



RF & Microwave

PRODUCT SELECTION
GUIDE 2025

MACOM[®]

Partners from RF to Light

macom.com

MACOM's 2025 RF & Microwave Product Selection Guide features our catalog of thousands of products, which include integrated circuits (ICs), multi-chip modules (MCMs), power pallets and transistors, MMICs, diodes, amplifiers, switches and switch limiters, passive and active components, and complete subsystems. Inside are detailed product specifications designed to help engineers quickly evaluate and select the right products to differentiate their designs. Our selection guide includes application diagrams and key technologies to further assist you in your selection process.

Additional product information can be found on our website at **macom.com**.

Contact our worldwide sales offices, authorized representatives, and industry-leading distributors to request samples, test boards, and application support. All contacts are listed on our website at: **www.macom.com/contact**



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Partners from RF to Light

MACOM Technology Solutions Holdings, Inc. (MACOM) supplies key enabling technologies for the Cloud Connected Apps Economy and Modern Networked Battlefield. Recognized for its broad catalog portfolio of technologies and products, MACOM provides high-performance RF, microwave, millimeter wave and optical semiconductor products for diverse applications ranging from high speed optical, satellite communications, wired and wireless infrastructure networks, to military and civil radar systems. A pillar of the semiconductor industry, we thrive on over 75 years of solving our customers' most complex problems as their trusted partner for solutions from RF to Light. Headquartered in Lowell, Massachusetts, MACOM has achieved certification to the IATF16949 automotive standard, the AS9100D aerospace standard, the ISO9001 international quality standard and the ISO14001 environmental management standard. MACOM has design centers and sales offices throughout North America, Europe and Asia.

RF to Light Capabilities

MACOM offers end-to-end customer solutions and support, from proprietary process technologies to high-quality customer service. MACOM can produce and process semiconductor materials, design and manufacture complex devices and combine these devices into multifunction components. We offer dual-use technologies that enable us to service commercial and aerospace and defense markets. We have unique technologies and capabilities to create innovative design solutions, including:

- Unique processes: HMIC™, GMIC™ and AlGaAs
- In-house design, fabrication, assembly and screening capabilities
- Foundry services
- Build-to-print turnkey assembly capabilities
- Multiple design and sales locations to provide global coverage
- Wide spectrum coverage across RF, microwave and mmWave frequencies
- One of the broadest selections of standard and custom products in the industry

Commercial, Industrial and Military Products

This guide features our catalog of thousands of products. We work with you, engineer-to-engineer, to provide custom products to meet your unique application-specific requirements.

If you cannot find a product that meets your needs in this guide, please contact us and we will work together to develop or recommend an appropriate solution. Our team of product managers and engineers are available to support all product and design needs and offer the experience and attention to detail that ensure success.

Quality and Reliability

MACOM is committed to delivering high-quality products and services that meet our customers' and internal operations' needs in terms of delivery, reliability, performance and value.

Process controls are implemented to ensure that tasks are performed properly the first time, so that products and services meet established, agreed-to requirements. It is the personal responsibility of every MACOM employee to ensure quality, customer satisfaction, continual improvement, maintenance of our quality management system and compliance with customer and regulatory requirements.

Design and Manufacturing Facilities

MACOM has multiple design centers, Si, SiC, GaAS and InP fabrication, manufacturing, assembly and test and operational facilities throughout North America, Europe and Asia.

How to Purchase

Sales Representatives and Distribution Partners

Find solutions for your most complex applications today! You can purchase MACOM products directly through our sales offices and through one of our many distribution and sales representative partners.

Visit our website to see a list of our industry-leading distributors and to get additional information about ordering samples and product.

To see inventory availability from MACOM and our distributors the Order tab on your selected product page at macom.com

MACOM produces custom products and modifications to standard products to meet your specific requirements.

Please contact us with your specifications if you cannot find a standard product for your application.

See the back cover of this catalog for contact information.

Or visit us at macom.com for more information.



Aluminum Gallium Arsenide (AlGaAs)

Band gap engineering has been used to produce novel semiconductor structures in the microwave industry for over two decades. These band gap principles have been applied to the development of MACOM's AlGaAs technology, resulting in a significant advancement in the RF performance of PIN diodes. *Key applications* include industrial, scientific and medical (ISM), test and measurement, wireless backhaul, aerospace and defense.

Gallium Arsenide (GaAs)

For over three decades, MACOM has been the world leader in the advancement of GaAs technology, producing state-of-the-art, high performance discrete devices; control components; mixed signal processing and converters; driver amplifiers; CATV amplifiers; LNAs; and power amplifiers as single purpose and multifunction MMICs. *Key applications* include ISM, CATV and wired broadband, wireless backhaul, aerospace and defense, and satellite communication.

Gallium Nitride (GaN)

MACOM is driving the commercialization of GaN into mainstream RF Power applications designing solutions with GaN-on-Si and GaN-on-SiC. Our **MACOM PURE CARBIDE** series of GaN-on-SiC power amplifiers is the most recent addition to our product family. We offer a broad portfolio of GaN products spanning a wide range of package options for pulsed and continuous wave applications and address *key applications* in all markets including aerospace and defense, 5G wireless infrastructure and ISM.

Heterolithic Microwave Integrated Circuit (HMIC)

Developed at MACOM, this process joins two different materials—glass and silicon—into a single monolithic structure. This technology integrates the best properties of each material and allows monolithic circuit solutions that reduce both size and cost. *Key applications* include CATV and wired broadband, wireless backhaul, ISM, test and measurement, and chip and wire high frequency microwave applications.

Indium Phosphide (InP)

MACOM is a premier supplier of both photonic devices, such as lasers, and optoelectronics products, such as high speed modulator drivers, based on InP technology. *Key applications include, laser diodes for silicon photonics, data and metro markets, modulator drivers for 100G and 400G coherent networks, metro networks and data centers.*

Silicon (Si)

Leveraging our deep understanding of silicon technology, MACOM offers a broad portfolio of products ranging from PIN and varactor tuning diodes to multi-hundred watt silicon power MOSFETs. *Key applications include aerospace and defense, industrial, scientific and medical, test and measurement, CATV and wired broadband, and wireless networking.*

Silicon Germanium (SiGe)

Building upon a long history in designing integrated circuits and subsystems for radar and mmWave markets, MACOM leads the way in applying SiGe BiCMOS technology to both commercial and military needs. We see SiGe as a high value, differentiating technology which we will continue to leverage in MACOM's core product segments. *Key applications include high-speed optical network transceivers, base stations, wired broadband communications, and high speed crosspoint switches.*

MACOM produces and processes semiconductor materials and offers unique technologies and capabilities to create innovative design solutions to solve our customers' most complex challenges.



Wireless Networking and Communications

- > Wireless Network Infrastructure
- > Wireless Backhaul
- > Wireless LAN (WiFi)
- > SATCOM/VSAT
- > 5G Communications

Optical Networking

- > FTTx/PON
- > Wireless Fronthaul
- > Cloud Data Center
- > Network Security
- > Long Haul and Metro



Industrial, Scientific and Medical

- > Industrial
- > Test and Measurement
- > Healthcare
- > RF Energy

Wired Broadband

- > DOCSIS Infrastructure/CPE





Broadcast Video

- > Cameras
- > Distribution Amplifiers
- > Format Conversion
- > Monitors
- > Routers and Switches



Surveillance

- > Cameras
- > DVRs



Aerospace & Defense

- > Communication
- > EW
- > Radar
- > Active Antennas
- > Space & Hi-Reliability
- > Free Space Optics



Enterprise Solutions

- > Backplane Connectivity
- > Packet Switchers and Routers
- > Storage Area Networks
- > Transport Networks/OTN

Recognized for our broad portfolio of technologies and products, MACOM serves a range of diverse markets and thrives on more than 75 years of solving our customers' most complex problems.

MACOM is your partner for applications from RF to Light.

**The following pages have a sampling of application diagrams and products.
For more in-depth information, visit macom.com/applications**

MRI

RECEIVE COIL

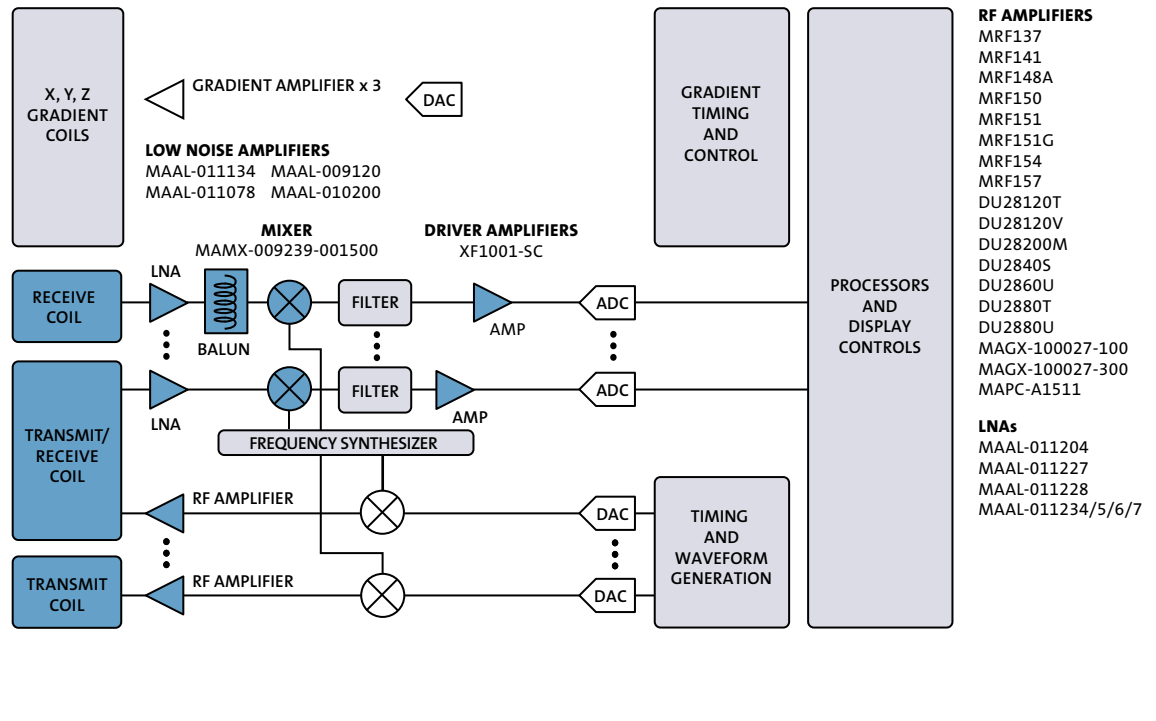
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 MADP-010015-14420T
 MADP-047668-1134B0
 MADP-047668-1441BN

TRANSMIT RECEIVE COIL

MA4P7446F-1091T
 MA4P7452F-1072T
 MA4P7461F-1072T
 MA4P7470F-1072T
 MADP-000235-10720T
 MADP-000504-10720T
 MADP-011034-10720T
 MADP-009989-14320T
 MADP-009989-14340T
 MADP-009989-14420T
 MADP-010015-14320T
 MADP-010015-14420T
 MA4P1200NM-401T
 MA4P7435NM-1091T
 MA4P7441F-1091T

TRANSMIT COIL

MA4PK2000 MA4PK3001
 MA4PK2001 MA4PK3002
 MA4PK2002 MA4PK3003
 MA4PK2003 MA4PK3004
 MA4PK2004 MA4P709-150
 MA4PK3000



WIRELESS ACCESS TDD

HIGH POWER SWITCH

MASW-000822-12770T
 MASW-000834-13560T
 MASW-000932
 MASW-000936
 MAMF-011070
 MASW-011120

SWITCH LNA MODULE

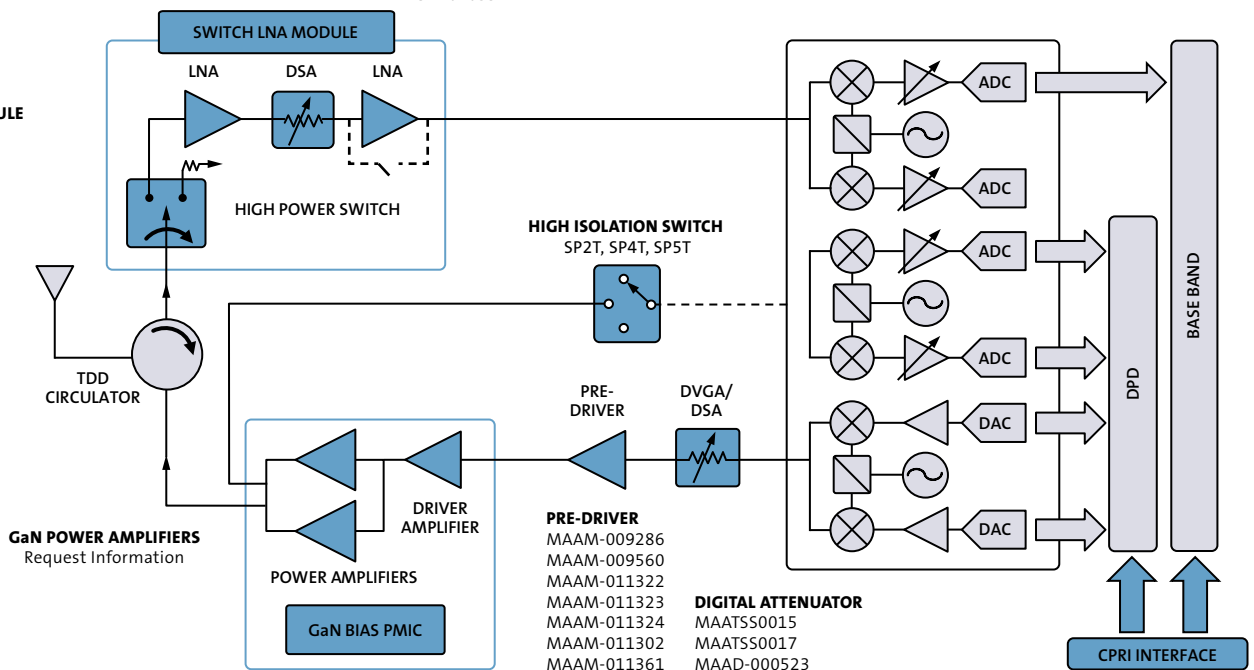
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 MAIA-011004
 MAMF-011069
 MAMF-011119
 MAMF-011133
 MAMF-011139
 MAMF-011145
 MAMF-011149
 MAMF-011150
 MAMF-011152
 MAMF-011153

LOW NOISE AMPLIFIER

MAAL-011078 MAAL-011188
 MAAL-010704

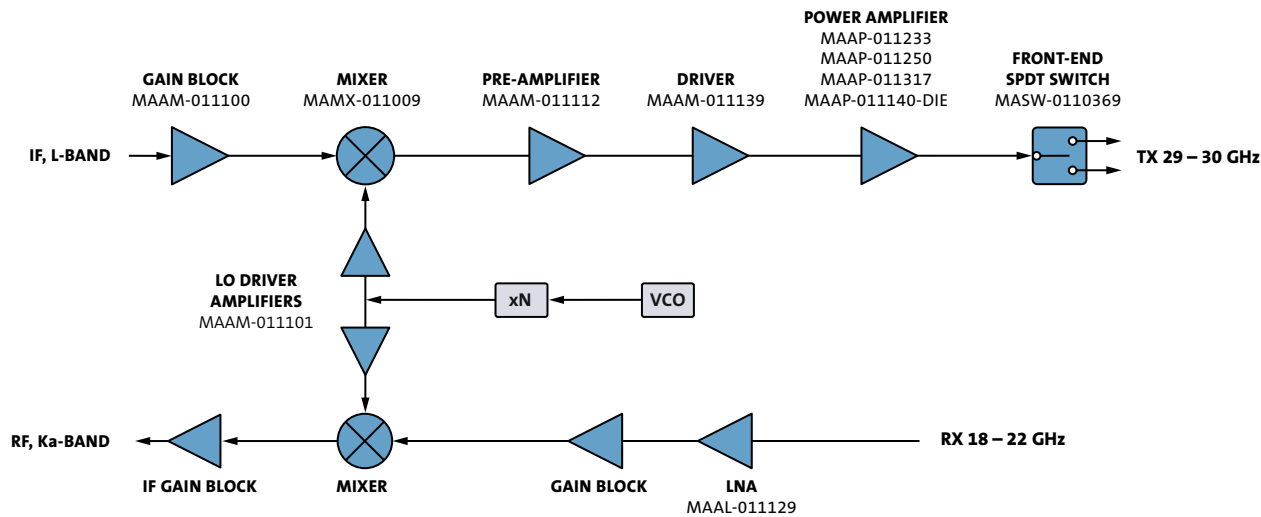
HIGH ISOLATION SWITCH

MASW-008543
 MASW-010351

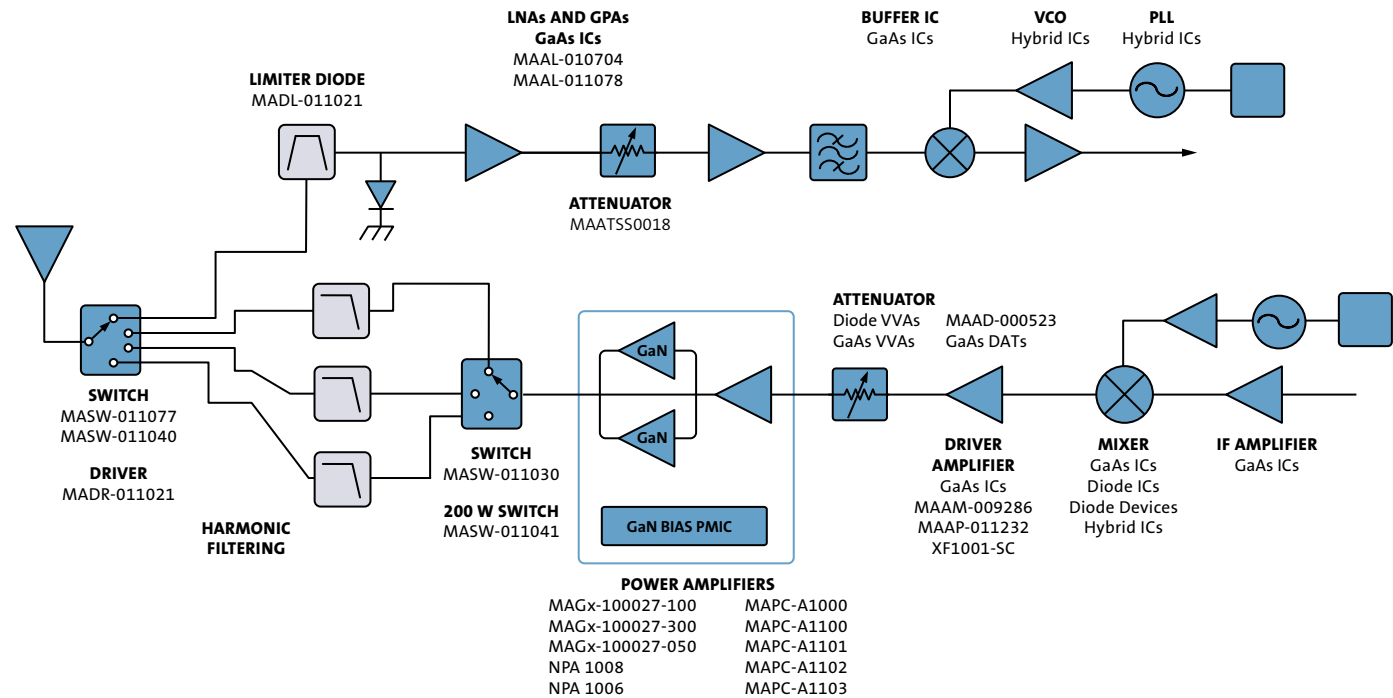


Note: Part numbers are RoHS compliant.
 Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
 All specifications are subject to change.

Ka-BAND SATCOM



LAND MOBILE RADIO



Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

RF POWER PRODUCTS

MACOM offers a broad range of RF Power semiconductor products such as discrete devices, modules and pallets designed to operate from DC to 12 GHz. These high power amplifiers are ideal for civil avionics, military communications, 5G networks, radar and ISM applications. Our product portfolio leverages MACOM's more than 75-year heritage of providing both standard and custom solutions using GaN, bipolar and MOSFET technologies to meet the most demanding specifications.



GaN-on-SiC **MACOM PURE CARBIDE**

- > Includes RF Power products such as discrete devices, modules and pallets
- > Designed to operate from 1 MHz to 15 GHz
- > Market leading high power/high voltage solutions exceeding 6 kW
- > Excellent RF performance, long-term reliability and ruggedness for pulsed and CW applications

Bipolar

- > Discrete devices, modules and pallets from 1 MHz to 3.5 GHz
- > For civil avionics, communications, networks, radar and industrial, scientific and medical applications
- > All gold metallization fabrication processes ensure high performance and long-term reliability

Si LDMOS

- > Discrete devices at 50 V from 1 MHz to 1600 MHz.
- > For avionics, communications, radar and ISM applications
- > Proven field reliability from a higher performance process

GaN-on-Si

- > Discrete and integrated amplifiers
- > Includes a broad range of RF Power products such as discrete devices, modules and pallets
- > Designed to operate from 1 MHz to 6 GHz
- > Market leading high power/high voltage solutions exceeding 6 kW
- > Excellent RF performance, long-term reliability and ruggedness for pulsed and CW applications

MOSFET

- > TMOS and DMOS RF Power MOSFET transistor products such as discrete devices from 1 MHz to 1 GHz
- > All gold metallization fabrication processes ensure high performance and long-term reliability

Pallets

- > Easy-to-use 50 Ω matched building blocks easily cascaded and/or parallel combined to achieve high system power levels
- > Standard and custom options available
- > Single and multi-stage pallets with connector options
- > Pallet options with MACOM's Power Management ICs (PMICs) to facilitate sequencing, control and monitoring

Communications Infrastructure							
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	P3dB Output Power (W)	Gain (dB)	Efficiency (%)	Operating Voltage (V)
PTRA082808NF-V1	280 W; 790 – 820 MHz; 48 V; High Power RF LDMOS FET	790	820	250	15.5	45	48
PTRA084858NF-V1	615 W; 730 – 960 MHz; 48 V; High Power RF LDMOS FET	730	960	615	19	50	48
PTRA095908NB-V1	520 W; 925 – 960 MHz; 48 V; High Power RF LDMOS FET	920	960	460	17.5	52	48
PTRA097058NB-V1	800 W; 730 – 960 MHz; 48 V; High Power RF LDMOS FET	730	960	800	18	48	48
GTRB097152FC	900 W; 758 – 960 MHz; 48 V; High Power RF GaN-on-SiC HEMT	758	968	450	18	59	48
MAPL-100405-060C	75 W; DC – 1 GHz; 50 V; LDMOS Transistor	DC	1000	74	23.7	70	50
PTGA090304MD-V2	2 x 15 W; 575 – 960 MHz; 48 V; Wideband LDMOS Two-stage Integrated Power Amplifier	500	1000	30	32	19	48
PTRA083818NF-V1	275 W; 733 – 805 MHz; 48 V; High Power RF LDMOS FET	500	1000	275	18	56	48
PTRA084808NF-V1	550 W; 734 – 821 MHz; 48 V; High Power RF LDMOS FET	500	1000	550	18	55	48
PTRA087008NB-V1	650 W; 755 – 805 MHz; 48 V; High Power RF LDMOS FET	500	1000	380	18.5	52	48
PTRA093818NF-V1	415 W; 48 V; 925 – 960 MHz; High Power RF LDMOS FET	500	1000	370	17	52	48
PTRA094808NF-V1	480 W; 859 – 960 MHz; 48 V; High Power RF LDMOS FET	500	1000	420	17.5	53	48
PTRA097008NB-V1	630 W; 920 – 960 MHz; 48 V; High Power RF LDMOS FET	500	1000	600	19	49	48
PTVA082407NF	240 W; 746 – 821 MHz; 48 V; High Power RF LDMOS FET	500	1000	250	22.5	36	48
PTVA084007NF	370 W; 755 – 805 MHz; 48 V; High Power RF LDMOS FET	500	1000	370	23.5	39	48
PTVA092407NF-V2	240 W; 869 – 960 MHz; 48 V; High Power RF LDMOS FET	500	1000	287	22.5	40	48
PTVA101K02EV-V1	1000 W; High Power RF LDMOS FET	1030	1090	900	18	65	50
GTVA10700	700 W; High Power RF GaN on SiC HEMT	960	1215	700	20	70	50
CGHV14500	500 W; GaN HEMT for L-Band Radar Systems	1200	1400	—	16	68	—
CGHV14800	850 W; GaN HEMT for L-Band Radar Systems	1200	1400	—	16	70	—
PTVA12350	350 W; 50 V; 1200 – 1400 MHz; High Power RF LDMOS FETs	1200	1400	—	17	54	0 – +55
PTVA120501EA-V1	50 W; 50 V; 1200 – 1400 MHz; High Power RF LDMOS FET	1200	1400	—	17	55	—
GTVA101K4	1400 W; High Power RF GaN-on-SiC HEMT	960	1400	1400	17	68	—
GTVA12600	600 W; High Power RF GaN-on-SiC HEMT	1200	1400	600	18	65	—
PTVA12025	25 W; 500 – 1400 MHz; High Power RF LDMOS FET	500	1400	—	18	54	50
PTVA127002EV-V1	700 W; 50 V; 1200 – 1400 MHz; High Power RF LDMOS FET	1200	1400	—	16	50	0 – +55
CGHV14250	250 W; DC – 1600 MHz; GaN HEMT for L - Band Radar Systems	DC	1600	—	18	77	—
PTVA102001EA-V1	200 W; 50 V; 960 – 1600 MHz; High Power RF LDMOS FET	960	1600	—	18.5	56	0 – +55
GTRA184602FC-V1	460 W; 1805 – 1880 MHz; 48 V; High Power RF GaN-on-SiC HEMT	1805	1880	460	15.5	60	48
GTRB184402FC	440 W; 1805 – 1880 MHz; 48 V; High Power RF GaN-on-SiC HEMT	1805	1880	440	16.7	56	48

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

Communications Infrastructure (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	P3dB Output Power (W)	Gain (dB)	Efficiency (%)	Operating Voltage (V)
GTRB186002FC-V1	500 W; 1805 – 1880 MHz; 48 V; High Power RF GaN-on-SiC HEMT	1805	1880	500	15.7	54	48
PXAD184218FV-V1	420 W; 1805 – 1880 MHz; 28 V; High Power RF LDMOS FET	1805	1880	420	16	52	28
PXFC191507FC-V1	150 W; 1805 – 1990 MHz; 28 V; High Power RF LDMOS FET	1805	1990	140	20.5	31	28
WGC20630-V1A	630 W; 1930 – 2020 MHz; 48 V; Thermally Enhanced GaN Amplifier	1930	2020	630	16.1	74	48
GTRB204402FC	350 W; 1930 – 2020 MHz; 48 V; High Power RF GaN-on-SiC HEMT	1930	2020	350	16.3	58	48
GTRB206002FC	500 W; 1930 – 2020 MHz; 48 V; High Power RF GaN-on-SiC HEMT	1930	2020	500	14.8	53	48
GTVB222611FAV1A	260 W; 1805 – 2170 MHz; 48 V; High Power RF GaN-on-SiC HEMT	1805	2170	260	17	72	48
GTRA214602FC	490 W; 2110 – 2170 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2110	2170	490	14.4	59	48
WGC22630	630 W; 2110 – 2200 MHz; 48 V; Thermally Enhanced GaN Amplifier	2110	2200	630	16.5	68	48
GTRB224402FC-V1	400 W; 2110 – 2200 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2110	2200	400	15.5	55	48
GTRB226002FC-V1	450 W; 2110 – 2200 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2110	2200	450	15	60	48
GTVA212701FA-V2	270 W; 2110 – 2200 MHz; 48 V; High Power RF GaN-on-SiC HEMT	1800	2200	300	19	38	48
GTVA220701FA	70 W; 1805 – 2170 MHz; 50 V; High Power RF GaN-on-SiC HEMT	1800	2200	45	19	27	50
PTMC210404MD-V2	2 x 20 W; 1805 – 2200 MHz; 28 V; Wideband LDMOS Two-stage Integrated Power Amplifier	1800	2200	37	30	19	28
PTNC210604MD-V2	20 W + 40 W; 1805 – 2200 MHz; Wideband LDMOS Two-stage Integrated Power Amplifier	1800	2200	63	27	37	28
PXAE183708NB	High Power RF LDMOS FET	1800	2200	315	16	51	28
PXAE213708NB	320 W; 1805 – 1880 MHz; 28 V; High Power RF LDMOS FET	2110	2200	290	16	52	28
PXAD214218FV-V1	430 W; 2110 – 2170 MHz; 28 V; High Power RF LDMOS FET	1800	2300	436	16	49	28
GTRB246608FC-V1	500 W; 2300 – 2400 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2300	2400	500	15.7	54	48
CGH09120F	120 W; UHF – 2.5-GHz; GaN HEMT for WCDMA; LTE; MC-GSM	DC	2500	120	21	35	28
GTRB266908FC-V1	500 W; 2515 – 2675 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2515	2675	500	15	52	48
PXAE261908NF-V1	240 W; 2515 – 2675 MHz; 28 V; High Power RF LDMOS FET	2515	2675	240	13.5	47	28
GTRB266702FCV1A	610 W; 2620 – 2690 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2620	2690	4	14.2	66	48
GTRA262802FC	250 W; 2490 – 2690 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2490	2690	250	14	54	48
GTRA263902FC-V2	370 W; 2495 – 2690 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2495	2690	370	13.8	54	48
GTRB266502FC	630 W; 2620 – 2690 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2620	2690	630	14	49	48
GTRB267008FC-V1	620 W; 2496 – 2690 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2496	2690	620	15	52	48
GTVA261802FC-V1	170 W; 2620 – 2690 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2620	2690	170	16.8	43	48
GTVA262701FA-V2	270 W; 2620 – 2690 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2620	2690	270	17	42	48

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Communications Infrastructure (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	P3dB Output Power (W)	Gain (dB)	Efficiency (%)	Operating Voltage (V)
GTVA262711FA	300 W; 2620 – 2690 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2620	2690	300	18	39	48
PXAE263708NB-V1	400 W (P3dB); 2620 – 2690 MHz; 28 V; High Power RF LDMOS FET	2620	2690	400	13.5	47	28
WS1A2639-V1-R3K	38.5 dBm; 2496 – 2690 MHz; GaN-on-SiC Power Amplifier Module	2496	2690	50	16.5	57	48
GTRB264902FC	480 W; 2620 – 2690 MHz; 48 V; GaN Amplifier	2620	2692	480	14.8	56	48
GTRB264318FC-V1	400 W; 2500 – 2700 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2500	2700	400	14	50	48
GTVA261701FA-V1	170 W; 2.62 – 2.69 GHz; 50 V; High Power RF GaN-on-SiC HEMT	2300	2700	170	17	43	50
GTVA263202FC-V1	340 W; 2620 – 2690 MHz; 48 V; High Power RF GaN-on-SiC HEMT	2300	2700	340	17	40	48
CGHV35120F	120 W; 2.9 – 3.8 GHz; 50 V; GaN HEMT for S-Band Radar Systems	3100	3500	—	12.8	—	—
GTRA374902FC-V1	450 W; 3600 – 3700 MHz; 48 V; High Power RF GaN-on-SiC HEMT	3600	3700	450	12	38	48
GTRA384802FC-V1	400 W; 3600 – 3800 MHz; 48 V; High Power RF GaN-on-SiC HEMT	3600	3800	400	13	42	48
GTRB384608FC	400 W; 3300 – 3800 MHz; 48 V; High Power RF GaN-on-SiC HEMT	3300	3800	400	12.5	43	55
WS1A3640	39.5 dBm; 3300 – 3800 MHz; GaN-on-SiC Power Amplifier Module	3300	3800	60	13.5	52	48
GTRA362002FC-V1	200 W; 3400 – 3600 MHz; 48 V; High Power RF GaN-on-SiC HEMT	3300	3900	200	13.5	42	48
GTRA362802FC-V1	280 W; 3400 – 3600 MHz; 48 V; High Power RF GaN-on-SiC HEMT	3300	3900	280	13.5	46	48
GTRA364002FC	400 W; 3400 – 3600 MHz; 48 V; High Power RF GaN-on-SiC HEMT	3300	3900	400	13	40	48
GTRB424908FC	450 W; 3700 – 3980 MHz; 48 V; High Power RF GaN-on-SiC HEMT	3700	3980	450	12	42	48
WS1A3940-V1-R3K	39.5 dBm; 3700 – 3980 MHz; GaN-on-SiC Power Amplifier Module	3700	3980	60	13	52	48
GTRA412852FC-V1	235 W; 3700 – 4100 MHz; 48 V; High Power RF GaN-on-SiC HEMT	3700	4100	235	11.5	45	48
WSGPA01-V1-R3K	10 W; 5 GHz; GaN-on-SiC General Purpose Power Amplifier	0	5000	10	18	19	48

High Voltage GaN

Part Number	Min Freq (MHz)	Max Freq (MHz)	Supply Voltage (V)	Output Power P _{SAT} (W)	Gain (dB)	Efficiency (%)	Test Freq (GHz)	Package
MAPC-A1511	3	300	100	3000	19	79	0.13	AC-1230
MAPC-A1529	3	700	100	1450	18	72.6	700	AC-780S-2
MAPC-A1602	960	1215	130	2500	22	65	1.15	AC-780
MAPC-A1604	960	1215	150	5000	20	60	1.08	AC-1230
MAPC-A1605	960	1215	150	7000	20	57	1.06	AP-1230

GaN MMICs

Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{SAT} (dBm)	PAE (%)	LSG (dB)	V _d (V)	Package
CMPA0527005F	500	2700	39	39	13.5	50	Flange
CMPA0530002S	500	3000	33	33	13	28	DFN
CMPA2060040D1	2000	6000	—	35	23	—	—
ENGPA00239A	2700	3500	40	65	24	—	Die
CMPA2735015S	2700	3500	42	42	27.5	50	QFN; Die
CMPA2735030S	2700	3500	45	45	28	50	QFN; Die
CMPA2735075F1	2700	3500	48.5	48.5	20	28	Flange; Die

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

GaN MMICs (continued)							
Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{SAT} (dBm)	PAE (%)	LSG (dB)	V _d (V)	Package
CMPA2935150S	2900	3500	52.7	52.7	25	50	QFN
CMPA2935250S	2900	3500	54	54	24	50	QFN
CMPA3135060S	3100	3500	48	48	29	50	QFN
CMPA2738060F	2700	3800	48	48	27	50	Flange
CMPA1842040F	1800	4200	47	47	24	28	Flange; Die
CMPA5259025S	5200	5900	44	44	25	28	QFN; Flange
CMPA5259050S	5200	5900	47	47	23	28	QFN; Flange; Die;
CMPA5259080S	5200	5900	50	50	21	40	QFN
CMPA5259100S	5200	5900	50	50	25	50	QFN
CMPA0060002F1	DC	6000	36	36	10	28	Flange
CMPA0060025F1	DC	6000	44	44	11	50	Flange
CMPA0560008S	500	6000	40	40	11	28	QFN
CMPA0760020F	700	6000	44	44	33	28	Flange
CMPA2060035F1	2000	6000	45.5	45.5	18	28	Flange; Die
CMPA2560025F	2500	6000	45	45	20	28	Flange; Die
ENGPA00240A	4000	8000	38	55	20	—	Die
CMPA5585030F	5500	8500	45	45	21	28	Flange; Die
CMPA9396025S	9300	9600	45.5	45.5	27	40	QFN
CMPA9396025	9000	10000	—	42	—	—	PSM
CMPA901A020	9000	10000	20	45	30	—	6 × 6 mm; Overmold QFN
CMPA901A020S	9000	10000	43	43	30	28	QFN
CMPA901A035	9000	10000	—	35	—	—	Flange
CMPA901A035F1	9000	10000	45.5	45.5	23	28	Flange; Die
CMPA851A005S	8500	10500	37	37	28	28	QFN
CMPA851A012S	8500	10500	43	43	28.5	28	QFN; Die
CMPA851A025S	8500	10500	46	46	29.5	28	QFN; Die
CMPA851A050S	8500	10500	49	49	29	28	QFN; Flange; Die
WSM5100S	8500	10500	—	—	—	—	—
CMPA801B030S	8000	11000	46	46	20	28	QFN; Flange; Die
ENGPA00238A	8000	11500	36	50	20	—	Die
CMPA601C025F	6000	12000	47	47	25	28	Die; Flange
CMPA1C1D060D	12700	13250	60	29	—	—	Die
CMPA1C1D080	12750	13250	90	21	25	—	Flange
CMPA1C1D080F	12750	13250	49.5	49.5	16	40	Flange
CMPA1D1E025	13500	14500	40	22	24	—	Flange
CMPA1D1E025F	13750	14500	46	46	15	40	Flange
CMPA1D1E030	13750	14500	30	24	27	—	Die
CMPA1F1H060	13750	14500	—	—	—	—	Die
CMPA1E1F060F	13400	15500	48	48	26	28	Flange; Die
CMPA1F1H060S	15400	17700	49	49	25	28	QFN; Flange; Die
CMPA1E1F060	DC	18000	6	60	17	—	Die
ENGDA00139A	2000	18000	—	—	—	—	Die
CMPA601J025	6000	18000	25	20	20	—	Flange; Die
CMPA601J025F	6000	18000	44	44	20	22	Flange; Die
CMPA1D1J001	12700	18000	1	30	23	—	SM
CMPA1D1J001S	12700	18000	30	30	23	22	QFN
CMPA1H1J050	17300	18400	60	30	25	—	Flange
CMPA1H1J050F	17300	18400	48	48	25	28	Flange
CGY2135UH	18000	23000	33	—	—	—	Die

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

GaN: Unmatched Packaged Transistors

Part Number	Min Freq (MHz)	Max Freq (MHz)	Operating Voltage (V)	Peak Output Power (W)	Gain (dB)	Efficiency (%)	Form
CGHV40180	DC	2000	50	200	24	70	Flange; Pill
CG2H40120	DC	2500	28	130	20	70	Flange; Pill
CGHV27060	DC	2700	50	60	16.5	64	Flange; Pill
CGH40025	DC	3000	28	25	13	62	Flange; Pill
CGH40120	DC	3000	28	120	15	70	Flange; Pill
CGH40180	DC	3000	28	180	15	70	Push-pull
CGHV40100	DC	3000	50	100	17.5	55	Flange; Pill
CGHV40200	DC	3000	50	250	21	75	Push-pull
CGH35060P2	3100	3500	28	60	12	60	Pill
CGH35060P1	3300	3600	28	60	12	25	Pill
CG2H40045	DC	4000	28	45	13	55	Flange; Pill
CGHV40320D-GP4	DC	4000	—	40	19	—	Die
CGH27060F	DC	4000	28	60	14	27	Flange
CGH40045	DC	4000	28	45	12	55	Flange; Pill
CGH40090	DC	4000	28	90	14	55	Push-pull
CGHV40050	DC	4000	50	50	16	53	Flange; Pill
CG2H40010	DC	6000	28	10	15	65	Flange; Pill
CG2H40025	DC	6000	28	25	15	62	Flange; Pill
CG2H40035	DC	6000	28	35	14	64	Flange; Pill
CGH27015	DC	6000	28	15	14.5	28	Flange; Pill
CGH27015P	DC	6000	28	15	14.5	28	Pill
CGH27030	DC	6000	28	30	18	33	Flange; Pill
CGH35015	DC	6000	28	15	12	26	Flange; Pill
CGH40006	DC	6000	28	6	11	65	3 x 3 mm; DFN
CGH40010	DC	6000	28	10	14	65	Flange; Pill
CGH40035	DC	6000	28	35	13	60	Flange
CGH55015	DC	6000	28	10	12	60	Flange; Pill
CGH55030	DC	6000	28	30	10	25	Flange; Pill
CGHV27015S	DC	6000	50	15	21	32	3 x 4 mm; DFN
CGHV27030	DC	6000	50	30	21	32	3 x 4 mm; DFN
CGHV40030	DC	6000	50	30	16	70	Flange; Pill
CGH60008D-GP4	DC	6000	28	30	12	25	Die
CGH60015D-GP4	DC	6000	28	15	28	65	Die
CGHV60040D-GP4	DC	6000	50	40	17	65	Die
CGHV60075D5-GP4	DC	6000	50	75	7	65	Die
CGHV60170D-GP4	DC	6000	50	170	17	65	Die
CGHV1F006	DC	15000	40	6	17	52	3 x 4 mm; DFN
CGHV1F025	DC	15000	40	25	11	51	3 x 4 mm; DFN

Power Amplifiers: GaN: IM (Internally Matched) 50 Ω FETs

Part Number	Min Freq (MHz)	Max Freq (MHz)	Operating Voltage (V)	Peak Output Power (W)	Gain (dB)	Efficiency (%)	Form
GTVA10700	960	1215	50	700	20	70	Flange
GTVA101K4	960	1400	50	1400	17	68	Flange
GTVA12600	1200	1400	50	600	20	63	Flange
CGH31240F	2700	3100	28	240	12	60	Flange
CGHV31500	2700	3100	50	500	12.7	60	Flange
CGHV35400	2900	3500	50	400	11	60	Flange
CGH35240	3100	3500	28	240	11.6	57	Flange
CGHV37400F	3300	3700	48	550	14	55	Flange

Note: Part numbers are RoHS compliant.
 Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
 All specifications are subject to change.

Power Amplifiers: GaN: IM (Internally Matched) 50 Ω FETs (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Operating Voltage (V)	Peak Output Power (W)	Gain (dB)	Efficiency (%)	Form
CGHV38375F	2750	3750	50	400	9	55	Flange
CGHV50200F	4400	5000	40	200	11.5	33	Flange
CGHV59350	5200	5900	50	350	11	55	Flange; Pill
CGHV96050F1	7900	8400	40	50	13	33	Flange
CGHV96050F2	7900	9600	40	50	10	55	Flange
CGHV96100	7900	9600	40	100	10	45	Flange
CGHV96130F	8400	9600	40	130	12.2	42	Flange
CGHV1A250F	8800	9600	45	300	12	40	Flange

GaN: Transistor Die

Part Number	Min Freq (MHz)	Max Freq (MHz)	Operating Voltage (V)	Peak Output Power (W)	Gain (dB)	Efficiency (%)	Form
CGHV40320D	DC	4000	50	320	19	65	N/A
CGH60008D	DC	6000	28	8	12	65	N/A
CGH60015D	DC	6000	28	15	12	65	N/A
CGH60030D	DC	6000	28	30	12	65	N/A
CGH60060D	DC	6000	28	60	12	65	N/A
CGH60120D	DC	6000	28	120	12	65	N/A
CGHV60040D	DC	6000	50	40	18	62	N/A
CGHV60075D5	DC	6000	50	75	17	65	N/A
CGHV60170D	DC	6000	50	170	17	65	N/A
CG2H80015D	DC	8000	28	15	15	70	N/A
CG2H80015D-GP4	DC	8000	28	—	17	65	Die
CG2H80030D	DC	8000	28	30	16.5	65	N/A
CG2H80030D-GP4	DC	8000	28	—	16.5	70	Die
CG2H80045D	DC	8000	28	45	15	65	N/A
CG2H80045D-GP4	DC	8000	—	—	15	65	Die
CG2H80060D	DC	8000	28	60	14	70	N/A
CG2H80060D-GP4	DC	8000	28	—	—	65	Die
CG2H80120D	DC	8000	28	120	12	65	N/A
CG2H80120D-GP4	DC	8000	28	—	12	65	Die
CGHV1J006D	DC	18000	40	6	17	60	N/A
CGHV1J006D-GP4	DC	18000	40	—	17	60	Die
CGHV1J025D	DC	18000	40	25	17	60	N/A
CGHV1J025D-GP4	DC	18000	40	—	17	60	Die
CGHV1J070D	DC	18000	40	70	17	60	N/A
CGHV1J070D-GP4	DC	18000	40	—	17	60	Die

GaN: Partially Matched Packaged Transistors

Product	Min Freq (MHz)	Max Freq (MHz)	Operating Voltage (V)	Peak Output Power (W)	Gain (dB)	Efficiency (%)	Form
CGHV14500	1200	1400	50	500	16	68	Flange
CGHV14800	1200	1400	50	800	16	65	Flange
CGH21240F	1800	2300	28	240	15	33	Flange
CGH25120F	2500	2700	28	120	7	30	Flange
CG2H30070	500	3000	28	80	15	55	Flange
WST33H0NC	2400	3000	50	300	17	75	TO-270
CGHV35150	2900	3500	50	150	13.5	50	Flange
CGHV35120	3100	3500	50	120	12.8	62	Flange
CGHV35060MP	2700	3800	50	60	14.5	67	Flange
CGHV59070	4500	5900	50	70	12	50	Flange

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

GaN: Amplifiers: **MACOM PURE CARBIDE**

Part Number	Min Freq (MHz)	Max Freq (MHz)	Supply Voltage (V)	Output Power P _{SAT} (W)	Gain (dB)	Efficiency (%)	Test Freq (GHz)	Package
MAPC-A1002-AD	DC	1400	—	—	20	70	—	DFN
MAPC-A1502	400	460	50	1250	17	83	400	AC-1230
MAPC-A1508	900	930	50	700 (CW)	16.5	73	0.915	AC-780
MAPC-A1507	900	930	50	1400 (CW)	16	73	0.915	AC-1230
MAPC-A1533	728	960	28	15	17.5	60	—	6 mm; QFN-20
GTRB097152NCV1A	758	960	48	820	18.2	61	0.94	TO248-4
MAPC-A1501	960	1215	65	1300	17.2	64.5	1.06	AC-780B-2
MAPC-A1500	960	1215	65	2600	18.5	66.2	1.06	AC-1230S-4
MAPC-A1558-AB	1200	1400	65	1200	16	68	1.3	Ceramic
MAPC-A1001	30	1400	50	50	15.9	61	900	5 x 6 mm; DFN
MAPC-A1504	1200	1400	50	500	17	54	1400	AC-780
MAPC-A1535	700	1500	28	7	16	63	1	4 mm; QFN-20
MAPC-C15550	1430	1520	48	585	16.5	72	1.5	Ceramic
MAPC-A1513	1300	1850	52	450	14	59	1.6	AP-780
WGC18630	1805	1880	48	610	16.7	58.7	1.81	TO288-8L
MAPC-A3030-AB	DC	2000	65	300	21	71	-1	Ceramic
WGC20630-V1A	1930	2020	48	85	16.1	—	—	TO248-8L
MAPC-C20130	1800	2200	48	585	16.7	53	2.2	7 x 6.5 mm; DFN
WGC22630	2110	2200	48	85	16.5	—	—	TO288-8L
MAPC-C22440	2110	2200	48	400	16.9	58	2.2	H-37248C-4
MAPC-A1506	2000	2400	52	450	14	58	2.9	AP-780
MAPC-A1516	2400	2500	50	500 (CW)	14.5	70	2450	AC-780
WSDC2642	2496	2690	48	125	17.3	57	2.7	7 x 6.5 mm; DFN
WGC26420	2620	2690	48	400	16.6	53.6	2.62	TO248-6L
WGC27630	2620	2690	48	600	14.6	50	2.62	TO288-8L
MAPC-A1103	DC	2700	50	270	18.4	68.2	2.6	AC-650S-4
MAPC-A1000	30	2700	50	25	13	51	2.7	7 x 6.5 mm; DFN
WSDC2642	2496	2690	48	125	17.3	57	2.7	7 x 6.5 mm; DFN
WGC26420	2620	2690	48	400	16.6	53.6	2.62	TO248-6L
WGC27630	2620	2690	48	600	14.6	50	2.62	TO288-8L
MAPC-A3001-AB	DC	2700	50.0	300.0	23.0	75.0	1.30	—
MAPC-A1107-AB	500	3000	28	120	20	66	3	Ceramic
MAPC-A1522	2700	3100	65	1000	14.5	61	2900	AP-1230S-4
MAPC-A1505	2700	3300	50	700	14	68	2.2	AC-1230
MAPC-A1101	DC	3500	50	85	15	70	3.5	AC-360S-2
MAPC-A1102	DC	3500	50	150	13	65	3.5	AC-360S-2
MAPC-A4030	3100	3500	65	700	11.5	57	3.3	Ceramic
MAPC-A1100	1	3500	50	65	18	71	3.5	AC-360S-2
MAPC-A4031	3500	3700	65	500.0	12.0	55	—	AC-587BH-2
MAPC-A2004	3300	3800	50	90	14.5	52	3.6	7 x 6.5 mm; DFN
MAPC-A2517	3400	3800	50	29	14	52.3	3.6	AC-780S-4
MAPC-A2002	3400	4000	50	50	16.2	61	3.6	7 x 6.5 mm; DFN
MAPC-A2001	3400	4000	50	50	17.2	62	3.85	7 x 6.5 mm; DFN
MAPC-A2500	3400	4000	50	450	13	52	3.6	AC-780S-4
MAPC-A2506	3700	4000	50	29	12.5	52.3	3.85	AC-780S-4
MAPC-A2011	3700	4000	50	90	14.5	52	3.8	7 x 6.5 mm; DFN

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
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GaN: Amplifiers: **MACOM PURE CARBIDE** (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Supply Voltage (V)	Output Power P _{SAT} (W)	Gain (dB)	Efficiency (%)	Test Freq (GHz)	Package
MAPC-C50030-AD	DC	6000	48.0	30.0	18.0	13.52	1.47	3 x 4 mm; DFN

GaN: Amplifiers								
Part Number	Min Freq (MHz)	Max Freq (MHz)	Operating Voltage (V)	Output Power P _{SAT} (W)	Gain (dB)	Efficiency (%)	Test Freq (GHz)	Package
MAGE-100809-500G00	896	928	50	500	18	76	0.93	AC-780S-4
NPA1006A	20	1000	28	12.5	14	>45	0.9	6 x 5 mm; DFN-8
MAGX-101011-700E00	1000	1100	50	700	19.3	70	1.09	AC-780B-2
MAGX-101214-500L00	1200	1400	50	500	16	73.5	3	AC-780B-2
NPA1003QA	20	1500	28	7	15	>40	1	4 x 4 mm; QFN-16
NPA1007	30	2500	28	10	10	>50	2	6 x 5 mm; DFN-8
MAGE-102425-300S00	2400	2500	50	300	16.7	75	2.45	AC-780S-2
MAMG-100227-010C0L	225	2600	28	10	23	45	2.6	14 x 18 mm; MD1
MAGX-100027-002S0P	DC	2700	50	2	18.7	58.5	4	6 x 3 mm; DFN
MAGX-100027-015S0P	DC	2700	50	15	17.2	60	2.5	6 x 3 mm; DFN
MAGX-100027-050C0P	DC	2700	50	50	16.8	72	2.5	TO-272S-2
MAGX-100027-100C0P	DC	2700	50	100	15.1	59	2.5	TO-272S-2
MAGX-100027-300C0P	DC	2700	50	300	16.3	5	2	TO-272S-4I
NPA1008A	20	2700	28	5	12	>45	1.9	4 x 4 mm; PQFN-24
NPT25100B	2100	2700	28	90	16	>60	3	AC-780B-2
MAGB-102327-010B0P	2300	2700	50	8	17.2	23	2.5	4 x 4 mm; DFN-6
MAGB-102327-012B0P	2300	2700	50	10	17.3	21	2.7	4 x 4 mm; DFN-6
NPT25015	1	3000	28	23	14	>60 PEP	2.5	SOIC8NE
NPT2018	1	3500	50	12.5	17.5	>50	2.5	6 x 3 mm; PDFN-14
MAGB-101836-025B0P	1800	3600	50	25	16.9	29	3.5	5 x 7 mm; QFN
MAPC-C38075-AD	3400	3800	48	48	14.1	44.5	3.6	Ceramic
NPT35015	1	3800	28	18	11	>48 PEP	3.5	SOIC8NE
MAGB-103440-005B0P	3300	3800	50	5	17	15.5	3.6	4 x 4 mm; DFN-6
MAGB-103338-050S0P	3300	3800	50	44	16.3	15.1	3.6	6 x 6.5 mm; DFN
MAGB-103438-020S0P	3400	3800	50	20	17	28	3.5	5 x 7 mm; QFN
WGC40680V1A	3700	3980	48	500	12.4	42.5	3.98	TO248-8L
MAPC-A3010	DC	4000	28	120	17	70	—	Air Cavity; Ceramic
MAPC-A3009	DC	4000	28	60	16	67	2.5	Air Cavity; Ceramic
NPTB00025B	1	4000	28	25	13	>50	3	AC-360B-2
MAGB-103440-010B0P	3300	4000	50	10	18.1	18.3	3.8	4 x 4 mm; DFN-6
MAGB-103340-015B0P	3300	4000	50	15	16.4	17	3.6	4 x 4 mm; DFN-6
MAGB-103740-008B0P	3700	4000	50	8	17.9	16.2	3.9	4 x 4 mm; DFN-6
WSGPC04	DC	5000	48	9.5	18.8	12.1	—	—
MAGX-101050-002S0P	1000	5000	50	2	15	50	4	4 x 4 mm; DFN
MAGX-011086A	1	6000	28	4	9	>50	5.8	4 x 4 mm; QFN-24
NPTB00004B	1	6000	28	5	17	>50	2.5	SOIC8NE
MAPC-A3029	DC	6000	65	40	21	72	1.2	Ceramic
MAPC-A3008	DC	6000	28	45	14.5	63	2	Air Cavity; Ceramic
MAPC-A3007	DC	6000	28	30	15	67	3.7	Air Cavity; Ceramic
MAPC-A3005	DC	8000	28	10	14	68	2	Air Cavity; Ceramic
MAPC-A3006	DC	8000	28	18	12.5	70	3.7	Air Cavity; Ceramic
MAPC-A4004	8800	9600	50	150	11	44	9.3	Ceramic

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Si LDMOS

Part Number	(Min Freq (MHz))	Max Freq (MHz)	Operating Voltage (V)	Peak Output Power (W)	Gain (dB)	Efficiency (%)	Package Category	Form
PTVA030121EA-V1	390	450	12	25	69	50	Bolt Down	—
PTVA035002EV-V1	390	450	0 – +55	—	18	—	Bolt Down	—
PTRA082808NF-V1	790	820	250	15.5	45	48	Plastic	Packaged Discrete Transistor
PTRA095908NB-V1	920	960	460	17.5	52	48	Surface Mount	Packaged Discrete Transistor
PTRA084858NF-V1	730	960	615	19	50	48	Earless	Packaged Discrete Transistor
PTRA097058NB-V1	730	960	800	18	48	48	Plastic	Packaged Discrete Transistor
PTGA090304MD-V2	500	1000	30	32	19	48	Surface Mount	Packaged Discrete Transistor
PTVA082407NF	500	1000	250	22.5	36	48	Plastic	Packaged Discrete Transistor
PTRA083818NF-V1	500	1000	275	18	56	48	Surface Mount	Packaged Discrete Transistor
PTVA092407NF-V2	500	1000	287	22.5	40	48	Plastic	Packaged Discrete Transistor
PTRA093818NF-V1	500	1000	370	17	52	48	Plastic	Packaged Discrete Transistor
PTVA084007NF	500	1000	370	23.5	39	48	Plastic	Packaged Discrete Transistor
PTRA087008NB-V1	500	1000	380	18.5	52	48	Plastic	Packaged Discrete Transistor
PTRA094808NF-V1	500	1000	420	17.5	53	48	Plastic	Packaged Discrete Transistor
PTRA084808NF-V1	500	1000	550	18	55	48	Plastic	Packaged Discrete Transistor
PTRA097008NB-V1	500	1000	600	19	49	48	Plastic	Packaged Discrete Transistor
PTVA12025	500	1400	—	18	54	50	Bolt Down, Surface Mount	Packaged Discrete Transistor
PXAD184218FV-V1	1805	1880	420	16	52	28	Earless	Packaged Discrete Transistor
PXFC191507FC-V1	1805	1990	140	20.5	31	28	Earless	Packaged Discrete Transistor
PTMC210404MD-V2	1800	2200	37	30	19	28	Surface Mount	Packaged Discrete Transistor
PTNC210604MD-V2	1800	2200	63	27	37	28	Surface Mount	Packaged Discrete Transistor
PXAE183708NB	1800	2200	315	16	51	28	Plastic	Packaged Discrete Transistor
PXAE213708NB	2110	2200	290	16	52	28	Plastic	Packaged Discrete Transistor
PXAD214218FV-V1	1800	2300	436	16	49	28	Earless	Packaged Discrete Transistor
PXAE261908NF-V1	2515	2675	240	13.5	47	28	Plastic	Packaged Discrete Transistor
PXAE263708NB-V1	2620	2690	400	13.5	47	28	Plastic	Packaged Discrete Transistor

Amplifiers: Silicon Bipolar and MOSFET

Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{OUT} (W)	Gain (dB)	Efficiency (%)	Package
MRF421	1	30	100	10	40	Flange; Ceramic
MRF448A	1	30	250	12	45	Flange; Ceramic
MRF426	2	30	25	22	35	Flange; Ceramic
MRF455	2	30	60	13	55	Flange; Ceramic
MRF454	2	30	80	12	50	Flange; Ceramic
MRF422	2	30	150	10	40	Flange; Ceramic
MRF428	2	30	150	13	45	Flange; Ceramic
MRF448	2	30	250	12	45	Flange; Ceramic
MRF429	2	60	150	13	45	Flange; Ceramic
MRF154	5	80	600	17	45	Flange; Ceramic
MRF157	5	80	600	21	45	Flange; Ceramic
MRF157H	5	80	600	21	45	Flange; Ceramic
MRF140	5	150	150	15	40	Flange; Ceramic
MRF150	5	150	150	17	45	Flange; Ceramic
MRF148A	5	175	30	18	40	Flange; Ceramic
MRF173	5	175	80	11	60	Flange; Ceramic
MRF173CQ	5	175	80	13	60	Flange; Ceramic
MRF151	5	175	150	13	40	Flange; Ceramic
MRF151A	5	175	150	13	40	Flange; Ceramic
MRF141	5	175	150	18	40	Flange; Ceramic

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Amplifiers: Silicon Bipolar and MOSFET (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{OUT} (W)	Gain (dB)	Efficiency (%)	Package
MRF141G	5	175	300	12	50	Flange; Ceramic
MRF151G	5	175	300	14	50	Flange; Ceramic
DU2805S	30	175	5	11	55	Flange; Ceramic
DU2810S	30	175	10	13	55	Flange; Ceramic
DU1215S	30	175	15	9.5	60	Flange; Ceramic
DU2820S	30	175	20	13	60	Flange; Ceramic
DU2840S	30	175	40	13	60	Flange; Ceramic
DU2860U	30	175	60	13	60	Flange; Ceramic
DU2880T	30	175	80	13	60	Flange; Ceramic
DU2880U	30	175	80	13	60	Flange; Ceramic
DU28120T	30	175	120	13	60	Flange; Ceramic
DU28120V	30	175	120	13	60	Flange; Ceramic
DU28200M	30	175	200	13	55	Flange; Ceramic
MRF174	5	200	125	9	50	Flange; Ceramic
MRF314	30	200	30	10	50	Flange; Ceramic
MRF316	30	200	80	10	55	Flange; Ceramic
MRF317	30	200	100	9	55	Flange; Ceramic
MRF171A	100	200	45	17	60	Flange; Ceramic
MRF175GV	5	225	200	14	65	Flange; Ceramic
MRF176GV	5	225	200	15	50	Flange; Ceramic
MRF134	5	400	5	11	50	Flange; Ceramic
MRF136	5	400	15	16	60	Flange; Ceramic
MRF136Y	5	400	30	14	54	Flange; Ceramic
MRF137	5	400	30	13	60	Flange; Ceramic
MRF175LU	5	400	100	10	55	Flange; Ceramic
MRF177	5	400	100	12	60	Flange; Ceramic
MRF175GU	5	400	150	12	55	Flange; Ceramic
MRF176GU	5	400	150	12	45	Flange; Ceramic
MRF313	100	400	1	15	45	Flange; Ceramic
MRF392	100	400	125	10	55	Flange; Ceramic
MRF321	150	400	10	12	50	Flange; Ceramic
MRF323	150	400	20	10	50	Flange; Ceramic
2N6439	225	400	60	7.8	55	Flange; Ceramic
MRF327	225	400	80	7.3	50	Flange; Ceramic
MRF158	5	500	2	16	55	Flange; Ceramic
MRF160	5	500	4	16	55	Flange; Ceramic
MRF166C	5	500	20	13.5	50	Flange; Ceramic
MRF166W	5	500	40	14	50	Flange; Ceramic
MRF275L	5	500	100	8.8	55	Flange; Ceramic
MRF275G	5	500	150	10	50	Flange; Ceramic
MRF587	100	500	0.17	13	12	Flange; Ceramic
UF2805B	100	500	5	10	50	Flange; Ceramic
UF2810P	100	500	10	10	50	Flange; Ceramic
UF2815B	100	500	15	10	50	Flange; Ceramic
UF2820P	100	500	20	10	50	Flange; Ceramic
UF2840G	100	500	40	10	50	Flange; Ceramic
UF2840P	100	500	40	10	50	Flange; Ceramic
MRF393	100	500	100	9.5	55	Flange; Ceramic
UF28100M	100	500	100	10	50	Flange; Ceramic

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Amplifiers: Silicon Bipolar and MOSFET (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{OUT} (W)	Gain (dB)	Efficiency (%)	Package
UF28100V	100	500	100	10	50	Flange; Ceramic
UF28150J	100	500	150	8	55	Flange; Ceramic
LF2805A	500	1000	5	10	50	Flange; Ceramic
MAPRST1030-1KS	1030	1030	1000	8	45	Flange; Ceramic
PH1090-15L	1030	1090	15	9	40	Flange; Ceramic
PH1090-75L	1030	1090	75	9	45	Flange; Ceramic
PH1090-175L	1030	1090	175	8.3	55	Flange; Ceramic
PH1090-350L	1030	1090	350	8	55	Flange; Ceramic
PH1090-550S	1030	1090	550	7.4	55	Flange; Ceramic
PH1090-700B	1030	1090	700	7.5	50	Flange; Ceramic
MRF10150	1025	1150	150	9.5	40	Flange; Ceramic
MRF10350	1025	1150	350	8.5	40	Flange; Ceramic
MAPR-001090-350S00	1025	1150	350	9	45	Flange; Ceramic
MRF10502	1025	1150	500	8.5	40	Flange; Ceramic
MAPR-001011-850S00	1025	1150	850	7.8	42	Flange; Ceramic
MRF1000MB	960	1215	0.7	10	—	Flange; Ceramic
MRF1004MB	960	1215	4	10	40	Flange; Ceramic
MRF10005	960	1215	5	8.5	45	Flange; Ceramic
MRF10031	960	1215	30	9	40	Flange; Ceramic
MAPRST0912-50	960	1215	50	9.1	40	Flange; Ceramic
MRF1090MB	960	1215	90	8.4	35	Flange; Ceramic
MRF10120	960	1215	120	8	50	Flange; Ceramic
MRF1150MB	960	1215	150	7.8	35	Flange; Ceramic
MAPRST0912-350	960	1215	350	9.4	45	Flange; Ceramic
MAPR-000912-500S00	960	1215	500	9	45	Flange; Ceramic
PH1214-2M	1200	1400	2	7	40	Flange; Ceramic
PH1214-6M	1200	1400	6	7	45	Flange; Ceramic
PH1214-12M	1200	1400	12	9	45	Flange; Ceramic
PH1214-25M	1200	1400	25	9.5	50	Flange; Ceramic
PH1214-40M	1200	1400	40	8.5	50	Flange; Ceramic
PH1214-55EL	1200	1400	55	6.6	50	Flange; Ceramic
PH1214-80M	1200	1400	80	7.5	50	Flange; Ceramic
PH1214-100EL	1200	1400	100	6	52	Flange; Ceramic
PH1214-110M	1200	1400	110	7.4	50	Flange; Ceramic
PH1214-220M	1200	1400	220	7.4	50	Flange; Ceramic
PH1214-300M	1200	1400	300	8.75	50	Flange; Ceramic
PH1617-2	1600	1700	2	10	35	Flange; Ceramic
PH2226-50M	2200	2600	50	8	45	Flange; Ceramic
PH2226-110M	2200	2600	110	7	40	Flange; Ceramic
PH2729-25M	2700	2900	25	9.2	45	Flange; Ceramic
PH2729-65M	2700	2900	65	8.5	40	Flange; Ceramic
PH2729-110M	2700	2900	110	6.8	35	Flange; Ceramic
PH2729-130M	2700	2900	130	7.5	40	Flange; Ceramic
MAPR-002729-170M00	2700	2900	170	9	45	Flange; Ceramic
PH2731-5M	2700	3100	5	7	30	Flange; Ceramic
PH2731-20M	2700	3100	20	8.2	45	Flange; Ceramic
PH2731-75L	2700	3100	75	7	40	Flange; Ceramic
PH3134-10M	3100	3400	10	8	35	Flange; Ceramic

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

Amplifiers: Silicon Bipolar and MOSFET (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{OUT} (W)	Gain (dB)	Efficiency (%)	Package
PH3134-20L	3100	3400	20	7.5	35	Flange; Ceramic
PH3134-55L	3100	3400	55	7.5	35	Flange; Ceramic
PH3135-5M	3100	3500	5	8.5	30	Flange; Ceramic
PH3135-20M	3100	3500	20	7.5	35	Flange; Ceramic
PH3135-25S	3100	3500	25	7.5	35	Flange; Ceramic
PH3135-65M	3100	3500	65	7.5	35	Flange; Ceramic
PH3135-90S	3100	3500	90	7.5	35	Flange; Ceramic

Pallets: GaN-on-SiC

Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{OUT} (W)	Gain (dB)	Efficiency (%)	Package
MAPC-P1026	900	930	1300	15	70	Pallet
MAPC-P1012	1030	1090	2000	17	65	Pallet
MAPC-P1008	960	1215	2000	17	60	Pallet
MAPC-P1015	1300	1850	400	15	55	Pallet
MAPC-P1009	2700	2900	700	14	60	Pallet
MAPC-P1010	2700	3100	250	28	52	Pallet
MAPC-P1017	3000	36000	120	30	43	Pallet

Pallets: Silicon Bipolar and MOSFET Pallets

Part Number	Min Freq (MHz)	Max Freq (MHz)	P _{OUT} (W)	Gain (dB)	Efficiency (%)	Package
PHA2729-300M	2700	2900	300	7.5	36	Pallet
PHA2731-190M	2700	3100	190	7.5	33	Pallet
PHA3135-130M	3100	3500	130	7.4	35	Pallet

AMPLIFIERS

For Voice, Data and Point-to-Point Applications for A&D and Commercial Markets

MACOM designs, manufactures and supports a wide variety of amplifiers for RF, microwave and mmWave applications. Our products cover frequency ranges from 40 kHz to 90 GHz. We use a variety of semiconductor processes such as GaAs MESFET for linearity, pHEMT for power and low noise and HBT for linearity and high gain. Additionally, our 50 to 1100 MHz cable band amplifiers exhibit advanced composite linearity performance. MACOM amplifiers are used in a variety of commercial and aerospace and defense applications.



Active Splitters

- > Available in 2-, 3-, 4-, 5-, 6- and 8-way splits
- > Designed for today's advanced CATV, FTTx and direct broadcast satellite (DBS) subscriber equipment
- > Used in high definition flat screen TVs, set top boxes (STBs), embedded multi media terminal adapter (eMTAs), cable modems and PCTV cards
- > Surface mount PDFN and PQFN plastic packages

Amplifier Gain Blocks

- > Frequencies from DC to 45 GHz
- > 50 Ω and 75 Ω applications include networks, commercial and aerospace and defense
- > Plastic packaging and bare die

Linear and Power Amplifiers

- > 40 kHz to 90 GHz frequencies for both linear and saturated applications including: network infrastructure, radar, test and measurement and communication systems
- > Many of the power amplifiers include an on-chip temperature-compensated detector

Low Noise Amplifiers

- > Frequencies from 20 MHz to 86 GHz
- > For network infrastructure, radar and communication systems
- > Available in a variety of packages

CATV Amplifiers

- > Single-ended and Push-Pull 75 Ω broadband amplifiers cover head-end, HFC infrastructure nodes, network and drop amplifiers
- > Flat gain response, low distortion and high linearity
- > Offered in small, plastic leaded and leadless packages

Hybrid Amplifiers

- > Gain Block
- > Low Noise Amplifiers
- > Limiting Amplifiers
- > 10 kHz to 6 GHz
- > Unconditionally stable with excellent cascading
- > Designed using thin film technology
- > Hermetically sealed and screened up to space level, these amplifiers are perfect for military applications



Active Splitters

Part Number	Min Freq (MHz)	Max Freq (MHz)	Splits (#)	Gain (dB)	Noise Figure (dB)	CSO (dBc)	CTB	Bias Current/Voltage (mA)/(V)	Package
MAAM-009811	50	1100	2	2.4	4.5	-55	-65	90/3	2 mm; PDFN-8
MAAM-008818	50	1100	2	3.2	3.4	-60	-63	120/5	2 mm; PDFN-8
MAAM-009879	50	1100	2	3.5	3.8	-60	-65	100/5	3 mm; PQFN-12
MAAM-007805	50	1100	2	8.5	4	-60	-75	100/5	3 mm; PQFN-12
MAAM-008819	50	1100	3	2.6	3.8	-60	-63	120/5	2 mm; PDFN-8
MAAM-009451	50	1100	3	3	3.5	-55	-67	90/3	2 mm; PDFN-8
MAAM-009450	50	1100	3	3.5	3.8	-65	-65	100/5	3 mm; PQFN-12
MAAM-007239	50	1100	3	6	4.5	-65	-77	125/5	3 mm; PQFN-16
MAAM-009452	50	1100	4	2.5	3.5	-56	-65	96/3.3	3 mm; PQFN-12
MAAM-009778	50	1100	4	2.5	4.5	-60	-65	100/5	3 mm; PQFN-12
MAAM-008820	50	1100	4	3	3.8	-62	-70	120/5	3 mm; PQFN-12
MAAM-009779	50	1100	5	1.5	3.9	-60	-65	110/5	3 mm; PQFN-12
MAAM-008821	50	1100	5	3.5	3.8	-60	-70	120/5	3 mm; PQFN-12
MAAM-010237	50	1100	8	1.9	4.4	-50	-65	190/5	4 mm; PQFN-24
MAAM-008970	950	2150	2	4.8	5	—	—	60/5	3 mm; PQFN-12

Amplifier Gain Blocks

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Output P1dB (dBm)	OIP3 (dBm)	Bias Current (mA)	Package
MAAM-008198-00A162	Cascadable; High Efficiency	10	1200	13	6	18	15	TO-8
MAAM02350-A2	Wideband Amplifier	200	3000	18	14	24	65	CR-3
MAAM02350	Wideband Amplifier	200	3000	19	14	24	65	Die
MAAM-011229	Broadband Low Noise	50	4000	19	20	34	80	2 mm; PDFN-8
MAAM-011229-CQ3	Broadband Low Noise	50	4000	19	20	36	80	3 mm; CQFN-12
MAAM-011357	Wideband Amplifier	400	6000	20	19	33	90	SOT-89; Plastic
XF1001-SC	Packaged HFET	DC	6000	15.5	30	46.5	300	SOT-89
MAAM-011326	Gain Block	500	6000	21	20	36	90	2 mm; PDFN-8
MAAM-011326-DIE	Gain Amplifier	500	6000	21	20	36	90	Die
MAAM-011305	Broadband Low Noise	30	8000	15.25	20	35	65	2 mm; PDFN-8
MAAM-011305-DIE	Broadband Amplifier	30	8000	16	20	37	66	Die
MAAM-011252	Broadband Low Noise	30	8000	20	20	34	56	2 mm; PDFN-8
MAAM-011252-DIE	Broadband Amplifier	30	8000	20	20	34	60	Die
MAAM-011252-CQ3	Broadband Low Noise	30	8000	20	20	34	65	3 mm; CQFN-12
MAAM28000-A1	Wideband Amplifier	2000	8000	17	14	24	70	CR-3
MAAM28000-A1G	Wideband Amplifier	2000	8000	17	14	24	70	CR-10
MAAM28000	Wideband Amplifier	2000	8000	18	14	24	60	Die
XB1007-BD	Buffer Amplifier	4000	11000	23	20	30	100	Die
XB1007-QT	Buffer Amplifier	4000	11000	23	19	31	100	3 mm; PQFN-16
ENGLA00059	C-/X-Band; Gain Block	4000	12000	7	21	36	100	Die
CMM0511-QT	Driver Amplifier	5000	14000	20	11	22	90	3 mm; PQFN-16
CGY2731UH	Gain Block	12000	15000	19	—	—	—	Die
MAAM-011206	Driver Amplifier	DC	15000	13.5	18	28	72	1.5 x 1.2 mm; TDFN-6
ENGDA00160	Wideband Distributed Amplifier	1000	19000	11	10	18	70	Die
ENGDA00074	Wideband Distributed Gain Block	1500	19000	8	16	35	190	Die
ENGDA00074	Wideband Distributed Gain Block	15000	19000	8	16	35	190	Die
ENGDA00072	Wideband Distributed Amplifier	800	20000	8	17.5	36	110	Die
ENGDA00161	Wideband Distributed Amplifier	1000	20000	10	10	18	70	Die
MAAM-011101	Ultra Small Broadband General Purpose Amplifier	4000	20000	16	19	30	45	1.5 x 1.2 mm; TDFN-6
MAAM-011289-DIE	Driver Amplifier	5000	20000	15	19.5	31	100	Die

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Amplifier Gain Blocks (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Output P1dB (dBm)	OIP3 (dBm)	Bias Current (mA)	Package
MAAM-011289	Driver Amplifier	5000	20000	16.5	20	30	102	3 mm; AQFN-12
MAAM-011290-DIE	Driver Amplifier	5000	20000	20	19.5	32	115	Die
MAAM-011290	Driver Amplifier	5000	20000	20.5	20	29	110	3 mm; AQFN-12
XB1008-BD	Buffer Amplifier	10000	21000	18	20	30	100	Die
XB1008-QT	Buffer Amplifier	10000	21000	17	18	32	100	3 mm; PQFN-16
ENGDA00073	Wideband Distributed Amplifier	750	22000	10	18	36	175	Die
MAAM-011132	Driver Amplifier	17700	23600	23	21	33	180	4 mm; PQFN-16
XB1004-BD	Buffer Amplifier	16000	30000	21	19	29	100	Die
MAAM-011112	Buffer Amplifier	20000	37000	24	18	30	335	3 mm; PQFN-1
XB1006-BD	Buffer Amplifier	18000	38000	21	15	25	50	Die
MAAM-011109	Wideband Amplifier	10	40000	13	18	22	170	5 mm; LGA-9
MAAM-011337	LO Buffer Amplifier	27000	42000	23	20	29	260	2 mm; DFN-8
MAAM-011338	LO Buffer Amplifier	27000	42000	26	12	22	80	2 mm; DFN-8
XB1005-BD	Buffer Amplifier	35000	45000	23	16	26	50	Die
MAAM-010651	Buffer Amplifier	37000	45000	21	20	30.5	50	3 mm; PQFN-16

Amplifier Modules

Part Number	Min Freq (GHz)	Max Freq (GHz)	Gain (dB)	RL In/Out (dB)	P _{SAT} (dBm)	P _{SAT} (W)	PAE (%)	Voltage (V)	DC Current (A)	Package Size
ENGAD00053	0.3	3	27	10/13	42.2	16.6	50	28	0.2	1.33" x 1.78" x 0.5"
ENGAD00073	0.3	3	27	10/13	42.2	16.6	50	28; -2.2	0.2	1.44" x 1.28" x 0.82"
ENGAD00074	4	6	27	16/21	40	10	50	26	0.47	1.33" x 1.78" x 0.5"
ENGAD00054	4	8	28	15/6	37	5	50	24	0.33	1.33" x 1.78" x 0.5"
ENGAD00055	8	11	25	10/6	35	3.2	40	20	0.18	1.33" x 1.78" x 0.5"
ENGAD00039	8	12	28	15/14	43.4	21.9	41	28	0.6	1.33" x 1.78" x 0.5"
ENGAD00072	8	12	28	12/15	43.4	21.9	41	28; -1.5	0.6	0.5" x 0.45" x 0.055"
ENGAD00080	8	12	28	12 / 12	46.5	44.7	45	28; -1.5	1.2	1.44" x 1.28" x 0.82"
ENGAD00017	2	18	40	17/12	39	7.9	15	28	1.2	2.9" x 2.14" x 0.45"
ENGAD00034	2	18	30	15/15	35	3.2	20	18	0.31	1.33" x 1.78" x 0.5"
ENGAD00035	2	18	10.5	16/19	37	5	23	28	0.3	1.33" 1.78" x 0.5"
ENGAD00036	2	18	10.5	15/13	40	10	25	28	0.6	1.33" x 1.78" x 0.5"
ENGAD00041	2	18	21	18/13	40	10	22	28	0.87	1.33" x 1.78" x 0.5"
ENGAD00045	15	18	37	15/12	42	15.8	17	28	1.5	2.9" x 2.14" x 0.45"
ENGAD00056	14	18	22	7/10	33	2	38	20	0.2	1.33" x 1.78" x 0.5"
ENGAD00071	2	18	30	16/16	34	2.5	31	18; -1.5	0.5	0.25" x 0.45" x 0.055"
ENGAD00028	2	18	26	14/12	—	—	—	8; -5	0.46	1.12" x 0.95" x 0.5"
ENGAD00081	15.2	18.2	24	10/12	46	40	30	28; -1.9	0.6	1.44" x 1.28" x 0.82"
ENGAD00040	20	21.5	24	12/18	40	10	33	28	0.25	1.33" x 1.78" x 0.5"
ENGAD00042	20	21.5	23	12/18	42.8	19.1	35	28	0.47	1.33" x 1.78" x 0.5"
ENGAD00057	18	22	20	6/6	31	1.3	30	20	0.1	1.33" x 1.78" x 0.5"
ENGAD00026	19.5	22	28	12/15	40	10	36	28; -1.6	0.25	0.58" x 0.38" x 0.12"
ENGAD00011	29.2	30.2	44	10/10	47	50.1	15	28; 6; -6	5.9; 1.5; 0.014	12" x 8.5" x 4"
ENGAD00015	29.3	31.3	48	14/20	50.8	120.2	21	28	7.9	12" x 8.5" x 4"

Power Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Output P1dB (dBm)	P _{SAT} (dBm)	Gain (dB)	OIP3 (dBm)	Package
ENGDA00170A	—	2	18	—	37	11	—	Die
ENGDA00179A	—	2	18	—	—	11	—	Die
MAAP-011232	Power Amplifier	100	3000	29	30	25	40	3 mm; PQFN-16,
MAAP-010168	10 W; Power Amplifier	500	3000	39	41	24	—	Flanged-10; Ceramic

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
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Power Amplifiers (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Output P1dB (dBm)	P _{SAT} (dBm)	Gain (dB)	OIP3 (dBm)	Package
MAAP-011022	7 W; Pulsed High Power Amplifier	2700	3000	37.5	38.3	23	—	6 mm; PQFN-28
MAAP-010171	8 W; Power Amplifier	2500	3500	38	39	27.3	—	5 mm; PQFN-20
MAAP-011027	8 W; Power Amplifier	5200	5900	—	39	20	—	5 mm; PQFN-20
MAAM26100-B1	Power Amplifier	2000	6000	27	30.5	19	39	CR-2
MAAP-011307	High Linearity Distributed Power Amplifier	50	6000	29	—	12	40	Lead-Free; PQFN
MAAP-011307-DIE	High Linearity Distributed Power Amplifier	50	6000	29	40	12	41	Die
MAAM26100-P1	Power Amplifier	2000	6000	28	30.5	20	40	CR-15
MAAP-010169	10 W; Power Amplifier	2000	6000	38	41	18	—	Flanged-10; Ceramic
MAAM26100	GaAs MMIC Power Amplifier	2000	6500	28	30.5	19	39	Die
XP1039-QJ	2.5 W; Power Amplifier	5600	7100	33	34	17	48	6 mm; QFN-24
MAAP-011161	4 W; Power Amplifier	7100	7900	35.5	36.5	22	46.5	7 mm; Air Cavity
MAAP-011193	4 W; Power Amplifier	7700	8500	35.5	36.5	20	46.5	7 mm Lead-Free Cavity
XP1035-QH	0.5 W; Power Amplifier	5900	9500	28	29	26	39	4 mm; PQFN-24
MAAM71100	GaAs MMIC Power Amplifier	7000	11000	28	31	18	38	Die
MAAP-015035-DIE	12 W; Power Amplifier	8500	11500	40	41	36	—	Die
MAAP-015030-DIE	13 W; Power Amplifier	8500	11750	38	41	25	—	Die
MAAP-008924	1.2 W; Power Amplifier	10000	13300	31	32	20	44	5 mm; PQFN-20
MAAP-011313	4 W; Power Amplifier	13500	15000	34.5	36	36	—	5 mm; AQFN-32
MAAP-011333-DIE	4 W; Power Amplifier	13500	15000	37	38	26	—	Bare Die
MAAP-010150	10 – 15.35 GHz; Power Amplifier	10000	15350	33.5	36	27	42	7 mm; QFN-48
MAAP-011202	2.5 W; Power Amplifier	12700	15400	33.5	34.5	30	41	5 mm; QFN-24
MAAP-010517	3 W; Power Amplifier	14400	15400	35	36.4	24	42	5 mm; PQFN-24
XP1042-QT	0.5 W; Power Amplifier	12000	16000	25	27	21	38	3 mm; PQFN-16
XP1043-QH	1.5 W; Power Amplifier	12000	16000	30	32	21.5	41	4 mm; PQFN-24
MAAP-011145-STD	2 W; Power Amplifier	17650	19750	33	34.5	25	43	7 mm; Cavity
MAAP-011327	1 W; Power Amplifier	1	22000	28.5	30.5	13.5	47	5 mm; AQFN-32
MAAP-011327-DIE	1 W; Power Amplifier	1	22000	30	32	14	47	Die
MAAP-011146-STD	2 W; Power Amplifier	21150	23650	34	35	24	41	7 mm; Cavity
MAAP-118260	Power Amplifier	18000	26000	28.5	31	28.5	37	5 mm; QFN-24
MAAP-011324-DIE	0.25 W; DC — 40 GHz; Power Amplifier	DC	27000	25	26	18	35	Die
MAAP-011324	0.25 W; DC — K-Band; Power Amplifier	DC	27000	25.5	27	18	35	5 mm; AQFN-32
MAAP-011319	0.5 W; Ka-Band; Power Amplifier	24000	30000	26	27	24	37	4 mm; AQFN-24
MAAP-011358-DIE	6 W; Ka-Band; Power Amplifier	27000	30000	37.5	39	27	—	Die
MAAP-011250	4 W; Ka-Band; Power Amplifier	27500	30000	34.8	36	24	—	5 mm; AQFN-32
MAAP-011361	4 W; Power Amplifier	27500	30000	36	37	28	37	5 mm; AQFN-32
MAAP-011362	2 W; Power Amplifier	27500	30000	33	34	27.5	34	5 mm; AQFN-32
MAAP-011289	3 W; Ka-Band; Power Amplifier	28000	30000	34	36	24	—	5 mm; AQFN-32
MAAP-011316	2 W; Ka-Band; Power Amplifier	27000	31000	33.5	34	26	—	5 mm; AQFN-32
MAAP-011317	4 W; Power Amplifier	27500	31000	36.5	36	27.5	36	5 mm; QFN-32
MAAP-011233	4 W; Ka-Band; Power Amplifier	28500	31000	34.5	37	25	—	5 mm; AQFN-32
MAAP-011139	4 W; Power Amplifier	28500	31000	34.5	36	23	36	5 mm; AQFN-32
MAAP-011139-DIE	4 W; Power Amplifier	29000	31000	34.5	36.5	22	—	Die
MAAP-011340-DIE	0.25 W; Ka-Band; Amplifier	27000	31500	24	26	24	33	Die
MAAP-011340	0.25 W; Ka-Band; Amplifier	27000	31500	24	—	25	33	4 mm; AQFN-24
MAAP-011341	0.5 W; Ka-Band; Power Amplifier	27000	31500	27	28	28	36	4 mm; AQFN-24
MAAP-011341-DIE	0.5 W; Ka-Band; Power Amplifier	27000	31500	26.5	28	27	36	Die
MAAP-011246	Power Amplifier	27500	31500	30	33	23	—	5 mm; AQFN-32
MAAP-011298	2.3 W; Ka-Band; Power Amplifier	28000	31500	32.5	33.5	24.5	—	5 mm; AQFN-32
MAAP-015016-DIE	4 W; Ka-Band; Power Amplifier	32000	38000	—	37	18	—	Die

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Power Amplifiers (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Output P1dB (dBm)	P _{SAT} (dBm)	Gain (dB)	OIP3 (dBm)	Package
MAAP-011325	0.25 W; Power Amplifier	DC	40000	24.5	27	11	33	5 mm; 12-lead Laminate
MAAP-011325-DIE	0.25 W; DC — 40 GHz; Power Amplifier	DC	40000	27	28	11	35	Die
MAAP-011170	Power Amplifier	37000	40000	27	28	27	38	7 mm; SMD-16
XP1080-QU	38 GHz; Power Amplifier	37000	40000	27	28.9	25	38	7 mm; LGA-16
MAAP-010512	42 GHz; Power Amplifier	40500	43500	27	29	22	38	7 mm; LGA-16
MAAP-011377	0.25 W; Power Amplifier	20000	55000	24	24	22	33	5 mm; 12-lead; Laminate
MAAP-011377-DIE	0.25 W; Power Amplifier	20000	55000	24	24	22	33	Die
MAAP-011378	0.5 W; Power Amplifier	20000	55000	25	27	22	35	5 mm; 12-lead; SMT
MAAP-011378-DIE	0.5 W; Power Amplifier	20000	55000	25	27	22	35	Die
MAAP-011379	1 W; Power Amplifier	20000	55000	26	30	22	39	5 x 7 mm; 12-lead; SMT
MAAP-011379-DIE	1 W; Power Amplifier	20000	55000	28	30	22	37	Die
MAAP-011205	0.25 W; Power Amplifier	71000	86000	21	24	19	—	7 mm; AQFN-16
MAAP-011218-DIE	0.5 W; Power Amplifier	71000	86000	26	27	20	31	Die
MAAP-011199	Power Amplifier	80000	100000	22	24	12	—	Die

Linear Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Output P1dB (dBm)	Package
MAAM-011106	Power Amplifier Module	1616	1627	30.5	30	33	Die
MAAM-011117	Broadband; Low Distortion	50	2700	16	35	19.5	2 mm; PDFN-8
MAAM-011322	Driver Amplifier	1700	2800	19	39	24	3 mm; 16-lead; SMT
MAAM-011302	Driver Amplifier	1700	2900	38	41	26	Lead-Free; SMT
MAAM-011324	Driver Amplifier	3300	3800	17	40	26	3 mm; 16-lead; Lead-Free; SMT
MAAM-011323	Driver Amplifier	3000	4400	17	39	25	3 mm; 16-lead; SMT
MAAM-011361	Driver Amplifier	3000	4400	35	40	26	Lead-Free; SMT
XF1001-SC	Packaged HFET	DC	6000	15.5	47	30	SOT-89
MAAM-011326	21 dB; Gain Amplifier	500	6000	21	36	20	2 mm; PDFN-8
XP1050-QJ	2.5 W; Power Amplifier	7100	8500	15.5	47	33	6 mm; QFN-24
MAAP-015035-DIE	12 W; Power Amplifier	8500	11500	36	—	—	Die
MAAP-015024-DIE	8 W; Power Amplifier	14500	17500	21	—	—	Die
XP1027-BD	Power Amplifier	27000	31000	25	43	34	Die
XP1026-BD	Power Amplifier	27000	32000	21	40	32	Die
MAAM-011139	Driver Amplifier	27500	33400	21	32	20	4 mm; QFN-24
XP1017-BD	Power Amplifier	30000	36000	16	33	24	Die
MAAM-011167	Medium Power Amplifier	71000	86000	18	27	21	Die
MAAP-011205	Power Amplifier	71000	86000	19	—	21	Die
MAAP-011106	Power Amplifier	71000	86000	20	30	23	Die

High Frequency Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
MAAP-011215-DIE	Power Amplifier	55000	70000	25	32	Die
MADC-011021	E-Band; Direct Downconverter	71000	86000	—	—	8.0 x 8.0 x 2.235 mm; SM
MAAM-011167	Power Amplifier	71000	86000	18	27	Die
MAAP-011205	Power Amplifier	71000	86000	18	27	7 x 7 mm; SMT
MAAP-011106	Power Amplifier	71000	86000	20	30	Die
MAAP-011218-DIE	0.5 W; Power Amplifier	71000	86000	20	31	Die
MAMF-011142	E-Band; Direct Upconverter	71000	86000	30	25.5	12000 x 8000 x 2220 µm; SM
MAAP-011388-DIE	E-Band Power Amplifier	71000	86000	28	42	Die
MAAP-011199-DIE	Power Amplifier	80000	100000	12	—	Die

Note: Part numbers are RoHS compliant.
 Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
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Low Noise Amplifiers

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (dB)	OIP3 (dBm)	Output P1dB (dBm)	Bias Voltage (V)	Bias Current (mA)	Package
MAAL-011236 †	64	128	28	0.35	26	17	10	9	Laminate; non-magnetic
MAAL-011204 †	62.87	128.74	28	0.6	28	11.5	3	37	4 mm; PDFN-8
MAAL-011227	62.87	128.74	28	0.6	28	11.5	3	37	15.24 x 10.16 mm; Module
MAAL-011228 †	126.74	128.74	27.1	0.5	21	8.5	3	27	Laminate; non-magnetic
MAAL-011237 †	126.74	128.74	28	0.25	26	17	10	8	Laminate; non-magnetic
MAAL-011237	127	129	28	.25	26	17	—	—	Laminate
MAAL-011234 †	41.57	299	28	0.3	24	17	10	9	4 mm; 8-lead; non-magnetic
MAAL-011136	45	1218	20.5	1.2	32	17.5	5	50	SOT-89; Plastic
MAAL-010705	500	1600	21	0.5	32	18.5	4	60	2 mm; PDFN-8
MAALS50042	1500	1600	27	1.15	13	1	5	20	Lead-Free; SOIC8
MAAM-011297	5	1800	17	2.0	42	24	5	290	SOIC8EP
MAAM-011299	5	1800	18.7	2.5	42	24	5	290	SOIC8EP
MAALS50048	1400	2000	18	1.6	13	1	3	7	SOT-26
MAAL-009120	70	3000	11	1.4	35	18.5	3	80	SOT-363
MAAL-010200	70	3000	11	1.4	36	17.5	3	77	SOT-89
CGY2106XHV	100	3000	19	0.45	35	19	2.5	50	QFN
MAAL-007304	500	3000	25.5	0.7	19	7	3	12	SOT-26
MAAL-009053	800	3000	11	1.4	35	18	3	80	SOT-363
MAAL-010570	100	3500	16	0.75	34	18.8	5	15	SOT-363
MAAL-010704	100	3500	16	0.8	34	19	3	60	SOT-363
MAAL-011138	2500	3500	21	1	28	—	5	55	2 mm; PDFN-8
MAAM-011229-CQ3	50	4000	19	1.3	38	19.0	5	80	3 mm; CQFN-12
MAAM-011229	50	4000	19	1.3	45	19.5	5	80	2 mm; QFN-8
CGY2105XHV	500	4000	19	0.42	35	21	3	50	QFN
MAAL-010706	1400	4000	17.5	0.6	34.5	19	4	60	2 mm; PDFN-8
MAAL-011207-Q	150	6000	23	0.3	33	17.5	3	50	2 mm; PDFN-8
CGY2108GS	500	6000	21	0.6	36	10	5	50	Hermetic; Ceramic
MAAM-011326	500	6000	21	1.5	36	20	5	90	2 mm; PDFN-8
CGY2108HV	500	6000	21.5	0.5	36	22	5	50	Hermetic; Ceramic
CGY2107HV	500	6000	24	0.5	36	19	5	50	QFN
MAAL-011134	700	6000	15	0.85	28	15	3	50	2 mm; PDFN-8
MAAL-011134-CQ3	700	6000	15	0.85	28	15	3	50	3 mm; CQFN-12
MAAL-011078	700	6000	23	0.35	33	17.5	3	50	2 mm; PDFN-8
MAAL-011188	1000	6000	35	0.79	31	17.5	5	80	3 mm; PQFN-16
CGY2178UH	5000	6000	30	1	22	15	3	40	Die
MAAL-01124	1400	6500	34	0.9	35	—	—	—	QFN
MAAM37000	3500	7000	17	1.8	24	14	4	75	Die
MAAM37000-A1	3500	7000	17	2.2	25	14	4	75	Ceramic; 8-lead
MAAM37000-A1G	3500	7000	17	2.2	25	14	4	75	Gull Wing-8; Ceramic
CGY2120XUH	5000	7000	13	0.5	—	12	1	50	Die
MAAM-011305	30	8000	15.3	1.7	35	20	5	65	2 mm; PDFN-8
MAAM-011305-DIE	30	8000	16	1.6	37	20	5	55	Die
MAAM-011252	30	8000	20	1.2	34	19.5	5	56	2 mm; PDFN-8
MAAM-011252-DIE	30	8000	20	1.2	34	20	5	60	Die
MAAM-011252-CQ3	30	8000	20	1.4	34	20	5	65	3 mm; CQFN-12
ENGLA00262A	3000	8000	15	2.1	21	—	—	—	Die
CGY2220UH	1000	12000	36	1.5	12	—	1.5	54	Die
MAAM71200-H1	7500	12000	15.5	2.7	21	11	4	40	CR-16
MAAM71200	7500	12000	16.5	2.3	22	12	4	40	Die

Note: Part numbers are RoHS compliant. † Indicates non-magnetic.
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Low Noise Amplifiers (continued)									
Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (dB)	OIP3 (dBm)	Output P1dB (dBm)	Bias Voltage (V)	Bias Current (mA)	Package
CGY2221UH	8000	12000	16	1.6	29	17	5	82	Die
MAAL-010528	8000	12000	20	1.6	26	14	4	60	3 mm; PQFN
CGY2124UH	8000	12000	33	1.1	20	10	5	55	Die
ENGLA00267A	6000	13000	8.5	2.5	28	—	—	—	Die
CGY2221HV	7500	13000	16	1.6	29	17	5	82	QFN
CGY2221HV	7500	13000	17	1.6	—	17	5	82	QFN
CGY2232UH	12750	14750	24	1.3	—	0	3	24	Die
CGY2125AUH	13000	15000	25	1.5	—	8	3.3	20	Die
CGY2230UH	1000	18000	35	1.5	12	0	1.5	50	Die
MAAL-011151	2000	18000	15	3.5	—	5	3	2	5 mm; PQFN-32
ENGLA00263A	2000	18000	15	3	20	10	—	—	Die
MAAL-011130	2000	18000	21	1.4	24	14	3	80	2 mm; PQFN-8
ENGLA00182A	2000	18000	17.5	2	22	12	—	—	Die
ENGLA00183A	2000	18000	32	2.7	27	18	—	—	Die
CGY2290SUH	6000	18000	8.5	3	—	13	5	30	Die
MAAL-011181	9	20000	15	2.5	29	18	5	—	5 mm; PQFN-32
MAAL-011181-DIE	9	20000	15	2.5	29	18	5	—	Die
MAAL-011182	2000	20000	15	1.5	24	14	5	65	5 mm; PQFN-32
MAAL-011182-DIE	2000	20000	15	2.5	25	14	5	65	Die
MAAL-011265	17000	21500	28.5	1.5	18	10	2	26	2 mm; DFN-8
MAAL-011146	17250	21500	17	1.4	14	12	2	30	3 mm; PQFN-16
ENGLA00259A	12000	26000	12.5	3	20	—	—	—	Die
ENGLA00261A	13000	26000	7	2.5	28	—	—	—	Die
CGY2121XUH	18000	26000	19	1.3	5	7	1.5	60	Die
MAAL-011141	DC	28000	17.5	1.4	27.5	16	6	75	5 mm; AQFN-32
MAAL-011141-DIE	DC	28000	17.5	1.4	27.5	16	6	75	Die
MAAL-011129	18000	31500	23	2.5	25	16	3	80	2 mm; PQFN-8
MAAL-011264	27000	31500	26	1.6	10	2	2	12	2 mm; DFN-8
MAAL-011238	27000	31500	30	1.5	20	11	2	25	2 mm; DFN-8
MAAL-011238	27000	31500	30	1.5	20	11	2	25	2 mm; DFN-8
MAAL-011238-DIE	27000	31500	30	1.2	20	11	2	25	Die
MAAL-011240-DIE	27000	31500	25	1.2	28	18	3.5	90	Die
CGY2128UH	24000	34000	23	1.6	17.5	8.5	3.5	47	Die
MAAL-011138	25000	35000	21	1	28	—	5	80	3 mm; PDFN-8
XL1002-BD	20000	36000	23	2.6	16	4	5	85	Die
MAAL-011198	32000	37000	18.5	3	23	18	3.3	90	2 mm; PDFN-8
XL1010-BD	20000	38000	17	3	—	—	4	45	Die
XL1010-QT	20000	38000	17	3	—	6	4	45	3 mm; QFN-16
MAAL-011111	22000	38000	19	2.5	—	5	3	55	3 mm; QFN-16
XL1000-BD	20000	40000	20	2	16	9	3	35	Die
CGY2122XUH	25000	43000	32	1.5	10	1.2	1.1	30	Die
CGY2260UH	24000	44000	25.5	1.7	22	6	1.5	50	Die
MAAL-011229 †	17000	55000	24	3.2	27	17.5	3	150	5 mm; 12-lead; SMT
MAAL-011229-DIE	17000	55000	24	3.2	27	17.5	3	150	Die
MAAL-011186	20000	55000	20	2.5	24	14	3.5	130	5 mm; Lead-Free; SMT
MAAL-011186-DIE	20000	60000	20	2.5	24	14	3.5	130	Die
CGY2272UH	44000	69000	29	1.7	—	5	1.5	46	Die
CGY2190UH	75000	110000	23	2.8	—	1	1	33	Die

Note: Part numbers are RoHS compliant. † Indicates non-magnetic.
 Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
 All specifications are subject to change.

Low Phase Noise Amplifiers

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (dB)	Phase Noise (dBc/Hz)	Package
MAAL-011154	4000	8000	15.7	5	-165	4 mm; PQFN-16
MAAL-011154-DIE	4000	8000	15	5.1	-165	Die
MAAL-011155	6000	12000	15.5	5	-167	4 mm; PQFN-16
MAAL-011155-DIE	6000	12000	15	5.1	-167	Die
MAAL-011151	2000	18000	15	4	-154	5 mm; PQFN-32
MAAL-011161	2000	18000	14	5	-169	5 mm; PQFN-32
MAAL-011161-DIE	2000	18000	14	5	-169	Die
MAAL-011159-DIE	2000	27000	23	4	-164	Die
MAAL-011158-DIE	2000	28000	12	4	-172	Die
MAAL-011158	2000	30000	12	5	-172	5 mm; AQFN-32

Variable Gain Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Output P1dB (dBm)	Atten Range	Package
MAAM-010399	CATV Return Path Differential	50	1200	28	48	26	25	5 x 7 mm; PQFN-40
MAAM-011100	Ultra Small Broadband	400	20000	12	25	15	30	1.5 x 1.2 mm; TDFN-6
MAAM-010651	Amplifier; Buffer	37000	40000	21	30.5	20	15	3 mm; QFN

CATV Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Bias Current (mA)	Bias Voltage (V)	Noise Figure (dB)	Package
MAAM-011156	Return Path Differential	5	300	19	44	210	8	7	3 mm; PQFN-16
MAAM-011184	Return Path Single-ended	5	300	21	43	95	5	2.5	MSOP8-EP
MAAM-011185	Return Path Differential	5	300	21.2	43	290	5	3.1	3 mm; PQFN-16
MAAM-011186	Variable Gain Differential	5	300	39	42	280	8	3	7 mm; PQFN-48
MAAM-011168	Differential Variable Gain	5	300	40	44	290	8	2.6	7 mm; PQFN-48
MAAMSS0067	Low Noise; Low Distortion	50	1000	12.2	32	190	5	3.3	4 mm; PQFN-20
MAAMSS0044	Low Noise; Low Distortion	50	1000	12.2	42	225	5	3.3	4 mm; PQFN-20
MAAM-009100	Broadband	50	1000	14.3	34	105	5	3	SOT-89
MAAM-007724	Low Noise; Low Distortion	50	1005	12.2	32	190	5	3.3	4 mm; PQFN-20
MAAM-010373	Broadband	50	1100	22	40	148	8	1.66	SOT-89
MAAM-011169	75 Ω; CATV; Push Pull	45	1200	25	54	480	12	4.4	5 x 7 mm; PQFN-40
MAAMSS0041	Low Noise; Low Distortion	50	1200	15	36	100	8	2.7	SOT-89
MAAMSS0042	Low Noise; Low Distortion	50	1200	15	38	110	5	3	SOT-89
MAAMSS0060	Low Noise; Low Distortion	50	1200	17	37	120	8	1.8	SOT-89
MAAM-009633	Broadband	50	1200	17	37	120	8	1.9	SOT-89
MAAM-011251	75 Ω; High Linearity; Low Noise	5	1218	15	37	100	5	1.9	SOT-89
MAAM-011258	75 Ω; High Linearity; Low Noise	5	1218	15	37	100	5	2.2	SOT-89
MAAM-011240	75 Ω; Differential RF	5	1218	17	44	290	5	1.7	SOIC8EP
MAAM-011163	75 Ω; Differential RF	5	1218	19	42	290	5	1.7	SOIC8EP
MAAM-011182	75 Ω; 8 V RF	45	1218	18	38	130	8	2.7	2 mm; PDFN-8
MAAM-011297	75 Ω; RF Differential	5	1800	17	42	290	5	2	SOIC8EP
MAAM-011299	75 Ω; RF Differential	5	1800	18.7	42	290	5	2	SOIC8EP
MAAL-011119	Satellite TV	900	2200	10.5	32	80	2.5	1.5	SOT-363
MAAL-009053	Satellite TV	800	3000	11	35	80	3	1.4	SOT-363
MAAL-011139	Low Noise	5	4000	21	34	85	5	1	SOT-89

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Distributed Amplifiers

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Gain Flatness (dB)	Noise Figure (dB)	OIP3 (dBm)	Output P1dB (dBm)	Package
MAAM-011289	5000	20000	16	1	5	30	20	3 mm; AQFN-12
MAAM-011290	5000	20000	20	2.5	4	29	20	3 mm; AQFN-12
MAAP-011327-DIE	2000	22000	13	—	—	42	28	Die
MAAP-011327	2000	22000	13	—	—	45	28	5 mm; AQFN-32
MAAP-011324	DC	27000	18	—	—	34	25	5 mm; AQFN-32
MAAP-011325-DIE	DC	40000	11	—	—	35	27	Die
MAAM-011275-DIE	DC	40000	15	0.75	5	33	21	Die
MAAM-011109	10	40000	13	18	3.5	22	18	5 mm; LGA-9
MAAM-015023-DIE	18000	40000	26	0.5	6	30	21	Die
MAAM-011286-DIE	DC	44000	16	1	4	30	22	Die
CGY2145UH	500	45000	12.7	—	4.5	—	18	Die
MAAM-011291-DIE	20000	45000	19	—	—	35	28.5	Die
MAAM-011277-DIE	20000	45000	24.5	—	—	30	23.5	Die
CGY2141UH	10	46000	16	—	4	—	19	Die
CGY2160UH	1500	47000	14.5	—	1.5	—	17	Die
MAAM-011275	DC	50000	15	0.75	5	29	20	5 mm; AQFN-12
MAAM-011238	DC	50000	14	3.5	5.5	27	17	5 mm; LGA-12
MAAM-011231-DIE	DC	50000	15	1.5	3.5	24	15	Die
XD1001-BD	18000	50000	17	1	5	24	15	Die
CGY2144UH	10	54000	13	—	2.5	—	15	Die
MAAM-011238-DIE	DC	67500	15	2	7	27	17.6	Die

FTTx Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Bias Current (mA)	Bias Voltage (V)	Noise Figure (dB)	Package
MAAM-007807	CATV and 2nd Stage FTTx Amp	50	1000	9	35	60	5	3.8	SOT-89
MAAM-008863	FTTx RF Amplifier	50	1000	37	—	220	5	4.8	4 mm; PQFN-24
MAAM-010333	Optical Node RF Amplifier	50	1200	33	—	260	5	—	4 mm; PQFN-24

Hybrid Amplifiers: Gain Blocks

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
A72	Cascadable; High Efficiency	5	500	15	26	TO-8
SMA72	Cascadable; High Efficiency	5	500	15	26	SMT
A54	Cascadable	5	500	15.5	21	TO-8
A77	Cascadable	5	500	16.5	30	TO-8
CA77 ♦	Cascadable	5	500	16.5	30	Connectorized
SMA77	Cascadable	5	500	16.5	30	SMT
A88	Cascadable	5	500	18.7	30	TO-8
SMA88	Cascadable	5	500	18.7	30	SMT
A74-2	Cascadable; High Efficiency	5	500	26	10	TO-8
RA89	Cascadable; High Gain	5	500	26.5	35	TO-8B
CRA89 ♦	Cascadable; High Gain	5	500	26.5	35	Connectorized
A55	Cascadable	10	500	14.7	24	TO-8
A57	Cascadable	10	500	14.7	28	TO-8
SMA57	Cascadable	10	500	14.7	28	SMT
PA512	Cascadable; Medium Power	10	500	18	40	TO-8
MAAM-007502-CPA512 ♦	Cascadable; Medium Power	10	500	18	40	Connectorized
SMA513	Cascadable	10	500	20	30	SMT
MAAM-008200-000A83	Cascadable; High Efficiency	10	500	30	10	TO-8
RA89-1	Cascadable; High Gain	10	500	30	36	TO-8B

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Hybrid Amplifiers: Gain Blocks (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
CRA89-1 ♦	Cascadable; High Gain	10	500	30	36	Connectorized
SMRA89-1	Cascadable; High Gain	10	500	30	36	SMT
A77-1	Cascadable	5	600	16	30	TO-8
CA77-1 ♦	Cascadable	5	600	16	30	Connectorized
SMA77-1	Cascadable	5	600	16	30	SMT
A5-6	Cascadable	6	600	15.5	21	TO-8
SMA5-6	Cascadable	6	600	16	21	SMT
A59-1	Cascadable; High Dynamic Range	10	700	10.5	36	TO-8
SMA59-1	Cascadable; High Dynamic Range	10	700	10.5	36	SMT
A89	Cascadable	50	800	22	30	TO-8
SMA89	Cascadable	100	800	22	30	SMT
AMC-184-SMA ♦	Cascadable	5	1000	20	20	Connectorized
AMC-145-SMA ♦	Cascadable	10	1000	10.7	32	Connectorized
A19-1	Cascadable	10	1000	11.5	35	TO-8
CA19-1 ♦	Cascadable	10	1000	11.5	35	Connectorized
SMA19-1	Cascadable	10	1000	11.5	35	SMT
A17	Cascadable	10	1000	12	27	TO-8
CA17 ♦	Cascadable	10	1000	12	27	Connectorized
SMA17	Cascadable	10	1000	12	27	SMT
RA69	Cascadable; High Gain	10	1000	25	34	TO-8B
CRA69 ♦	Cascadable; High Gain	10	1000	25	34	Connectorized
SMRA69	Cascadable; High Gain	10	1000	25	34	SMT
A1021	Cascadable; High Gain	10	1000	26	26	TO-8
CA1021 ♦	Cascadable; High Gain	10	1000	26	26	Connectorized
SMA1021	Cascadable; High Gain	10	1000	26	26	SMT
A66-1	Cascadable; High Gain	10	1000	27.5	28	TO-8
CA66-1	Cascadable; High Gain	10	1000	27.5	28	Connectorized
SMA66-1	Cascadable; High Gain	10	1000	27.5	28	SMT
RA66	Cascadable; High Gain	10	1000	37	30	TO-8B
CRA66 ♦	Cascadable; High Gain	10	1000	37	30	Connectorized
SMRA66	Cascadable; High Gain	10	1000	37	30	SMT
AMC-155-SMA ♦	Cascadable; High Dynamic Range	300	1000	12.3	30	Connectorized
A66	Cascadable	10	1200	23.5	28	TO-8
CA66 ♦	Cascadable	10	1200	23.5	28	Connectorized
SMA66	Cascadable	10	1200	23.5	28	SMT
A64	Cascadable; High Gain	10	1200	26	20	TO-8
CA64 ♦	Cascadable; High Gain	10	1200	26	20	Connectorized
SMA64	Cascadable; High Gain	10	1200	26	20	SMT
A27	Cascadable	5	1500	8.5	28	TO-8
A25	Cascadable	5	1500	10	21	TO-8
A24	Cascadable	5	1500	20	21	TO-8
CA24 ♦	Cascadable	5	1500	20	21	Connectorized
SMA24	Cascadable	5	1500	20	21	SMT
A29-1	Cascadable	10	1500	9	32	TO-8
CA29-1 ♦	Cascadable	10	1500	9	32	Connectorized
SMA29-1	Cascadable	10	1500	9	32	SMT
A28	Cascadable	10	1500	11	29	TO-8
CA28 ♦	Cascadable	10	1500	11	29	Connectorized
SMA28	Cascadable	10	1500	11	29	SMT

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant.
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Hybrid Amplifiers: Gain Blocks (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
A26	Cascadable	10	1500	20.5	27	TO-8
CA26 ♦	Cascadable	10	1500	20.5	27	Connectorized
SMA26	Cascadable	10	1500	20.5	27	SMT
A39	Cascadable	10	2000	7.5	34	TO-8
SMA39	Cascadable	10	2000	7.5	34	SMT
A38	Cascadable	10	2000	9.5	30	TO-8
CA38 ♦	Cascadable	10	2000	9.5	30	Connectorized
SMA38	Cascadable	10	2000	9.5	30	SMT
A35	Cascadable	10	2000	10	21	TO-8
CA35 ♦	Cascadable	10	2000	10	21	Connectorized
SMA35	Cascadable	10	2000	10	21	SMT
A37	Cascadable	10	2000	10	28	TO-8
SMA37	Cascadable	10	2000	10	28	SMT
A34	Cascadable	100	2000	16	18	TO-8
SMA34	Cascadable	100	2000	16	18	SMT
A36	Cascadable	100	2000	16.5	23	TO-8
SMA36	Cascadable	100	2000	16.5	23	SMT
RA36	Cascadable; High Gain	100	2000	24	22	TO-8
CRA36 ♦	Cascadable; High Gain	100	2000	24	22	Connectorized
SMRA36	Cascadable; High Gain	100	2000	24	22	SMT
SMPA2010	Cascadable; Medium Power	200	2000	10	33	SMT
CA36-1 ♦	Cascadable	100	2300	16.2	23	Connectorized

Hybrid Amplifiers: Low Noise Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
A101	Cascadable; High Linearity	5	100	17	3	36	TO-8
SMA101	Cascadable; High Linearity	5	100	17	3	36	SMT
AMS-162-PIN ♦	Cascadable; High Dynamic Range	10	100	12.5	1.5	30	TO-8
AMC-162-SMA ♦	Cascadable; Low Noise; High Dynamic Range	10	100	12.5	1.5	30	Connectorized
AM-162-PIN ♦	Cascadable; High Dynamic Range	10	100	12.5	1.1	32	TO-8
A80-1	Cascadable	10	200	27.3	2	28	TO-8
SMA80-1	Cascadable	10	200	27.3	2	28	SMT
MAAM-007844-OCA801 ♦	Cascadable	10	200	27.3	2	28	Connectorized
A74-1	Cascadable; High Gain	5	250	31	4.5	21	TO-8
A70	Cascadable; High Dynamic Range	10	250	8	1.6	24	TO-8
SMA70	Cascadable; High Dynamic Range	10	250	8	1.6	24	SMT
A70-1	Cascadable; High Dynamic Range	10	250	8	1.8	28	TO-8
SMA70-1	Cascadable; High Dynamic Range	10	250	8	1.8	28	SMT
A70-2	Cascadable; High Dynamic Range	10	250	8	2.2	38	TO-8
CA70-2 ♦	Cascadable; High Dynamic Range	10	250	8	2.2	38	Connectorized
A231	Cascadable; High Gain	10	250	26	1.7	22	TO-8
CA231 ♦	Cascadable; High Gain	10	250	26	1.7	22	Connectorized
SMA231	Cascadable; High Gain	10	250	26	1.7	22	SMT
A83-1	Cascadable	10	250	35.5	2.5	9	TO-8
CA83-1 ♦	Cascadable	10	250	35.5	2.5	9	Connectorized
SMA83-1	Cascadable	10	250	35.5	2.5	9	SMT
A70-3	Cascadable; High Dynamic Range	20	250	8	2.8	40	TO-8
A82-1	Cascadable	20	250	19	2.8	26	TO-8
SMA82-1	Cascadable	20	250	19	2.8	26	SMT

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant.
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Hybrid Amplifiers: Low Noise Amplifiers (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
SMA81	Cascadable	20	250	24.5	2.6	28	Ceramic SMT0-8
A81-1	Cascadable	20	250	25	2.5	27	TO-8
SMA81-1	Cascadable	20	250	25	2.5	27	SMT
A82	Cascadable	20	250	25	2.8	31	TO-8
CA82 ♦	Cascadable	20	250	25	2.8	31	Connectorized
SMA82	Cascadable	20	250	25	2.8	31	SMT
A81	Cascadable	20	250	25.5	3	28	TO-8
A78	Cascadable	5	300	14	3.5	35	TO-8
CA78 ♦	Cascadable	5	300	14	3.5	35	Connectorized
SMA78	Cascadable	5	300	14	3.5	35	SMT
SMA70-2	Cascadable; High Dynamic Range	10	300	8	2.2	38	Ceramic; SMT0-8
A87-2	Cascadable	10	300	16	2.9	24	TO-8
SMA87-2	Cascadable	10	300	16	2.9	24	SMT
SMA70-3	Cascadable; High Dynamic Range	15	300	8	2.8	40	Ceramic; SMT0-8
PAW1027 ♦	Ultra Linear Power; Multi Carrier	35	350	38.5	3.7	43	SOT115J
EA1	Cascadable	5	400	14	4.3	13	TO-5
MAAM-008199-000A51	Cascadable	10	400	15	2.7	10	TO-8
A411	Cascadable	10	400	15.8	3	24	TO-8
SMA411	Cascadable	10	400	15.8	3	24	SMT
A87-1	Cascadable	10	400	16	3.4	31	TO-8
CA87-1 ♦	Cascadable	10	400	16	3.4	31	Connectorized
SMA87-1	Cascadable	10	400	16	3.4	31	SMT
AMC-123-SMA ♦	Cascadable; Low Noise; High Linearity	5	500	10	5.5	30	Connectorized
A58	Cascadable	5	500	11.5	4	34	TO-8
SMA58	Cascadable	5	500	11.5	4	34	SMT
AM-131-PIN	Cascadable; Low Noise; High Linearity	5	500	11.5	4	34	TO-8
A59	Cascadable; High Dynamic Range	5	500	11.5	4.3	36	TO-8
SMA59	Cascadable; High Dynamic Range	5	500	11.5	4.3	36	SMT
AMC-143-SMA ♦	Cascadable	5	500	15.8	2.5	20	Connectorized
A1	Cascadable	5	500	16	2.4	11	TO-8
SMA1	Cascadable	5	500	16	2.4	11	SMT
AMC-147-SMA ♦	Cascadable; High Linearity	5	500	17	3.4	33	Connectorized
EA53-2	Cascadable	5	500	19	3.6	24	TO-5
A75	Cascadable	5	500	21	2.1	21	TO-8
CA75 ♦	Cascadable	5	500	21	2.1	21	Connectorized
SMA75	Cascadable	5	500	21	2.1	21	SMT
A76-1	Cascadable; High Efficiency	5	500	27.5	3	26	TO-8
SMA76-1	Cascadable; High Efficiency	5	500	27.5	3	26	SMT
A515	Cascadable; High Gain	5	500	27.5	3.5	33	TO-8
MAAM-007272-0CA515 ♦	Cascadable; High Gain	5	500	27.5	3.5	33	Connectorized
MAAM-007272-SMA515	Cascadable; High Gain	5	500	27.5	3.5	33	SMT0-8
SMA76	Cascadable; High Gain	5	500	28	3	28	SMT
CA76 ♦	Cascadable; High Gain	5	500	28	3	28	Connectorized
A76	Cascadable; High Gain	5	500	28	3	28	TO-8
A514	Cascadable; High Gain	5	500	28	4	32	TO-8
MAAM-007272-0CA514	Cascadable; High Gain	5	500	28	4	32	Connectorized
MAAM-007272-SMA514	Cascadable; High Gain	5	500	28	4	32	SMT0-8
A74	Cascadable; High Gain	5	500	30	3	20	TO-8
CA74 ♦	Cascadable; High Gain	5	500	30	3	20	Connectorized

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant.

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Hybrid Amplifiers: Low Noise Amplifiers (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
SMA74	Cascadable; High Gain	5	500	30	3	20	SMT
A73	Cascadable; High Gain	5	500	32	3.5	15	TO-8
SMA73	Cascadable; High Gain	5	500	32	3.5	15	SMT
A180	Cascadable	10	500	16.5	3.4	33	TO-8
CA180 ♦	Cascadable	10	500	16.5	3.4	33	Connectorized
SMA180	Cascadable	10	500	16.5	3.4	33	SMT
A511	Cascadable	10	500	17	3.4	33	TO-8
CA511 ♦	Cascadable	10	500	17	3.4	33	Connectorized
A75-3	Cascadable	10	500	20.5	1.7	16	TO-8
SMA75-3	Cascadable	10	500	20.5	1.7	16	SMT
MAAM-008317-CA7503 ♦	Cascadable	10	500	20.5	1.7	16	Connectorized
A531	Cascadable	10	500	31.7	2	14	TO-8
CA531 ♦	Cascadable	10	500	31.7	2	14	Connectorized
A81-3	Cascadable	20	500	17	4	20	TO-8
A81-2	Cascadable	20	500	24.5	3	28	TO-8
CA81-2 ♦	Cascadable	20	500	24.5	3	28	Connectorized
SMA81-2	Cascadable	20	500	24.5	3	28	SMT
A80	Cascadable	20	500	29	2.5	27	TO-8
SMA80	Cascadable	10	550	29	2.3	27	Ceramic; SMTO-8
A67-1	Cascadable; High Efficiency	10	600	15	3.7	30	TO-8
CA67-1 ♦	Cascadable; High Efficiency	10	600	15	3.7	30	Connectorized
SMA67-1	Cascadable; High Efficiency	10	600	15	3.7	30	SMT
A611	Cascadable; Low Noise; Low Volt	5	700	15	3.2	24	TO-8
SMA611	Cascadable; Low Noise; Low Volt	5	700	15	3.2	24	SMT
A67	Cascadable; High Efficiency	10	800	14	4	30	TO-8
AMC-176-SMA ♦	Cascadable	5	1000	13.2	4	27	Connectorized
A11	Cascadable Amplifier	5	1000	14.7	3.1	10	TO-8
SMA11-2	Cascadable	5	1000	16	2.5	10	SMT
A63	Cascadable	5	1000	16	3	15	TO-8
SMA63	Cascadable	5	1000	16	3	15	SMT
AMC-182-SMA ♦	Cascadable; High Gain	5	1000	28.2	3.5	20	Connectorized
A18-1	Cascadable; High Dynamic Range	10	1000	14.7	3.8	30	TO-8
CA18-1 ♦	Cascadable; High Dynamic Range	10	1000	14.7	3.8	30	Connectorized
SMA18-1	Cascadable; High Dynamic Range	10	1000	14.7	3.8	30	SMT
A12	Cascadable Amplifier	10	1000	16	2.8	22	TO-8
A66-3	Cascadable; High Efficiency	10	1000	26	3	13	TO-8
CA66-3 ♦	Cascadable; High Efficiency	10	1000	26	3	13	Connectorized
SMA66-3	Cascadable; High Efficiency	10	1000	26	3	13	SMT
A1031	Cascadable; High Gain	10	1000	28.5	2.7	22	TO-8
SMA1031	Cascadable; High Gain	10	1000	28.5	2.7	22	SMT
MAAM-008198-OCA162	Cascadable; High Efficiency	10	1200	13	3.5	18	Connectorized
MAAM-008198-SMA162	Cascadable; High Efficiency	10	1200	13	3.5	18	SMTO-8
CA12 ♦	Cascadable; Low Volt	10	1200	14	2.8	20	Connectorized
A1211	Cascadable Amplifier	10	1200	14	2.8	20	TO-8
SMA1211	Cascadable; Low Volt	10	1200	14	2.8	20	SMT
A1212	Cascadable Amplifier	100	1200	14	1.8	29	TO-8
CA1212 ♦	Cascadable; Low Volt	100	1200	14	1.8	29	Connectorized
SMA1212	Cascadable; Low Volt	100	1200	14	1.8	29	SMT
A25-1	Cascadable	2	1500	13.5	3	22	TO-8

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant.
 Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
 All specifications are subject to change.

Hybrid Amplifiers: Low Noise Amplifiers (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
CA25-1 ♦	Cascadable	2	1500	13.5	3	22	Connectorized
A28-2	Cascadable; High Efficiency	10	1500	14	3.5	24	TO-8
CA28-2 ♦	Cascadable; High Efficiency	10	1500	14	3.5	24	Connectorized
SMA28-2	Cascadable; High Efficiency	10	1500	14	3.5	24	SMT
AM-153-PIN ♦	Cascadable; Low Noise	300	1800	12.4	2.5	17	TO-8
A31-1	Cascadable Amplifier	10	2000	11.5	3.5	9	TO-8
A32-1	Cascadable; Low Noise; Low Volt	100	2000	11.5	2.5	25	TO-8
CA32-1 ♦	Cascadable; Low Noise; Low Volt	100	2000	11.5	2.5	25	Connectorized
SMA32-1	Cascadable; Low Volt	100	2000	11.5	2.5	25	SMT
A32	Cascadable; High Linearity	100	2000	13	2.1	32	TO-8
CA32 ♦	Cascadable; High Linearity	100	2000	13	2.1	32	Connectorized
SMA32	Cascadable; High Linearity	100	2000	13	2.1	32	SMT
PA38	Cascadable; Medium Power	200	2000	10	4	34	TO-8
CPA38 ♦	Cascadable; Medium Power	200	2000	10	4	34	Connectorized
SMPA38	Cascadable; Medium Power	200	2000	10	4	34	SMT
MAAM-007501-0A2002	Cascadable	20	2700	11.5	2.5	40	TO-8
MAAM-007501-CA2002	Cascadable	20	2700	11.5	2.5	40	Connectorized
MAAM-007501-SA2002	Cascadable	20	2700	11.5	2.5	40	SMT-8
A4011	Cascadable; Low Volt	1000	4000	15.5	2	29	TO-8
SMA4011	Cascadable; Low Volt	1000	4000	15.5	2	29	SMT
A45-1	Cascadable	1000	4000	17.5	4	26	TO-8
SMA45-1	Cascadable	1000	4000	17.5	4	26	SMT
A45	Cascadable	1000	4000	17.5	4	29	TO-8
CA45 ♦	Cascadable	1000	4000	17.5	4	29	Connectorized
SMA45	Cascadable	1000	4000	17.5	4	29	SMT
A4012	Cascadable; Low Volt	1000	4000	18	3.5	26	TO-8
SMA4012	Cascadable; Low Volt	1000	4000	18	3.5	26	SMT
A61	Cascadable; Low Volt	2000	6000	7.5	3.2	25	TO-8
SMA61	Cascadable; Low Volt	2000	6000	7.5	3.2	25	SMT
A6011	Cascadable; Low Volt	2000	6000	14.8	1.5	30	TO-8
CA6011 ♦	Cascadable; Low Volt	2000	6000	14.8	1.5	30	Connectorized
SMA6011	Cascadable; Low Volt	1500	6000	14.8	1.5	30	Ceramic; SMT-8

Hybrid Amplifiers: Limiting Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Package
LA7	Cascadable	50	500	12.5	TO-8
CLA7 ♦	Cascadabler	50	500	12.5	SMA
SMLA7	Cascadable	50	500	12.5	Ceramic; SMT-8
AL7	Cascadable	50	500	13	TO-8
CAL7 ♦	Cascadable	50	500	13	SMA
SMAL7	Cascadable	20	550	13	Ceramic; SMT-8
LA17	Cascadable	10	1000	11.5	TO-8
CLA17 ♦	Cascadable	10	1000	11.5	SMA
SMLA17	Cascadable	10	1000	11.5	Ceramic; SMT-8
L1	Cascadable; Signal Limiter	5	3000	—	TO-8
SML1	Cascadable; Signal Limiter	5	3000	—	Ceramic; SMT-8
L42	Cascadable; Signal Limiter	50	4000	—	TO-8
CL42 ♦	Cascadable; Signal Limiter	50	4000	—	SMA
SML42	Cascadable; Signal Limiter	50	4000	—	SMT

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

DIODES

For Microwave Circuit Applications from 1 MHz to 80 GHz

MACOM designs, manufactures and supports one of the widest variety of PIN, Schottky, Varactor and Multiplier Diodes in the industry for microwave circuit applications from 1 MHz to 80 GHz. Our diodes are manufactured in die, SURMOUNT™, plastic and ceramic packaging for a variety of circuit configurations providing high performance.



Variable Varactor Diodes

- GaAs constant gamma series for higher frequency and high Q applications
- Plastic packaged silicon varactor diodes for surface mount applications, including VCOs, tunable filters and phase shifters

Step Recovery Diodes

- Flip chip series for higher frequency mmWave applications
- Plastic packaged series for microwave frequency surface mount applications
- Ceramic packaged series for high power waveguide and coaxial applications

PIN Switch and Attenuator Diodes

- Broadband performance from 1 MHz to 70 GHz
- Excellent choices for switch, limiter, phase shifter and attenuator circuit applications
- Plastic series for cost effective, surface mount applications
- AlGaAs series for low loss, high isolation mmWave frequency applications
- GaAs and silicon flip chip series for surface mount mmWave applications
- SURMOUNT chipscale style for surface mount high performance applications

PIN Limiter Diodes

- Die series for chip and wire high frequency microwave applications
- Ceramic packaged series for waveguide, coaxial and surface mount applications

Schottky Mixer and Detector Diodes

- Best choice for microwave circuit detector and mixer applications ranging from DC to 80 GHz
- Available in die form, SURMOUNT, flip chip, plastic and ceramic packaging

THz Diodes

- The intrinsic cutoff frequencies of these Schottky junction devices exceed 1 THz
- Well-suited for use in mixers and detectors operating in the frequency bands from 60 GHz into the hundreds of GHz bands



Variable Varactor Diodes					
Part Number	Total Capacitance (pF)	Gamma	Quality Factor @ 50 MHz, Min	Breakdown Voltage (V)	Package
MAVR-011020-1411	0.025	0.9	3000	22	ODS-287 (SOT-23)
MAVR-011005-12790T	0.27	1	—	20	ODS-1279 (SC-79)
MA46600-134 S	0.3	0.5	8000	30	ODS-134; Die
MGV075-08	0.3	0.75	4000	22	C01A
MA46H120	0.35	1	3000	15	Flip Chip; Die
MAVR-000120-12030W	0.35	1	3000	15	Flip Chip; Die
MAVR-000120-14110G	0.35	1	3000	20	Flip Chip; Die
MAVR-000120-14110P	0.35	1	3000	20	Flip Chip; Die
MGV100-08	0.35	1	4000	22	Various/Die
MTV4030-01	0.4	0.5	5000	30	Various/Die
MGV075-09	0.4	0.75	4000	22	C01A
MGV100-09	0.45	1	4000	22	Various/Die
MGV075-10	0.5	0.75	3000	22	C01A
MA46580-1209	0.5	1.25	3000	18	ODS-1209; Die
MA46470-120	0.5	1.25	4000	22	ODS-120
MA46470-134	0.5	1.25	4000	22	ODS-134; Die
MGV100-20	0.55	1	4000	22	Various/Die
MTV4030-02	0.6	0.5	5000	30	Various/Die
MA46H070-1056 S	0.6	0.75	4500	20	ODS-1056
MA46603-134 S	0.6	0.5	6500	30	ODS-134; Die
MA46603-276	0.6	0.5	6500	30	ODS-276
MA46H200-1056	0.6	1.25	3000	22	ODS-1056
MA46471-134	0.7	1.25	4000	22	ODS-134; Die
MTV4030-03	0.8	0.5	4800	30	Various/Die
MTV4030-04	1	0.5	4800	30	Various/Die
MA46H071-1088	1	0.75	4500	20	ODS-1088
MA46H071-1056 S	1	0.75	4500	20	ODS-1056
MA46452-134	1	1	3000	22	ODS-134; Die
MA46472-94	1	1.25	3000	22	ODS-94
MA46472-134	1	1.25	3000	22	ODS-134; Die
MA46H201-1056	1	1.25	3000	22	ODS-1056
MA46H201-1088	1	1.25	3000	22	ODS-1088
MA46413-120	1	1.5	2500	18	ODS-120
MA46H501-1056	1	1.5	2500	18	ODS-1056
MTV4030-05	1.2	0.5	4600	30	Various/Die
MA46473-134	1.2	1.25	3000	22	ODS-134; Die
MA46473-186	1.2	1.25	3000	22	ODS-186
MA46474-94	1.5	1.25	3000	22	ODS-94
MA46474-95	1.5	1.25	3000	22	ODS-95
MA46474-120	1.5	1.25	3000	22	ODS-120
MA46474-134	1.5	1.25	3000	22	ODS-134; Die
MGV100-26	1.7	1	3000	22	Various/Die
MTV4030-08	1.8	0.5	4200	30	Various/Die
MA46416-134 S	1.8	1.5	2500	18	ODS-134; Die
MTV4030-09	2.2	0.5	4000	30	Various/Die
MA46477-134	2.2	1.25	3000	22	ODS-134; Die
MA46477-186	2.2	1.25	3000	22	ODS-186
MTV4030-10	2.7	.05	3800	30	Various/Die
MAVR-000250-0287AT	2.7	1	450	12	SOT-23

Note: Part numbers are RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Variable Varactor Diodes (continued)					
Part Number	Total Capacitance (pF)	Gamma	Quality Factor @ 50 MHz, Min	Breakdown Voltage (V)	Package
MAVR-000250-0287FT	2.7	1	450	12	SOT-23
MAVR-000250-11410T	2.7	1	450	12	SOT-23
MAVR-000250-1146AT	2.7	1	450	12	SC-703
MAVR-000250-12790T	2.7	1	450	12	ODS-1279 (SC-79)
MA46H072-1056 S	3	0.75	3000	20	ODS-1056
MAVR-000202-12790T	3	1.25	2000	22	ODS-1279 (SC-79)
MA46H202-1056	3	1.25	2000	22	ODS-1056
MA46H202-1088	3	1.25	2000	22	ODS-1088
MAVR-1SV279	3	—	—	30	SM
MA45T1241-1141T	3.4	1	1200	12	ODS-1141 (SOT-323)
MAVR-001240-12790T	3.4	1	1200	12	ODS-1279 (SC-79)
MAVR-000240-0287AT	3.5	1	450	12	ODS-287 (SOT-23)
MAVR-000240-11410T	3.5	1	450	12	ODS-1141 (SOD323)
MAVR-000240-1146FT	3.5	1	450	12	ODS-1146 (SC-703)
MA46480-134	3.8	1.25	2000	22	ODS-134; Die
MA46461-186	4.7	1	1500	22	ODS-186
MA45T1231-1141T	4.7	1	1700	12	ODS-1141 (SOT-323)
MAVR-001230-12790T	4.7	1	1700	12	ODS-1279 (SC-79)
MAVR-045436-0287AT	4.7	0.5	1800	30	SOT-23
MAVR-045436-0287FT	4.7	0.5	1800	30	SOT-23
MAVR-045436-12790T	4.7	0.5	1800	30	SC-79
MA46H073-1056 S	5	0.75	2200	20	ODS-1056
MA46H203-1056	5	1.25	1500	22	ODS-1056
MA46H203-1088	5	1.25	1500	22	ODS-1088
MAVR-000083-0287AT	5	1.3	450	12	ODS-287 (SOT-23)
MAVR-000083-0287FT	5	1.3	450	12	ODS-287 (SOT-23)
MA46H503	5	1.5	1200	18	ODS-1056
MTV4030-15	5.6	0.5	3000	30	Various/Die
MAVR-001350-12790T	5.9	1	690	12	ODS-1279 (SC-79)
MAVR-001350-1146FT	5.9	1	690	12	ODS-1146 (SC-70-3)
MAVR-000350-11410T	6.2	1	400	12	ODS-1141 (SOT-323)
MAVR-045438-0287AT	6.8	0.5	1600	30	SOT-23
MAVR-045438-0287FT	6.8	0.5	1600	30	SOT-23
MA46483-186	6.8	1.25	1500	22	ODS-186
MAVR-000082-0287AT	7.3	1.3	350	12	ODS-287 (SOT-23)
MAVR-001340-11410T	9.2	1	600	12	SOT-323
MAVR-001340-1146FT	9.2	1	600	12	ODS-1146 (SC-70-3)
MAVR-001340-12790T	9.2	1	600	12	ODS-1279 (SC-79)
MAVR-000340-11410T	9.5	1	350	12	ODS-1141 (SOT-323)
MAVR-045440-0287AT	10	0.5	1300	30	SOT-23
MAVR-045440-0287FT	10	0.5	1300	30	SOT-23
MAVR-000401-0287AT	10	1	250	22	ODS-287 (SOT-23)
MAVR-000401-0287FT	10	1	250	22	ODS-287 (SOT-23)
MA46485-120	10	1.25	1500	22	ODS-120
MA46H204-1056	10	1.25	1500	22	ODS-1056
MA46H204-1088	10	1.25	1500	22	ODS-1088
MAVR-000081-0287AT	10.1	1.3	300	12	ODS-287 (SOT-23)
MAVR-000081-0287FT	10.1	1.3	300	12	ODS-287 (SOT-23)
MAVR-045441-0287AT	12	0.5	1200	30	SOT-23

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Variable Varactor Diodes (continued)

Part Number	Total Capacitance (pF)	Gamma	Quality Factor @ 50 MHz, Min	Breakdown Voltage (V)	Package
MAVR-045441-0287FT	12	0.5	1200	30	SOT-23
MAVR-001330-11410T	13.2	1	530	12	ODS-1141 (SOT-323)
MAVR-001330-1146FT	13.2	1	530	12	ODS-1146 (SC-70-3)
MAVR-001330-12790T	13.2	1	530	12	ODS-1279 (SC-79)
MAVR-1SV279	15	—	—	30	SM
MTV4030-20	15	0.5	2000	30	Various/Die
MAVR-000403-0287AT	15	1	250	22	SOT-23
MAVR-000403-0287FT	15	1	250	22	ODS-287 (SOT-23)
MAVR-1SV280	15	—	—	30	SM
MAVR-SOD279	15	—	—	30	SM
MTV4030-21	18	0.5	1800	30	Various/Die
MAVR-000404-0287FT	18	1	175	22	ODS-287 (SOT-23)
MTV4030-22	22	0.5	1600	30	Various/Die
MAVR-000405-0287FT	22	1	175	22	SOT-23
MAVR-000080-0287AT	24.8	1.3	150	12	ODS-287 (SOT-23)
MAVR-000080-0287FT	24.8	1.3	150	12	ODS-287 (SOT-23)
MAVR-000320-11410T	28	1	300	12	ODS-1141 (SOT-323)
MAVR-001320-11410T	28.3	1	350	12	ODS-1141 (SOT-323)
MAVR-001320-1146FT	28.3	1	350	12	ODS-1146 (SC-70-3)
MTV4030-24	33	0.5	1400	30	Various/Die
MAVR-045446-0287AT	33	0.5	750	30	SOT-23
MAVR-000407-0287AT	33	1	150	22	ODS-287 (SOT-23)
MAVR-000407-0287FT	33	1	150	22	SOT-23
MTV4030-26	47	0.5	1000	30	Various/Die
MAVR-000409-0287FT	47	1	150	22	ODS-287 (SOT-23)
MAVR-000079-0287FT	54.1	1.3	80	12	ODS-287 (SOT-23)

Step Recovery Diodes

Part Number	Total Capacitance Min (pF)	Total Capacitance Max (pF)	Reverse Voltage (V)	Lifetime (Typ vs Min) (ns)	Tt (Typ vs Max) (ps)	Package
MMDB45-B11 S	0.11	0.2	25	8	40	B11
MMDB35-B11 S	0.13	0.2	16	4	35	B11
MMDB30-B11 S	0.15	0.25	14	4	30	B11
MMDB45-0402	0.21	0.28	25	8	45	0402
MMDB35-0402	0.22	0.28	16	4	35	0402
MMDB45-0805-2	0.22	0.29	25	8	45	0805-2
MMDB35-0805-2	0.23	0.29	16	4	35	0805-2
MMDB45-E28/28X	0.24	0.31	25	8	45	E28/28X
MMDB35-E28/28X	0.25	0.31	16	4	35	E28/28X
MMDB30-0402	0.25	0.32	14	4	30	0402
MMDB30-0805-2	0.26	0.33	14	4	30	0805-2
MMDB30-E28/28X	0.28	0.36	14	4	30	E28/28X
SMMD840-SOD323	0.2	0.4	15	5	90	SOD323
SMMD840-SOT23-05	0.2	0.4	15	5	90	SOT23-05
MMD840-C11 S	0.2	0.4	15	7	70	Die
MSD700 S	0.2	0.4	15	8	60	Various/Die
MSD700-12	0.2	0.4	15	8	60	CS12
MMDB37-C11 S	0.2	0.4	20	5	70	Die
SMMD837-SOD323	0.2	0.4	20	5	90	SOD323
SMMD837-SOT23-05	0.2	0.4	20	5	90	SOT23-05

Note: Part numbers are RoHS compliant. **S** indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Step Recovery Diodes (continued)

Part Number	Total Capacitance Min (pF)	Total Capacitance Max (pF)	Reverse Voltage (V)	Lifetime (Typ vs Min) (ns)	Tt (Typ vs Max) (ps)	Package
SMMD837-SOT23-1S	0.2	0.4	20	5	90	SOT23-1S
MSD710 S	0.2	0.4	20	11	70	Various/Die
MSD720 S	0.2	0.4	30	17	100	Various/Die
MMD840-0805	0.26	0.46	15	7	70	0805-2
MMD837-0805	0.26	0.46	20	5	70	805-2
MMD840-E28	0.28	0.48	15	7	70	E28
MMD840-E28X	0.28	0.48	15	7	70	E28X
MMD837-E28	0.28	0.48	20	5	70	E28
MMD837-E28X	0.28	0.48	20	5	70	E28X
MMD840-H27 S	0.32	0.52	15	7	70	H27
MMD837-H27 S	0.32	0.52	20	5	70	H27
MMD840-T86 S	0.38	0.58	15	7	70	T86
MMD837-T86 S	0.38	0.58	20	5	70	T86
MSD701 S	0.4	0.6	15	8	60	Various/Die
MSD711 S	0.4	0.6	20	11	70	Various/Die
MSD731 S	0.4	0.6	40	21	150	Various/Die
MMD835-C11 S	0.3	0.7	15	10	70	Die
MMD0840-A15 S	0.6	0.75	15	20	75	A15
MMD832-C11 S	0.4	0.8	20	10	80	Die
SMMD832-SOD323	0.4	0.8	20	10	100	SOD323
SMMD832-SOT23-0S	0.4	0.8	20	10	100	SOT23-0S
SMMD832-SOT23-1S	0.4	0.8	20	10	100	SOT23-1S
MSD722 S	0.6	0.8	30	17	100	Various/Die
MMD0151-A15 S	0.7	0.8	15	15	100	A15
MMD835-0805	0.36	0.86	15	10	60	0805-2
MMD832-0805	0.46	0.86	20	10	80	0805-2
MMD835-E28	0.38	0.88	15	10	70	E28
MMD835-E28X	0.38	0.88	15	10	50	E28X
MMD832-E28	0.48	0.88	20	10	80	E28
MMD835-H20 S	0.42	0.92	15	10	70	H20
MMD835-T86 S	0.48	0.98	15	10	70	T86
MMD832-H20 S	0.58	0.98	20	10	60	H20
MMD832-T86 S	0.58	0.98	20	10	60	T86
MMD830-C11 S	0.5	1	25	15	80	Die
SMMD830-SOD323	0.5	1	25	15	110	SOD323
SMMD830-SOT23-0S	0.5	1	25	15	110	SOT23-0S
SMMD830-SOT23-1S	0.5	1	25	15	110	SOT23-1S
MSD703 S	0.8	1	15	8	60	Various/Die
MSD723 S	0.8	1	30	17	100	Various/Die
MSD733 S	0.8	1	40	21	150	Various/Die
MMD830-0805	0.56	1.06	25	15	80	0805-2
MMD830-E28	0.58	1.08	25	15	80	E28
MMD830-E28X	0.58	1.08	25	15	80	E28X
MMD830-T86 S	0.68	1.18	25	10	80	T86
MMD830-H20 S	0.68	1.18	25	15	80	H20
MA144769-287T	0.8	1.2	30	50	150	ODS-287 (SOT-23)
MAVR-044769-0287FT	0.8	1.2	30	50	150	ODS-287 (SOT-23)
MAVR-044769-12790T	0.8	1.2	30	50	150	ODS-1279 (SC-79)
MSD724 S	1	1.4	30	17	100	Various/Die

Note: Part numbers are RoHS compliant. **S** indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Step Recovery Diodes (continued)

Part Number	Total Capacitance Min (pF)	Total Capacitance Max (pF)	Reverse Voltage (V)	Lifetime (Typ vs Min) (ns)	Tt (Typ vs Max) (ps)	Package
MMD820-C12 S	1	1.7	40	30	100	Die
SMMD820-SOD323	1	1.7	40	30	125	SOD323
SMMD820-SOT23-05	1	1.7	40	30	125	SOT23-05
SMMD820-SOT23-15	1	1.7	40	30	125	SOT23-15
MMD820-0805	1.06	1.76	40	30	100	0805-2
MMD820-E28	1.08	1.78	40	30	100	E28
MMD820-E28X	1.08	1.78	40	30	100	E28X
MMD820-H20 S	1.18	1.88	40	30	100	H20
MMD820-T86 S	1.18	1.88	40	30	100	T86
SMMD810-SOD323	1.5	2.5	50	40	250	SOD323
SMMD810-SOT23-05	1.5	2.5	50	40	250	SOT23-05
SMMD810-SOT23-15	1.5	2.5	50	40	250	SOT23-15
MMD810-T86 S	1.68	2.68	50	40	250	T86
MSD726 S	2	3	30	17	100	Various/Die
MSD736 S	2	3	40	21	150	Various/Die
SMMD805-SOD323	2.5	3.5	60	80	300	SOD323
SMMD805-SOT23-05	2.5	3.5	60	80	300	SOT23-05
SMMD805-SOT23-15	2.5	3.5	60	80	300	SOT23-15
MMD805-0805	2.56	3.56	60	80	300	0805-2
MMD0815-A15 S	3.15	4.15	50	135	320	A15

PIN Switch and Attenuator Diodes

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	Tl (ns)	Breakdown Voltage Min (V)	Package
MMP7078 S	0.1	100	—	1	0.5	2500	400	Various/Die
MMP7078-127-1	0.1	100	5	1	0.5	2500	400	CS127-1
MADP-011048	5	400	4.7	3	0.5	200	100	4 mm; HQFN-8
MA4P4301B-402	DC	500	10	2	1	15000	100	ODS-402
MA4P4001B-402	DC	500	12	2.2	0.5	20000	100	ODS-402
MA4P4002B-402	DC	500	12	2.2	0.5	20000	200	ODS-402
MA4P4006B-402	DC	500	12	2.2	0.5	20000	600	ODS-402
MA4PK2003 †	DC	500	37.5	3.2	0.2	30000	2000	ODS-1080
MA4PK2004 †	DC	500	37.5	3.2	0.2	30000	2000	ODS-1038
MA4PK2000 †	DC	500	50	3.2	0.2	30000	2000	ODS-1027
MA4PK2001	DC	500	50	3.2	0.2	30000	2000	ODS-1082
MA4PK2002 †	DC	500	50	3.2	0.2	30000	2000	ODS-1048
MA4PK3003	DC	500	50	4	0.2	65000	3000	ODS-1085
MA4PK3004	DC	500	50	4	0.2	65000	3000	ODS-1075
MA4P709-150	DC	500	75	3.3	0.3	10000	1500	ODS-150
MA4PK3000	DC	500	75	4	0.2	65000	3000	ODS-1073
MA4PK3001	DC	500	75	4	0.2	65000	3000	ODS-1084
MA4PK3002	DC	500	75	4	0.2	65000	3000	ODS-1074
MMP7089-127-1	0.1	500	5	0.5	0.6	1000	500	CS127-1
MA4P504-30 S	1	500	7.5	0.4	0.6	1000	500	ODS-30
MA4P504-186 S	1	500	7.5	0.4	0.6	1000	500	ODS-186
MA4P504-255 S	1	500	7.5	0.4	0.6	1000	500	ODS-255
MA4PH611	1	500	10	1	0.4	5000	1000	ODS-1091
MA4P505-255 S	1	500	10.7	0.55	0.5	2000	500	ODS-255
MA4P506-255	1	500	13.6	0.95	0.3	3000	500	ODS-255

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All specifications are subject to change.

PIN Switch and Attenuator Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	TI (ns)	Breakdown Voltage Min (V)	Package
MA4P506-258	1	500	13.6	0.95	0.3	3000	500	ODS-258
MA4P506-30 S	1	500	13.6	0.95	0.3	3000	500	ODS-30
MA4P506-31 S	1	500	13.6	0.95	0.3	3000	500	ODS-31
MADP-000015-000030 S	1	500	15	0.55	0.4	2000	500	ODS-30
MA4P604-255 S	1	500	15	0.6	1	3000	1000	ODS-255
MA4P606-30 S	1	500	15	0.8	0.7	4000	1000	ODS-30
MA4P606-258	1	500	20	0.98	0.7	4000	1000	ODS-258
MA4P606-36 S	1	500	20	0.99	0.7	4000	1000	ODS-36
MA4P607-43	1	500	25	2	0.4	5000	100	ODS-43
MA4P607-296 S	1	500	25	2.35	0.4	5000	1000	ODS-296
MA4P607-212	1	500	37.5	1.3	0.4	12000	1000	ODS-212; Die
MA4P1200-401T	5	500	5.5	1.2	0.5	8000	50	ODS-401
MA4P1200NM-401T †	5	500	5.5	1.2	0.5	8000	50	ODS-401
MA4P1250NM-1072T	5	500	18	0.8	0.5	8000	50	ODS-1072
MA4PH238-1072T	DC	1000	1	0.5	6	2000	200	Ceramic; SMT
MA4PH239-1079T	DC	1000	1	0.8	6	2000	200	ODS-1079
MADP-000504-10720T †	DC	1000	2.9	0.5	0.6	1000	500	ODS-1072
MA4P4301F-1091T	DC	1000	5	2	1	15000	100	ODS-1091
MA4P4001F-1091T	DC	1000	7.5	2.2	0.5	20000	100	ODS-1091
MA4P4002F-1091T	DC	1000	7.5	2.2	0.5	20000	200	ODS-1091
MA4P4006F-1091T	DC	1000	7.5	2.2	0.5	20000	600	ODS-1091
MADP-007417-10720T	DC	1000	12	0.7	0.8	6500	1000	ODS-1072
MA4P1450-1091T	DC	1000	30	1.8	0.5	8000	50	ODS-1091
MA47047-54 S	1	1000	0.3	0.3	1.5	1000	200	ODS-54
MA47266-146 S	1	1000	0.5	1.5	0.6	4000	200	ODS-146
MA4P606-4 S	1	1000	1	0.7	0.7	4000	1000	ODS-4
MA4PH237-1079T	1	1000	1	1.5	0.6	3000	200	ODS-1079
MA4P7002B-401T	1	1000	5	0.7	0.9	5000	200	ODS-401
MA4P7006B-401T	1	1000	5	0.7	0.9	5000	600	ODS-401
MA4P7102B-401T	1	1000	6	1	0.5	2500	200	ODS-401
MA4P7104B-401T	1	1000	6	1	0.5	2500	400	ODS-401
MA4P7101F-1072T	1	1000	11.5	1	0.5	2500	100	ODS-1072
MA4P606-131 S	1	1000	15	0.6	0.7	4000	1000	ODS-131 Die
MA47208	1	1000	15	1.3	0.3	1300	1000	ODS-114
MSWSE-020-10	10	1000	7.5	0.37	0.8	490	250	0503
MSWSE-020-05	10	1000	10	0.62	0.3	600	250	0503
SMPN7335-SOD323	5	1200	0.75	0.3	1.5	500	200	SOD323
MADP-000234-10720T	DC	1500	3	1.7	0.3	3000	500	ODS-1072
MA4P7001F-1072T	DC	1500	10	0.7	0.9	5000	100	ODS-1072
MA4P7002F-1072T	DC	1500	10	0.7	0.9	5000	200	ODS-1072
MA4P7006F-1072T	DC	1500	10	0.7	0.9	5000	600	ODS-1072
MA4P7418-1072T	DC	1500	11.5	0.8	1.2	7000	1100	ODS-1072
MA4P7102F-1072T	DC	1500	11.5	1	0.5	2500	200	ODS-1072
MA4P7104F-1072T	DC	1500	11.5	1	0.5	2500	400	ODS-1072
MA4P505-1072T	DC	1500	15	0.7	0.5	2000	500	ODS-1072
MA4P506-1072T	DC	1500	15	1	0.3	3000	500	ODS-1072
MA4P1250-1072T	DC	1500	18	0.9	0.5	8000	50	ODS-1072
MA4PH235-1072T	1	1500	1	1.2	0.5	300	35	ODS-1072

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PIN Switch and Attenuator Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	TI (ns)	Breakdown Voltage Min (V)	Package
SMPN7316-SOT23	50	1500	0.75	0.25	0.6	200	100	SOT23
MADP-000488-13740W S	100	1500	3.3	0.16	1.6	4000	900	ODS-1374; Die
MADP-000135-01340W S	100	1500	5	0.15	1.2	440	200	ODS-134; Die
MADP-000208-13180W	30	1800	2.6	0.81	0.4	500	90	ODS-1318; SURMOUNT
MPN3001 S	—	2000	—	0.25	1	—	200	A15
MA4P203-54	DC	2000	0.25	0.25	1.5	100	100	ODS-54
MA4P404-54	DC	2000	0.25	0.3	0.7	1000	250	ODS-54
MA4PH401-54T	DC	2000	0.25	0.3	1.5	1000	50	ODS-54
MA47600-54	DC	2000	0.25	0.3	6	2000	200	ODS-54
MA47123-139	DC	2000	0.25	0.5	3	1000	200	ODS-139
MA4P506-4	DC	2000	0.25	0.85	0.3	2500	500	ODS-4
MA47120-54T	DC	2000	0.25	1	0.5	3000	35	ODS-54
MA4PH301	DC	2000	0.25	1.1	1	4000	200	ODS-146
MA4PH151-139T	DC	2000	0.25	1.2	0.6	1000	100	ODS-139
MSWSE-044-10	1	2000	7.5	0.3	0.5	1200	300	0805P
MA4P404-30 S	5	2000	7.5	0.4	0.6	1000	250	ODS-30
MA4P404-258	5	2000	7.5	0.58	0.7	1000	250	ODS-258
MA4PH236-1072T	10	2000	1	0.5	3	1500	600	ODS-1072
SMPN7316-SOD323	50	2000	0.75	0.25	0.6	200	100	SOD323
MADP-042505-130600 S	50	2000	1.3	0.6	0.8	210	80	ODS-1306; Die
MADP-042508-130600 S	50	2000	1.3	0.6	0.9	310	100	ODS-1306; Die
MADP-000165-01340W S	100	2000	5	0.06	2.5	200	200	ODS-134; Die
MADP-007167-11410T	1	2500	0.2	0.42	16	3000	200	SOD-323; 2-lead
MADP-007167-0287AT	1	2500	0.3	0.42	16	3000	200	SOT23
MADP-007167-0287BT	1	2500	0.3	0.42	16	3000	200	SOT23
MADP-007167-0287DT	1	2500	0.3	0.42	16	3000	200	SOT23
MADP-007167-0287FT	1	2500	0.3	0.42	16	3000	200	SOT23
MADP-007167-0287GT	1	2500	0.3	0.42	16	3000	200	SOT23
MA4P604-30 S	1	2500	15	0.5	1	3000	1000	ODS-30
MA4P604-258	1	2500	15	0.68	1	3000	1000	ODS-258
MADP-007455-1146DT	5	2500	0.2	0.42	3	1000	100	SOT323; 3-lead
MA4P7455CK-1146T	5	2500	0.2	0.47	3	1000	100	SOT323; 3-lead
MA4P7455CA-1146T	5	2500	.25	0.47	3	1000	100	SOT323; 3-lead
MA4P7455CA-287T	5	2500	0.3	0.35	3	1000	100	SOT23
MA4P7455CK-287T	5	2500	0.3	0.35	3	1000	100	SOT23
MADP-007455-0287DT	5	2500	0.3	0.47	3	400	100	SOT23
MA4P7455-287T	5	2500	0.3	0.47	3	1000	100	SOT23
MA4P7455ST-287T	5	2500	0.3	0.47	3	1000	100	SOT23
MA4P7455ST-1146T	5	2500	0.3	0.47	3	1000	100	SOT323; 3-lead
MA4P7447-1141T	15	2500	0.2	1.31	0.6	1000	100	SOD323; 2-lead
MA4P7447-287T	15	2500	0.3	1.32	0.6	1000	100	SOT23
MA4P7447CA-287T	15	2500	0.3	1.32	0.6	1000	100	SOT23
MA4P7447CK-287T	15	2500	0.3	1.32	0.6	1000	100	SOT23
MA4P7447ST-287T	15	2500	0.3	1.32	0.6	1000	100	SOT23
MADP-007155-0287DT	15	2500	0.3	1.32	0.6	1000	100	SOT23
MADP-007448-1146DT	25	2500	—	0.25	2	—	100	SC70; 3-lead
MADP-007448-12790T	25	2500	0.2	0.35	2	400	100	SC70; 3-lead
MADP-007448-11410T	25	2500	0.2	0.36	2	400	100	SOD-323; 2-lead

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PIN Switch and Attenuator Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	TI (ns)	Breakdown Voltage Min (V)	Package
MADP-007448-1146BT	25	2500	0.2	0.37	2	400	100	SOT323; 3-lead
MADP-007448-1146GT	25	2500	0.2	0.37	2	400	100	SOT323; 3-lead
MA4P7433-1141T	25	2500	0.2	0.46	1.5	200	75	SOD-323; 2-lead
MA4P7433CA-1146T	25	2500	0.2	0.47	1.5	200	75	SOT323; 3-lead
MA4P7433CK-1146T	25	2500	0.2	0.47	1.5	200	75	SOT323; 3-lead
MA4P7433ST-1146T	25	2500	0.2	0.47	1.5	200	75	SOT323; 3-lead
MA4P7436-1141T	25	2500	0.2	1.11	0.5	200	75	SOD323; 2-lead
MA4P7436-1146T	25	2500	0.2	1.12	0.5	200	75	SC70; 3-lead/SOT-323
MA4P7436CA-1146T	25	2500	0.2	1.12	0.5	200	75	SOT323; 3-lead
MA4P7436CK-1146T	25	2500	0.2	1.12	0.5	200	75	SOT323; 3-lead
MA4P7436ST-1146T	25	2500	0.2	1.12	0.5	200	75	SOT323; 3-lead
MADP-007436-0287DT	25	2500	0.2	1.12	0.5	200	75	SOT23
MADP-007436-1146DT	25	2500	0.2	1.12	0.5	200	75	SOT323
MADP-007448-0287AT	25	2500	0.3	0.37	2	400	100	SOT23
MADP-007448-0287BT	25	2500	0.3	0.37	2	400	100	SOT23
MADP-007448-0287DT	25	2500	0.3	0.37	2	400	100	SOT23
MADP-007448-0287FT	25	2500	0.3	0.37	2	400	100	SOT23
MADP-007448-0287GT	25	2500	0.3	0.37	2	400	100	SOT23
MADP-007433-0287DT	25	2500	0.3	0.42	1.5	200	75	SOT23
MADP-007433-1146DT	25	2500	0.3	0.42	1.5	200	75	SOT323; 3-lead
MA4P7433-287T	25	2500	0.3	0.47	1.5	200	75	SOT23
MA4P7433CA-287T	25	2500	0.3	0.47	1.5	200	75	SOT23
MA4P7433CK-287T	25	2500	0.3	0.47	1.5	200	75	SOT23
MA4P7433ST-287T	25	2500	0.3	0.47	1.5	200	75	SOT23
MA4P7436-287T	25	2500	0.3	1.12	0.5	200	75	SOT23
MA4P7436CA-287T	25	2500	0.3	1.12	0.5	200	75	SOT23
MA4P7436CK-287T	25	2500	0.3	1.12	0.5	200	75	SOT23
MA4P7436ST-287T	25	2500	0.3	1.12	0.5	200	75	SOT23
MSWSE-010-16S	1	3000	10	0.15	0.9	1000	250	0402P
MSWSE-040-10	1	3000	40	0.12	0.6	700	250	0805P
MADP-010630-13920T	25	3000	2	0.35	1.5	200	100	ODS-1392
MADP-010631-13920T	25	3000	5	1	0.5	200	100	ODS-1392
MADP-010633-13920T	25	3000	6	0.4	0.6	1000	500	ODS-132
MA4SPS422	50	3000	1.8	0.34	3.1	10000	200	SURMOUNT; Die
MSWSE-050-10	100	3000	15	0.53	0.4	3200	500	0805P
MSWSE-050-17	100	3000	60	0.2	0.7	1600	500	0805P
MMP7068	0.5	4000	—	0.3	0.8	2000	500	Various/Die
MADP-007167-0287HT	1	4000	0.3	0.42	16	3000	200	SOT23
MADP-000506-014400 S	1	4000	10	0.7	0.3	100	500	ODS-144
MA4P506-131 S	1	4000	13.6	0.7	0.3	3000	500	ODS-131; Die
MA4P505-36 S	1	4000	15	0.55	0.5	2000	500	ODS-36
MADP-007455-12790T	5	4000	0.2	0.45	3	1000	100	SC-79
MA4P7455-1225	10	4000	—	0.47	1.4	1000	100	SOT-25
MA4P303-186 S	20	4000	0.3	0.35	1.5	200	200	ODS-186
MA4P303-1088	20	4000	0.3	0.47	1.5	200	200	ODS-1088
MA4P303-120 S	20	4000	5	0.35	1.5	200	200	ODS-120
MADP-007433-12790T	25	4000	0.2	0.4	1.5	200	75	SC-79
MADP-007436-12790T	25	4000	0.2	1.1	0.5	200	75	SC-79

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PIN Switch and Attenuator Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	TI (ns)	Breakdown Voltage Min (V)	Package
MADP-007433-0287HT	25	4000	0.3	0.42	1.5	200	75	SOT23
MA4P203-1056 S	30	4000	0.3	0.35	1.5	100	100	ODS-1056
MA4P203-30 S	30	4000	5	0.35	1.5	100	100	ODS-30
MA4P202-120 S	50	4000	0.3	0.25	2.5	60	100	ODS-120
MA4P202-276	50	4000	0.3	0.25	2.5	60	100	ODS-276
MADP-042405-130600 S	50	4000	1.3	0.27	0.8	210	80	ODS-1306; Die
MADP-042408-130600	50	4000	1.5	0.36	0.6	380	100	ODS-1306; Die
MMP7036	1	5000	—	0.3	0.7	225	200	Various/Die
MADP-007438-0287FT	5	5000	0.2	0.42	10	3000	200	SOT323
MA4P7455-1141T	5	5000	0.2	0.46	3	1000	100	SOD323; 2-lead
MA4P7437-1141T	5	5000	0.2	0.46	6	2000	200	SOD323; 2-lead
MA4P7438-1141T	5	5000	0.2	0.46	10	3000	200	SOD323; 2-lead
MA4P7438-287T	5	5000	0.2	0.47	10	3000	200	SOT323
MADP-007437-0287BT	5	5000	0.3	0.42	6	2000	200	SOT23
MADP-007437-0287DT	5	5000	0.3	0.42	6	2000	200	SOT23
MADP-007437-0287FT	5	5000	0.3	0.42	6	2000	200	SOT23
MADP-007438-0287BT	5	5000	0.3	0.42	10	3000	200	SOT323
MADP-007438-0287DT	5	5000	0.3	0.42	10	3000	200	SOT23
MA4P7437-287T	5	5000	0.3	0.47	6	2000	200	SOT23
MA4P7437CA-287T	5	5000	0.3	0.47	6	2000	200	SOT23
MA4P7438CA-287T	5	5000	0.3	0.47	10	3000	200	SOT323
MMP7064	0.5	6000	—	0.3	0.8	1500	250	Various/Die
MMP7092 S	1	6000	—	0.2	0.6	1000	500	Various/Die
MMP7024 S	1	6000	—	0.25	0.5	60	70	Various/Die
MPN7420 S	1	6000	2.5	0.06	1	1000	400	C12
MPN7453A S	1	6000	3	0.1	0.7	700	300	C22
MPN7453B S	1	6000	3	0.15	0.6	2500	400	C22
MPN7453C S	1	6000	3	0.18	0.4	1000	300	C22
MADP-017025-1314 S	1	6000	5	0.23	1	2300	1335	ODS-1314; Die
MADP-017015-1314 S	1	6000	5	0.32	0.7	1300	115	ODS-1314; Die
MPN7360 S	1	6000	10	0.8	0.2	2500	600	C37
MPN7380 S	1	6000	10	0.4	0.3	2500	800	C38
MPN7370 S	1	6000	10	2	0.2	5000	700	C39
MA4P505-131 S	1	6000	10.7	0.35	0.5	2000	500	ODS-131; Die
MADP-030025-1314 S	1	6000	11.5	0.5	0.7	2800	135	ODS-1314; Die
MADP-030015-13140P S	1	6000	11.5	0.78	0.5	1600	115	ODS-1314; Die
MPN7320-H20 S	5	6000	1	0.2	3	120	150	H20
MPN7345 S	5	6000	4	0.3	0.3	500	300	C40
MADP-008120-12790T	10	6000	0.2	0.15	2.5	200	100	SC-79
MPN7315-H20 S	10	6000	1	0.26	1.2	180	150	H20
MSWSE-005-15	10	6000	4	0.11	2	180	200	0503
MSWSE-005-10S	10	6000	5	0.08	2	180	200	0402P
MPN7312A-H20 S	20	6000	1	0.26	1.2	150	120	H20
MPN7312B-H20 S	20	6000	1	0.36	0.8	250	120	H20
MADP-042305-130600 S	50	6000	1	0.14	1.3	180	80	ODS-1306; Die
MADP-042308-130600 S	50	6000	1	0.14	1.3	280	100	ODS-1306; Die
MA4SP5421	50	6000	1.8	0.13	6.2	5000	200	SURMOUNT; Die
MSWSH-040-30	50	6000	40	0.42	0.4	600	500	2012

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PIN Switch and Attenuator Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	TI (ns)	Breakdown Voltage Min (V)	Package
MPN7306-H20 S	100	6000	1	0.26	1.2	50	70	H20
MSWSH-020-30	100	6000	20	0.13	0.6	600	100	2012
MSWSH-100-30	100	6000	100	0.4	0.4	3400	700	CM22
MMP7063	0.5	8000	—	0.2	1	1000	250	Various/Die
MMP7067	0.5	8000	—	0.2	1	1500	500	Various/Die
MMP7023 S	1	8000	—	0.2	0.7	60	70	Various/Die
MMP7035	1	8000	—	0.2	0.8	225	200	Various/Die
MA47222 S	1	8000	3.8	0.4	1.6	160	150	ODS-144
MA47223 S	1	8000	7.5	0.4	0.6	1000	500	ODS-144
MA4P504-144 S	1	8000	7.5	0.4	0.6	1000	500	ODS-144
MA4P604-131 S	1	8000	15	0.3	1	3000	1000	ODS-131; Die
MNP0012A-T55P S	5	8000	0.25	0.31	0.6	650	350	T55p
MNP0012A-T54P S	5	8000	0.25	0.36	0.6	650	350	T54p
MNP0012A-T89P S	5	8000	0.25	0.43	0.6	650	350	T89p
MNP0012A S	5	8000	1	0.18	0.6	650	350	C22p
MNP0012A-ET47P	5	8000	1	0.58	0.6	650	350	ET47p
MA47416-132 S	DC	10000	5	0.15	6	2000	200	ODS-132; Die
MMP7022 S	1	10000	—	0.15	0.9	60	70	Various/Die
MMP7028	1	10000	—	0.15	1	100	100	Various/Die
MMP7034	1	10000	—	0.15	1	225	200	Various/Die
MNP0014-T55P S	1	10000	0.1	0.25	0.8	750	450	T55p
MNP0014-T54P S	1	10000	0.1	0.32	0.8	750	450	T54p
MNP0014-T89P S	1	10000	0.1	0.37	0.8	750	450	T89p
MNP0014-ET47P	1	10000	0.5	0.52	0.8	750	450	ET47p
MNP0014 S	1	10000	1.5	0.12	1.3	750	500	C22p
MA4P504-132 S	1	10000	7.5	0.2	0.6	1000	500	ODS-132; Die
MPN7320-0805-2	5	10000	1	0.08	3	120	150	0805-2
MA47418-134 S	5	10000	6	0.15	3	1000	200	ODS-134; Die
MA4P404-132 S	5	10000	7.5	0.2	0.7	600	250	ODS-132; Die
MPN7315-0805-2	10	10000	1	0.14	1.2	180	150	0805-2
MPN7312A-0805-2	20	10000	1	0.14	1.2	150	120	0805-2
MPN7312B-0805-2	20	10000	1	0.24	0.8	250	120	0805-2
MSWSHC-040-40	50	10000	40	0.5	—	3000	300	2615
MSWSHB-020-30	50	10000	40	0.5	—	4000	200	2012
MPN7306-0805-2	100	10000	1	0.14	1.2	50	70	0805-2
MSAT-N25	100	10000	2	—	1.5	3000	200	2012
MSAT-P25	100	10000	2	—	1.5	3000	200	2012
MPN7302-0805-2	500	10000	1	0.14	1.2	8	20	0805-2
MMP7062	0.5	12000	—	0.1	1.2	1000	250	Various/Die
MMP7066-11	0.5	12000	—	0.1	1.2	1500	500	Various/Die
MMP7041	1	12000	—	0.07	1.5	400	200	Various/Die
MNP0012-T55P S	5	12000	0.25	0.21	3.5	350	300	T55p
MNP0012-T54P S	5	12000	0.25	0.28	3.5	350	300	T54p
MNP0012-T89P S	5	12000	0.25	0.33	3.5	350	300	T89p
MPN7320 S	5	12000	1	0.02	3	120	150	C01
MNP0012 S	5	12000	1	0.08	3.5	350	300	C12p
MNP0012-ET47P	5	12000	1	0.48	3.5	350	300	ET47p
MNP0010-ET47P	10	12000	1	0.48	2	300	150	ET47p

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PIN Switch and Attenuator Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	TI (ns)	Breakdown Voltage Min (V)	Package
MNP0010-T55P S	10	12000	0.25	0.21	2	300	150	T55p
MNP0010-T54P S	10	12000	0.25	0.28	2	300	150	T54p
MNP0010-T89P S	10	12000	0.25	0.33	2	300	150	T89p
MPN7312B S	20	12000	1	0.18	0.8	250	120	C12
MADP-011027-14150T	50	12000	3.3	0.24	1.9	1000	100	1.5 x 1.2 mm; TDFN-6
MADP-011028-14150T	50	12000	4.3	0.24	3.4	2000	200	1.5 x 1.2 mm; TDFN-6
MADP-011029-14150T	50	12000	7.5	0.31	1.5	1000	400	1.5 x 1.2 mm; TDFN-6
MNP0008-T55P S	100	12000	0.25	0.21	2	150	100	T55p
MNP0008-T54P S	100	12000	0.25	0.28	2	150	100	T54p
MNP0008-T89P S	100	12000	0.25	0.33	2	150	100	T89p
MPN7306 S	100	12000	1	0.08	1.2	50	70	C12
MNP0008-ET47P	100	12000	1	0.48	2	150	100	ET47p
MMP7011 S	200	12000	—	0.15	0.8	10	25	Various/Die
MPN7302 S	500	12000	1	0.08	1.2	8	20	C11
MMP7061	0.5	14000	—	0.08	1.5	1000	250	Various/Die
MMP7065	0.5	14000	—	0.08	1.5	1500	500	Various/Die
MMP7026	1	14000	—	0.07	1.5	100	100	Various/Die
MMP7021 S	1	14000	—	0.1	1	60	70	Various/Die
MMP7027	1	14000	—	0.1	1.2	100	100	Various/Die
MMP7033	1	14000	—	0.1	1.6	225	200	Various/Die
MMP7040	1	15000	—	0.03	2.6	400	200	Various/Die
MMP7060	0.5	16000	—	0.05	2	1000	250	Various/Die
MADP-042905-130600 S	50	16000	0.8	0.06	3.1	140	80	ODS-1306; Die
MADP-042908-130600 S	50	16000	0.8	0.06	3.1	230	100	ODS-1306; Die
MMP7025 S	1	18000	—	0.03	1.9	100	100	Various/Die
MMP7031	1	18000	—	0.03	3	225	200	Various/Die
MMP7020 S	1	18000	—	0.05	1.2	60	70	Various/Die
MA4P303-134 S	20	18000	5	0.15	1.5	200	200	ODS-134; Die
MA4P203-134 S	30	18000	5	0.15	1.5	100	100	ODS-13; Die
MADP-000402-12530P S	50	18000	1	0.04	4.5	200	70	ODS-1253; Die
MA4SP5402 S	50	18000	1	0.04	5	200	100	ODS-1253; Die
MADP-000402-12530G S	50	18000	1	0.04	5	200	1000	ODS-1253; Die
MADP-064908-131000 S	50	18000	1	0.05	5	200	100	ODS-1310; Die
MA4P7493-134 S	50	18000	2.5	0.05	1.8	80	150	ODS-134; Die
MA4PBL027 S	100	18000	0.2	0.03	4	150	90	Beam Lead; Die
MA4P161-134 S	100	18000	2.3	0.1	1.5	150	100	ODS-134; Die
MMPN080045 S	2000	20000	—	—	—	—	200	C50
MA4FCP305	100	24000	0.2	0.06	2.1	25	40	ODS-1269; Die
MA4SP5302 S	1	26000	0.8	0.4	1.3	460	100	SURMOUNT; Die
MA4SP5502 S	1	26000	35	0.14	2.4	2800	275	ODS-1270
MA4SP5552 S	50	26000	1	0.06	1.7	2500	200	ODS-1270
MSWSH-020-24	100	26000	2	—	—	600	200	2020
MADP-000907-14020P	100	30000	0.1	0.03	5.2	4	45	Flip Chip; Die
MADP-000907-14020W	100	30000	0.1	0.03	5.2	4	45	Flip Chip; Die
MA4AGP907	100	30000	0.1	0.03	5.2	4	50	Flip Chip; Die
MA4FCP300	100	30000	0.2	0.03	2.6	140	70	ODS-1269
MA4GP907	100	30000	0.3	0.03	4.2	2	45	Flip Chip; Die
MADP-001907-13050P	100	30000	0.5	0.03	4.2	4	50	Flip Chip; Die

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PIN Switch and Attenuator Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	TI (ns)	Breakdown Voltage Min (V)	Package
MMPN080150 S	2000	35000	—	—	—	—	200	C51
MA4FCP200	100	40000	0.1	0.02	2.8	100	70	ODS-1264; Die
MA4AGBLP912 S	100	40000	0.1	0.02	4	5	50	Beam Lead; Die
MA4AGFCP910	100	40000	0.1	0.02	5.2	4	75	Flip Chip; Die
MA4GP905	100	40000	0.1	0.03	3	2	50	Die
MA4GP030 S	100	40000	0.3	0.06	2	25	100	ODS-277
MA4GP022 S	100	40000	0.3	0.15	1	20	50	ODS-277
MMSPN050-C53 S	1000	40000	40	—	0.6	4000	200	C53
MMSPN050-C54 S	1000	40000	40	—	0.6	4000	200	C54

PIN Limiter Diodes

Part Number	Max CW Power (dBm)	Max Peak Power (dBm)	Input P1dB (dBm)	Junction Capacitance (pF)	Thermal Resistance	Lifetime (ns)	Resistance	Breakdown Voltage (V)	Package
MADL-011021-14150T	34	34	5	0.4	35	10	1.5	20	1.5 x 1.2 mm; TDFN-6
MADL-011008	33	44.8	10	0.3	150	15	1.5	20	1.2 x 1.5 mm; PDFN-6
MLP7130 S	33	47	7	0.12	120	5	2	15	Various
MLP7130-0805-2 S	33	47	7	0.12	120	5	2	15	Various
MLP7140 S	34.8	47	12	0.12	100	7	2	30	Various
MADL-000011-13880G S	33	49	7	0.18	35	10	2.1	15	ODS-13880G; Die
MA4L011-31 S	33	49	7	0.36	175	10	2.1	15	ODS-31
MA4L011-186 S	33	49	7	0.33	175	10	2.1	15	ODS-186
MA4L011-137 S	33	49	7	0.32	175	10	2.1	15	ODS-137
MA4L011-1088 S	33	49	7	0.3	175	10	2.1	16	ODS-1088
MA4L011-134 S	33	49	7	0.18	175	10	2.1	15	ODS-134; Die
MA4L011-1056 S	33	49	7	0.38	175	10	2.1	15	ODS-1056
MA4L011-32 S	33	49	7	0.48	175	10	2.1	15	ODS-32
MLP7131-2012	34.7	49.5	7	0.15	80	5	2	35	Plastic; SMT
MADL-011021-14210G S	34.8	49.5	8	0.2	35	10	2.1	20	ODS-1056
MA4L022-120 S	34.8	49.5	7	0.32	175	10	2	20	ODS-120
MA4L022-137 S	34.8	49.5	8	0.33	175	10	2	20	ODS-137
MA4L022-1056	34.8	49.5	8	0.39	175	10	2	20	ODS-1056
MA4L022-30	34.8	49.5	8	0.37	175	10	2	30	ODS-30
MA4L021-134 S	34.8	49.5	8	0.2	175	10	2.1	20	ODS-134; Die
MA4L022-134 S	34.8	49.5	8	0.19	175	10	2	20	ODS-134; Die
MA4L021-120 S	34.8	49.5	8	0.33	175	10	2.1	20	ODS-120
MA4L021-1056 S	34.8	49.5	8	0.4	175	10	2.1	20	ODS-1056
MA4L021-31	34.8	49.5	7	0.38	175	10	2.1	20	ODS-31
MA4L022-32 S	34.8	49.5	7	0.49	175	10	2	20	ODS-32
MLP7100 S	2	50	7	0.2	100	5	1.5	—	Various
MLP7101 S	34.8	50	7	0.5	80	10	1.2	20	Various
MLP7131 S	34.8	50	7	0.2	80	5	1.5	15	Various
MADL-011052-14280W S	36	50	7	—	36	23	—	20	ODS-134; DIE
MLP7141 S	36	50	12	0.2	70	7	1.5	30	Various
MADL-011023-14150T S	40	50	8	0.2	175	10	1.3	20	1.5 x 1.2 mm; TDFN-6
MA4L032-31 S	36	51	10	0.38	150	15	2.5	30	ODS-31
MA4L032-32	36	51	10	0.5	150	15	2.5	30	ODS-32
MADL-011010-01340W S	36	51	10	0.24	34	15	1.5	30	ODS-134
MA4L031-1056	36	51	11	0.41	150	20	2	30	ODS-1056
MADL-000032-003000	36	51	11	0.21	150	20	2.1	30	ODS-3000

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PIN Limiter Diodes (continued)

Part Number	Max CW Power (dBm)	Max Peak Power (dBm)	Input P1dB (dBm)	Junction Capacitance (pF)	Thermal Resistance	Lifetime (ns)	Resistance	Breakdown Voltage (V)	Package
MA4L032-186 S	36	51	10	0.35	150	15	2.5	30	ODS-186
MA4L032-1056 S	36	51	10	0.4	150	15	2.5	30	ODS-1056
MA4L032-134 S	30	51	10	0.2	150	15	2.5	—	ODS-134 Die
MA4L031-31 S	36	51	11	0.39	150	20	2	30	ODS-31
MA4L031-186 S	36	51	11	0.36	150	20	2	30	ODS-186
MA4L031-134 S	36	51	11	0.21	150	20	2	30	ODS-134; Die
MADL-000031-13880G S	36	51	23	0.21	34	20	2.1	30	ODS-1388
MADL-04L062-1088	37	53	15	0.11	33	10	2.5	60	Plastic; SMT
MADL-011085-14210W	37	53	15	0.2	25	11	2.1	50	ODS-1421
MADL-011011-01340W S	37	53	16	0.17	33	10	2.3	60	ODS-134
MADL-000062-13880G S	37	53	16	0.15	25	10	2.5	60	ODS-13880G; Die
MADL-000062-105600 S	37	53	16	0.35	25	10	2.5	60	ODS-1056
MLP7110 S	34.8	53	15	0.2	80	10	1.5	45	Various
MADL-011054-01340W	38	53	—	—	38	74	1.6	—	Die
MA4L062-134 S	200	53	16	0.15	150	10	2.5	60	ODS-134; Die
MA4L101-30 S	38	54	20	0.33	30	90	2	100	ODS-30
MA4L101-134 S	38	54	20	0.15	30	90	2	100	ODS-134; Die
MADL-000101-13880G S	38	54	20	0.15	25	90	2	100	ODS-13880G; Die
MA4L101-186 S	38	54	20	0.3	30	90	2	100	ODS-186
MLP7101-2012	27	55	10	0.5	85	10	1.2	20	2012
MLP7102-0503	—	56	10	0.7	55	10	1	20	Plastic; DFN
MADL-000301-01340W S	38.5	57	23	0.2	39	200	1.5	200	ODS-134; Die
MA4L301-31 S	38.5	57	23	0.38	30	200	1.5	—	ODS-31
MADL-000301-13870G S	38.5	57	23	0.2	30	200	1.5	200	ODS-1370
MLP7112-0503	—	59	15	0.7	40	20	1	45	Plastic; DFN
MLP7112 S	37	59	15	0.7	40	20	1	45	Various
MLP7120 S	37	60	20	0.2	40	50	1.5	120	Various
MLP7120-2012	37	60	20	0.2	45	50	1.5	120	Plastic
MA4L011-30 S	40	60	7	0.36	175	10	2.1	250	ODS-30
MADL-000401-13870G S	40	60	30	0.3	25	800	1.2	250	ODS-13870G; Die
MA4L401-31 S	40	60	32	0.48	25	800	1.2	250	ODS-31
MA4L401-120 S	40	60	32	0.43	25	800	1.2	250	ODS-32
MA4L401-30 S	40	60	33	0.48	25	800	1.2	250	ODS-30
MA4L401-1056 S	40	60	30	0.5	25	800	1.2	250	ODS-1056
MLP7121-0503	—	63	20	0.6	20	50	1	120	Plastic; DFN
MLP71211 S	40	63	20	0.6	20	50	1	120	Various
MLP7122-0503	—	66	20	0.8	15	50	0	119	Plastic; DFN
MLP7122 S	41.8	66	20	0.8	15	100	0.5	120	Various
MADL-000021-003000 S	3	90	8	0.38	35	10	21	20	ODS-30

Schottky Mixer and Detector Diodes

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	Vf (mV)	Vb (V)	Package
1N5819	—	—	0.04	—	110	30	DO-7
MGR703 S	DC	1000	1	—	0.41	20	Various/Die
MGR700 S	DC	1000	1.2	—	0.34	8	Various/Die
MGR705 S	DC	1000	1.2	—	0.41	70	Various/Die
MA4E2532L-1113	DC	1800	0.1	16	440	5	ODS-1113
MNM207 S	DC	2600	0.14	20	0.425	4	Various/Die
MNM201 S	DC	2600	0.2	20	0.4	3	Various/Die

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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	Vf (mV)	Vb (V)	Package
MNM212 S	DC	2600	0.21	20	0.475	5	Various/Die
MNM211	DC	2600	0.25	20	0.45	5	Various/Die
SMSD6012-SOD323	DC	3000	0.25	15	630	2	SOD-323
SMST6004-SOT23	DC	3000	0.6	10	600	2	SOT-23
MSS20-054-C15 S	DC	8000	0.2	80	—	0.8	C15P
MSS20-055-C15 S	DC	8000	0.2	80	—	0.8	C15P
MZB600-19-6	DC	8000	0.2	3500	0.3	3	CS19-6
MZB600-32 S	DC	8000	0.2	3500	0.3	3	CS32
MZB600-B11	DC	8000	0.2	3500	0.3	3	B11
MZB600-C15P	DC	8000	0.2	3500	0.3	3	C15P
MZB604-B11 S	DC	8000	0.2	5000	0.3	4	B11
MZB604-C15P	DC	8000	0.2	5000	0.3	4	C15P
MSS20-054-E25	DC	8000	0.3	80	—	0.8	E25
MSS20-055-E25	DC	8000	0.3	80	—	0.8	E25
MSS20-054-H27 S	DC	8000	0.35	80	—	0.8	H27
MSS20-055-H27 S	DC	8000	0.35	80	—	0.8	H27
MSS20-054-T86 S	DC	8000	0.41	80	—	0.8	T86p
MSS20-055-T86 S	DC	8000	0.41	80	—	0.8	T86p
MADS-011010-1419	DC	10000	0.15	7	—	3	ODS-1419
MA40147-213	DC	10000	0.32	—	—	—	ODS-213
MA40264 S	DC	10000	0.32	—	—	3	ODS-186
MSS39-048-C15	DC	12000	0.15	—	—	5	C15p
MSS20-050-C15 S	DC	12000	0.15	80	—	0.8	C15P
MSS20-051-C15 S	DC	12000	0.15	80	—	0.8	C15P
MSS39-152-B10B S	DC	12000	0.18	—	—	3.5	B10Bp
MSS20-050-E25	DC	12000	0.25	80	—	0.8	E25
MSS20-051-E25	DC	12000	0.25	80	—	0.8	E25
MSS39-152-E25	DC	12000	0.28	—	—	3.5	E25
MSS39-048-P55 S	DC	12000	0.3	—	0.4	5	P55p
MSS20-050-H27 S	DC	12000	0.3	80	—	0.8	H27
MSS20-051-H27 S	DC	12000	0.3	80	—	0.8	H27
MSS20-054-0805-2 S	DC	12000	0.3	80	—	0.8	0805-2
MSS20-055-0805-2	DC	12000	0.3	80	—	0.8	0805-2
MSS20-046-T86 S	DC	12000	0.31	80	—	0.8	T86p
MSS20-047-T86 S	DC	12000	0.31	80	—	0.8	T86p
MSS39-048-P86 S	DC	12000	0.32	—	—	5	P86p
MSS39-148-H20 S	DC	12000	0.33	—	—	3.5	H20
MSS20-050-T86 S	DC	12000	0.36	80	—	0.8	T86p
MSS20-051-T86 S	DC	12000	0.36	80	—	0.8	T86p
MA40215-120 S	DC	16000	0.32	—	0.39	5	ODS-1200
MADS-011030-14280W S	DC	16000	0.33	6.5	100	3.5	Die
MSS39-045-C15 S	DC	18000	0.1	—	0.4	5	C15p
MSS30-142-B10B S	DC	18000	0.1	22	0.29	2	B10B
MSS30-242-B20 S	DC	18000	0.1	22	0.29	2	B20
MSS30-442-B42 S	DC	18000	0.1	22	0.29	2	B42
MSS30-442-E45	DC	18000	0.1	22	0.29	2	E45
MSS30-442-H40 S	DC	18000	0.1	22	0.29	2	H40
MSS40-141-B10B S	DC	18000	0.1	22	0.42	3	B10B
MSS30-442-B41 S	DC	18000	0.1	22	0.4	4	B41

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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	Vf (mV)	Vb (V)	Package
MSS20-046-C15 S	DC	18000	0.1	80	—	0.8	C15P
MSS20-047-C15 S	DC	18000	0.1	80	—	0.8	C15P
MAD5-002545-1307HG	DC	18000	0.11	10	0.65	5	ODS-1307
MAD5-002545-1307MG	DC	18000	0.11	10	0.39	5	ODS-1307
MAD5-002545-1307LG	DC	18000	0.11	11	0.3	5	ODS-1307
MSS39-148-B10B S	DC	18000	0.12	—	0.38	3.5	B10Bp
MSS40-045-C15 S	DC	18000	0.12	15	0.42	3	C15
MSS30-046-C15 S	DC	18000	0.12	18	0.29	2	C15
MSS50-146-B10B S	DC	18000	0.12	18	0.5	4	B10B
MSS30-PCB46-B48 S	DC	18000	0.12	20	0.3	2	B48
MSS40-PCB46-B48 S	DC	18000	0.12	20	0.47	3	B48
MSS50-046-C26	DC	18000	0.12	20	0.5	4	C26
MSS40-244-B20 S	DC	18000	0.12	22	0.4	3	B20
MSS30-CR46-B49	DC	18000	0.125	22	0.3	2	B49
MSS30-B46-B45 S	DC	18000	0.125	25	0.3	2	B45
MSS50-B46-B45 S	DC	18000	0.13	20	0.5	4	B45
MSS30-PCR46-B47 S	DC	18000	0.13	22	0.29	2	B47
MSS40-PCR46-B47 S	DC	18000	0.13	22	0.47	3	B47
MSS40-B46-B45 S	DC	18000	0.13	25	0.47	3	B45
MSS30-148-B10B S	DC	18000	0.15	15	0.27	2	B10B
MSS30-248-B20 S	DC	18000	0.15	15	0.27	2	B20
MSS30-448-B41 S	DC	18000	0.15	15	0.4	2	B41
MSS30-448-B42 S	DC	18000	0.15	15	0.3	2	B42
MSS40-048-C15 S	DC	18000	0.15	15	0.42	3	C15
MSS40-148-B10B S	DC	18000	0.15	17	0.4	3	B10B
MSS40-248-B20 S	DC	18000	0.15	17	0.44	3	B20
MSS40-448-B42 S	DC	18000	0.15	17	0.4	3	B42
MSS50-048-C15	DC	18000	0.15	15	0.5	4	C15
MSS39-144-0402	DC	18000	0.16	—	0.38	3.5	0402
MSS39-144-0805-2	DC	18000	0.17	—	0.38	3.5	0805-2
MSS39-146-0402	DC	18000	0.18	—	0.38	3.5	0402
MSS30-050-C15 S	DC	18000	0.18	15	0.27	2	C15
MSS40-141-0402	DC	18000	0.18	18	0.42	3	0402
MSS39-146-0805-2	DC	18000	0.2	—	0.38	3.5	0805-2
MSS39-148-0402	DC	18000	0.2	—	0.38	3.5	0402
MSS50-244-B20	DC	18000	0.2	16	0.5	4	B20
MSS50-146-0402	DC	18000	0.2	18	—	4	0402
MSS20-046-E25	DC	18000	0.2	80	—	0.8	E25
MSS20-047-E25	DC	18000	0.2	80	—	0.8	E25
SMS202	DC	18000	0.2	80	-3.88	1	0503
MSS30-242-E35	DC	18000	0.21	22	0.29	2	E35
MSS39-148-0805-2	DC	18000	0.22	—	0.39	3.5	0805-2
MSS39-148-E25	DC	18000	0.22	—	0.38	3.5	E25
MSS40-141-E25	DC	18000	0.22	18	0.42	3	E25
MSS50-146-0805-2	DC	18000	0.22	18	—	4	0805-2
MSS30-CR46-E45	DC	18000	0.22	22	0.3	2	E45
MSS40-CR46-E45	DC	18000	0.23	15	—	3	E45
MSS39-144-H27 S	DC	18000	0.24	—	0.38	3.5	H27
MSS40-148-0402	DC	18000	0.24	15	0.4	3	0402

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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	Vf (mV)	Vb (V)	Package
MSS50-146-E25	DC	18000	0.24	18	0.5	4	E25
MSS40-B46-E45	DC	18000	0.24	25	0.47	3	E45
MSS40-244-E35	DC	18000	0.24	28	0.44	3	E35
MSS39-146-H27 S	DC	18000	0.25	—	0.38	3.5	H27
MSS39-152-0402	DC	18000	0.25	—	0.38	3.5	0402
MSS30-154-B10B S	DC	18000	0.25	12	0.25	2	B10B
MSS30-254-B20 S	DC	18000	0.25	12	0.25	2	B20
MSS30-454-B40 S	DC	18000	0.25	12	0.3	2	B40
MSS50-448-B40 S	DC	18000	0.25	14	0.5	4	B40
MSS40-B53-B45 S	DC	18000	0.25	15	0.43	3	B45
MSS50-B53-B45 S	DC	18000	0.25	15	0.5	4	B45
MSS50-CR53-B49 S	DC	18000	0.25	15	0.5	4	B49
MSS50-PCR53-B48 S	DC	18000	0.25	15	0.5	4	B47
MSS30-CR53-B49 S	DC	18000	0.25	15	0.3	2	B49
MSS30 PCR53-B47 S	DC	18000	0.25	15	0.29	2	B47
MSS30-248-E35	DC	18000	0.25	15	0.27	2	E35
MSS30-B53-B45 S	DC	18000	0.25	15	0.3	2	B45
MSS40-448-E45	DC	18000	0.25	15	0.4	3	E45
MSS40-248-0805-4	DC	18000	0.25	18	0.44	3	0805-4
MSS50-B46-E45	DC	18000	0.25	20	0.5	4	E45
MSS30-B46-E45	DC	18000	0.25	25	0.3	2	E45
MSS20-046-H27 S	DC	18000	0.25	80	—	0.8	H27
MSS20-047-H27 S	DC	18000	0.25	80	—	0.8	H27
MSS20-050-0805-2	DC	18000	0.25	80	—	0.8	0805-2
MSS20-051-0805-2	DC	18000	0.25	80	—	0.8	0805-2
MSS39-045-P55	DC	18000	0.26	—	0.4	5	P55p
MSS30-448-E45	DC	18000	0.26	15	0.3	2	E45
MSS30-142-E25	DC	18000	0.26	22	0.29	2	E25
MSS39-152-0805-2	DC	18000	0.27	—	0.38	3.5	0805-2
MSS39-045-P86 S	DC	18000	0.27	—	0.4	5	P86p
MSS40-045-P55 S	DC	18000	0.28	15	0.42	3	P55
MSS40-148-E25	DC	18000	0.28	15	0.4	3	E25
MSS40-248-E35	DC	18000	0.28	18	0.44	3	E35
MSS50-046-P55 S	DC	18000	0.28	20	—	4	P55
MSS40-155-B10B	DC	18000	0.3	13	0.38	3	B10B
MSS40-045-P86 S	DC	18000	0.3	15	0.42	3	P86
MSS40-048-P55	DC	18000	0.3	15	0.42	3	P55
MSS40-255-0805-4	DC	18000	0.3	15	—	3	0805-4
MSS30-346-B21 S	DC	18000	0.3	16	0.27	2	B2
MSS40-455-B40 S	DC	18000	0.3	17	0.38	3	B40
MSS30-046-P55 S	DC	18000	0.3	18	0.29	2	P55
MSS40-141-H20 S	DC	18000	0.3	18	0.42	3	H20
MSS50-046-P86	DC	18000	0.3	20	—	4	P86
MSS30-148-E25	DC	18000	0.31	15	0.27	2	E25
MSS50-244-E35	DC	18000	0.31	16	0.5	4	E35
MSS30-142-H20 S	DC	18000	0.31	22	0.29	2	H20
MSS30-242-H30 S	DC	18000	0.31	22	0.29	2	H30
MSS40-455-H40 S	DC	18000	0.32	14	0.38	3	H40
MSS40-048-P86 S	DC	18000	0.33	15	0.4	3	P86

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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	Vf (mV)	Vb (V)	Package
MSS30-046-P86 S	DC	18000	0.33	18	0.29	2	P86
MSS30-CR46-H40 S	DC	18000	0.33	22	0.3	2	H40
MSS50-146-H20 S	DC	18000	0.34	18	0.5	4	H2
MSS50-448-0805-4	DC	18000	0.35	10	—	4	0805-4
MSS30-254-E35	DC	18000	0.35	12	0.25	2	E35
MSS30-454-E45	DC	18000	0.35	12	0.3	2	E45
MSS30-050-P55 S	DC	18000	0.35	15	0.27	2	P55
MSS30-448-H40 S	DC	18000	0.35	15	0.3	2	H40
MSS30-B53-E45	DC	18000	0.35	15	0.3	2	E45
MSS30-CR53-E45	DC	18000	0.35	15	0.3	2	E45
MSS40-CR46-H40 S	DC	18000	0.35	15	—	3	H40
MSS50-B46-H40 S	DC	18000	0.35	20	0.5	4	H40
MSS30-B46-H40 S	DC	18000	0.35	25	0.3	2	H40
MSS39-152-H20 S	DC	18000	0.36	—	0.38	3.5	H20
MSS50-448-E45 S	DC	18000	0.36	10	0.5	4	E45
MSS30-148-H20 S	DC	18000	0.36	15	0.27	2	H20
MSS30-248-H30 S	DC	18000	0.36	15	0.27	2	H30
MSS40-148-H20	DC	18000	0.36	15	0.4	3	H20
MSS40-448-H40 S	DC	18000	0.36	15	0.4	3	H40
MSS40-B53-E45	DC	18000	0.36	15	0.43	3	E45
MSS50-CR53-E45	DC	18000	0.36	15	—	4	E45
MSS50-B53-E45 S	DC	18000	0.36	15	0.5	4	E45
MSS40-244-0805-4	DC	18000	0.36	28	0.44	3	0805-4
MSS40-155-0402 S	DC	18000	0.38	14	0.38	3	0402
MSS30-050-P86 S	DC	18000	0.38	15	0.27	2	P86
MSS40-455-E45	DC	18000	0.4	14	0.38	3	E45
MSS50-155-0805-2	DC	18000	0.4	15	—	4	0805-2A
MSS30-346-E25	DC	18000	0.4	16	0.29	2	E25
MSS30-154-E25	DC	18000	0.41	12	0.25	2	E25
MSS40-155-E25	DC	18000	0.41	14	0.38	3	E25
MSS40-255-E35	DC	18000	0.41	14	—	3	E35
MSS50-244-H30	DC	18000	0.42	16	0.5	4	H30
MSS50-244-0805-4	DC	18000	0.44	16	—	4	0805-4
MSS30-CR53-H40	DC	18000	0.45	15	0.3	2	H40
MSS30-154-H20 S	DC	18000	0.46	12	0.25	2	H20
MSS30-254-H30 S	DC	18000	0.46	12	0.25	2	H30
MSS30-454-H40 S	DC	18000	0.46	12	0.3	2	H40
MSS30-B53-H40 S	DC	18000	0.46	15	0.3	2	H40
MSS50-CR53-H40 S	DC	18000	0.46	15	0.5	4	H40
MSS50-448-H40 S	DC	18000	0.48	10	0.5	4	H40
MSS50-B53-H40 S	DC	18000	0.48	15	—	4	H40
MSS30-346-H20 S	DC	18000	0.5	16	0.29	2	H20
MSS40-155-H20 S	DC	18000	0.51	14	0.38	3	H20
MSS20-046-0805-2	DC	20000	0.2	80	—	0.8	0805-2
MSS20-047-0805-2	DC	20000	0.2	80	—	0.8	0805-2
MSS39-146-B10B S	DC	26000	0.1	—	0.38	3.5	B10Bp
MA4E2513L-1289 S	DC	26000	0.12	10	-0.7	3	ODS-1289
MA4E2501L-1290 S	DC	26000	0.12	10	0.33	5	ODS-1290
MAD5-002501-1290LP	DC	26000	0.12	10	0.3	5	ODS-1290

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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	Vf (mV)	Vb (V)	Package
MADS-002502-1246HP	DC	26000	0.12	11	0.7	3	ODS-1246
MA4E2502H-1246 S	DC	26000	0.12	11	0.65	3	ODS-1246
MADS-002502-1246MP	DC	26000	0.12	12	0.47	3	ODS-1246
MA4E2514M-1116 S	DC	26000	0.12	12	0.4	3	ODS-1116
MA4E2502M-1246 S	DC	26000	0.12	12	0.42	3	ODS-1246
MADS-002502-1246LP	DC	26000	0.12	16	0.33	3	ODS-1246
MA4E2502L-1246 S	DC	26000	0.12	16	0.3	3	ODS-1246
MA4E2514L-1116 S	DC	26000	0.12	16	0.3	3	ODS-1116
MSS20-140-0402	DC	26000	0.15	80	—	0.8	0402
MA4E2532M-1113 S	DC	26000	0.16	10	0.47	5	ODS-1113
MA4E2508H-1112 S	DC	26000	0.24	6	0.7	5	ODS-1112
MA4E2508M-1112 S	DC	26000	0.24	12	0.42	5	ODS-1112
MA4E2508L-1112 S	DC	26000	16	0.24	0.3	5	ODS-1112
SMS201	DC	26500	0.1	80	0.09	1	0503
SMGS11	DC	26500	0.13	13	0.69	4.5	0503
MSS39-144-B10B S	DC	40000	0.08	—	0.38	3.5	B10Bp
MSS25-141-B10D S	DC	40000	0.08	65	0.28	3	B10D
MSS20-140-B10D S	DC	40000	0.08	80	—	0.8	B10D
MSS20-141-0402	DC	40000	0.08	80	—	0.8	0402
MSS20-141-B10D S	DC	40000	0.08	80	—	0.8	B10D
MSS25-143-B10D S	DC	40000	0.1	60	0.26	3	B10D
MSS25-047-C15c S	DC	40000	0.1	65	0.26	3	C15c
MSS20-142-0402 S	DC	40000	0.1	80	—	0.8	0402
MSS20-142-B10D S	DC	40000	0.1	80	—	0.8	B10D
MSS20-143-0402	DC	40000	0.1	80	—	0.8	0402
MSS20-143-B10D S	DC	40000	0.1	80	—	0.8	B10D
MSS25-049-C15c S	DC	40000	0.12	52	0.22	3	C15c
MSS25-145-B10D S	DC	40000	0.12	52	0.22	3	B10D
MSS20-145-0402	DC	40000	0.12	80	—	0.8	0402
MSS20-145-B10D S	DC	40000	0.12	80	—	0.8	B10D
MSS20-146-0402	DC	40000	0.12	80	—	0.8	0402
MSS20-146-B10D S	DC	40000	0.12	80	—	0.8	B10D
MGS912 S	DC	60000	0.03	28	1.95	20	B89
MGS906 S	DC	60000	0.04	14	1.4	10	B90
MGS907 S	DC	60000	0.04	14	1.4	10	B85
MGS908 S	DC	60000	0.04	14	1.4	10	B86
MA4E2037 S	DC	60000	0.05	4	0.7	4.5	Beam Lead
MA4E2039 S	DC	60000	0.05	4	0.7	4.5	Beam Lead
MA4E2040 S	DC	60000	0.05	4	0.7	4.5	Beam Lead
MGS904 S	DC	60000	0.06	7	0.7	5	B85
MGS803	DC	60000	0.06	7	0.7	5	Flip Chip
MGS901 S	DC	60000	0.06	7	0.7	5	Beam Lead; GB110
MGS903 S	DC	60000	0.06	7	0.7	5	Beam Lead; GB110
MGS905 S	DC	60000	0.06	7	0.7	5	B86
MGS907A S	DC	60000	0.06	12	1.4	10	B85
MGS904A S	DC	60000	0.08	5	0.7	5	B85
MGS802	DC	60000	0.1	7	0.7	5	Flip Chip
MGS902 S	DC	60000	0.1	7	0.7	5	Beam Lead; GB210
MGS909 S	DC	60000	0.1	21	1.4	15	B90

Note: Part numbers are RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	Vf (mV)	Vb (V)	Package
MGS910 S	DC	60000	0.1	21	1.4	15	B87
MGS802A	DC	60000	0.15	5	0.7	5	Flip Chip
MAD5-001317-1500AG	DC	80000	0.05	4	0.7	4.5	ODS-1500
MA4E2160	DC	80000	0.05	4	0.7	7	ODS-1262
MAD5-001317-1500AP	DC	80000	0.05	4	0.7	7	ODS-1500
MA4E1317	DC	80000	0.05	4	0.7	4.5	ODS-1278
MA4E1319-1	DC	80000	0.05	4	0.7	4.5	ODS-1199
MA4E1318	DC	80000	0.09	4	0.7	4.5	ODS-1197
MAD5-001318-1197HP	DC	80000	0.09	4	0.7	7	Tape & Reel
MA4E1310	DC	110000	0.04	7	0.7	7	ODS-1278

THz Schottky Barrier Diodes

Part Number	Total Capacitance (fF)	Cutoff Frequency (THz)	Resistance (Ω)	Configuration (mV)
MADZ-011001	40	1.27	3.4	Single
MADZ-011002	49	1	3.5	Single
MADZ-011003	49	1	3.5	Anti-Parallel
MADZ-011004	49	1	3.5	Reverse Tee
MADZ-011005	49	1	3.5	Unconnected Anti-Parallel Pair

Low Magnetic and Non-Magnetic PIN Diodes

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	Lifetime (ns)	Breakdown Voltage Min (V)	Package
MADP-047668-1134B0	—	—	—	—	—	20	75	SMT
MMP7089-128-1	—	—	—	0.5	0.6	1000	500	CS128-1
MMP7080-128-1	—	—	—	0.7	0.8	3	600	CS128-1
MADP-047668-1441BN	—	—	—	1	—	20	75	Lead-Free; SM
MMP7078-128-1	—	—	—	1	0.5	3	400	CS128-1
MADP-010015-14320T	—	—	—	6	0.6	7.5	75	ODS-1432; SM
MADP-010015-14340T	—	—	—	6	0.6	7.5	75	ODS-1434 (Axial)
MADP-010015-14420T	—	—	—	6	0.6	7.5	75	ODS-1442 (AP Pair)
MADP-011143-10720T	DC	120	6	1	0.2	4000	500	ODS-1072
MADP-011084-1134B0	5	400	50	2	1	55	50	Ceramic; 2-lead
MADP-011084-TR0500	5	400	50	2	1	55	50	4 mm; HQFN-8
MA4P4001BNM-402	DC	500	12	2.2	0.5	20000	100	ODS-402
MADP-04002B-NM402T	DC	500	12	2.2	0.5	20000	200	ODS-402
MA4P1250NM-1072T	5	500	18	1	0.5	3500	50	ODS-1072
MA4P1200NM-401T	5	500	5.5	1.2	0.5	3500	50	ODS-401
MA4P7441F-1091T	DC	1000	30	2.2	0.5	18000	100	ODS-1091
MA44781	10	1000	1.7	1.5	0.8	200	60	ODS-1134
MA45471	10	1000	1.7	3	—	200	75	ODS-1134
MADP-000504-10720T	DC	1000	2.9	0.16	0.6	1000	500	ODS-1072
MADP-07006B-NM401T	1	1000	5	0.7	0.9	5000	600	ODS-401
MA4P7446F-1091T	DC	1000	25	2.2	0.5	19000	600	ODS-1091
MA4P7435NM-1091T	DC	1000	50	2.5	0.2	14000	1100	ODS-1091
MA4P7464F-1072T	DC	1500	7.5	0.8	0.5	4500	400	ODS-1072
MADP-000235-10720T	DC	1500	7.5	1.2	0.5	300	35	ODS-1072
MA4P7452F-1072T	DC	1500	10	0.7	0.9	9000	150	ODS-1072
MA4P7470F-1072T	DC	1500	12	0.7	0.8	6500	800	ODS-1072
MADP-011034-10720T	10	1500	6	1	0.4	300	150	ODS-1072
MADP-009989-14320T	30	1500	4	1.2	0.3	6500	75	SM (Axial)

Note: Part numbers are RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Low Magnetic and Non-Magnetic PIN Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	Lifetime (ns)	Breakdown Voltage Min (V)	Package
MADP-009989-14340T	30	1500	4	1.2	0.3	6500	75	ODS-1434 (Axial)
MADP-009989-14420T	30	1500	4	1.2	0.3	6500	75	ODS-1442 (AP Pair)
MADP-000404-10720T	100	1500	7.5	0.6	0.7	100	250	ODS-1072
MADP-011127-11410T	25	2500	0.2	0.35	1.5	200	75	SM
MADP-011128-11410T	25	2500	0.2	1	0.5	200	75	SM
MADP-011136-11410T	50	3000	0.25	0.5	2	20	70	SOD-323
MADP-011136-N287BT	50	3000	0.25	0.5	2	20	70	SOT-23
MADP-011136-N287T0	50	3000	0.25	0.5	2	20	70	SOT-23

Note: Part numbers are RoHS compliant. **S** indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

CONTROL PRODUCTS

For a Wide Range of A&D and Commercial Applications

MACOM offers control products for a wide range of A&D and commercial applications, covering a broad frequency spectrum from DC to 100 GHz, using Silicon, AlGaAs and GaAs based technologies.



Power Detectors

- > Broadband devices with integrated low loss directional couplers and built-in temperature compensation circuits
- > Lead-free plastic surface mount packages
- > For power monitoring and leveling in point-to-point radios, IMS, radar, VSAT, EW, A&D systems

Digital Phase Shifters

- > 4-Bit and 6-Bit with either serial or parallel control inputs
- > For military or weather radar, transmit/receive modules and EW
- > Convenient surface mount PQFN with 360° coverage, fast switching speed and low phase error

Voltage Variable Attenuators

- > Automotive and wireless markets
- > Ideal for cellular infrastructure, handset gain control, radar systems, satellite radios and test equipment

Digital Attenuators

- > Used in a variety of applications for automotive and wireless markets
- > Typical applications include: CATV infrastructure, cellular infrastructure, handset gain control, radar systems, satellite radios and test equipment including 75 Ω versions for CATV

Limiters

- > Thin-film hybrid manufacturing for the highest levels of performance, repeatability, reliability and cost effectiveness

CMOS Switch Drivers

- > For wireless infrastructure base stations and A&D applications including: cordless and mobile phones, satellite radio, GPS and DAB, 2.4 GHz and 5.0 GHz WLAN, VSAT, CATV and broadband, commercial and military radar and multi-market applications

Switches

- > Frequency spectrum from DC to 100 GHz
- > (HMIC) PIN diodes: high power and broadband from 50 MHz to 26 GHz
- > AlGaAs PIN diodes: upper frequency ranges for instrumentation and radar
- > GaAs pHEMT and MESFET for fast switching and low control voltage for narrow band and broadband
- > 75 Ω absorptive switches for CATV, FTTx and DBS infrastructure and CPE applications

Phase Detectors

- > SRD reference frequency multiplier, coupling capacitors and a Schottky diode microwave sampler/phase detector in a 0.075" x 0.100" hybrid
- > Used to phase lock microwave oscillators up to 22 GHz to a much lower reference frequency

Limiters								
Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Input Power (dBm)	Peak Power (W)	Leakage (mW)	Recovery Time (ns)	Insertion Loss (dB)	Package
LM401102-Q-x-301	400	1000	50	1000	63	5000	0.3	Flangeless; Ceramic
MADL-011012	300	1000	54	360	100	3000	0.2	10.1 x 6.2 x 3.2 mm
2690-1001 ♦	1000	2000	30	100	75	100	0.7	Connectorized-SMA
2690-1003 ♦	1000	2000	35	1000	100	1000	0.9	Connectorized-SMA
LM102202-H-C-301	1000	2000	47	200	50	3000	0.35	Flangeless; Ceramic
LM102202-Q-x-301	1000	2000	50	1000	50	1500	0.35	Flangeless; Ceramic
LM501202-L-C-300	500	2000	37	125	125	75	0.4	Flangeless; Ceramic
LM501202-M-C-300	500	2000	45	200	126	500	0.4	Flangeless; Ceramic
MADL-011014	1000	2000	55	1000	79	3500	0.3	Flangeless; Ceramic
SML1	5	3000	20	1	3	—	3	Ceramic; SMTO-8
L1	5	3000	20	1	3	—	3	TO-8
LM2933-Q-B-301	2900	3300	47	1580	200	1500	0.6	Flangeless; Ceramic
MADL-011173-DIE	2000	4000	41	—	40	80	0.5	Die
CL42	50	4000	20	1	3	—	4	SMA
L42	50	4000	20	1	3	—	4	TO-8
SML42	50	4000	20	1	3	—	4	SMT
LM202402-Q-A-301	2000	4000	50	1000	100	750	0.5	Flangeless; Ceramic
LM202402-Q-B-301	2000	4000	50	1000	100	750	0.5	Flangeless; Ceramic
LM202402-Q-C-301	2000	4000	50	1000	100	750	0.5	Flangeless; Ceramic
LM202402-Q-E-301	2000	4000	50	1000	32	3000	0.5	Flangeless; Ceramic
LM202402-Q-F-301	2000	4000	50	1000	32	3000	0.5	Flangeless; Ceramic
MADL-011015	2000	4000	50	250	30	3000	0.6	10.1 x 6.2 x 3.2 mm
LM202602-H-A-300	2000	6000	35	100	63	100	0.85	Flangeless; Ceramic
LM202602-H-C-300	2000	6000	35	100	63	100	0.85	Flangeless; Ceramic
MLM2060-301	2000	6000	36	100	100	100	0.9	Flangeless; Ceramic
MADL-011078-DIE	4000	8000	41	—	40	75	0.6	Die
MADL-011074-DIE	4000	8000	40	—	50	130	0.6	Die
MADL-011087-DIE	2000	8000	41	—	35	30	0.6	Die
2690-1007 ♦	2000	8000	35	1000	100	1000	1.3	Connectorized-SMA
2690-1005 ♦	2000	8000	30	100	50	100	1.1	Connectorized-SMA
LM200802-M-A-300	20	8000	42	100	100	500	1.4	Flangeless; Ceramic
LM202802-L-C-300	2000	8000	36	100	79	75	1	Flangeless; Ceramic
LM202802-M-C-300	2000	8000	45	200	158	1500	1.2	Flangeless; Ceramic
LM202802-Q-B-301	2000	8000	50	1000	126	5000	1.1	Flangeless; Ceramic
LM202802-Q-C-301	2000	8000	50	1000	126	5000	1.1	Flangeless; Ceramic
MADL-011088-DIE	6000	12000	39	—	56	50	0.35	Die
2690-1014 ♦	2000	18000	33	500	75	250	2.3	Connectorized-SMA
2690-1011 ♦	8000	18000	35	1000	100	1000	2.3	Connectorized-SMA
2690-1009 ♦	8000	18000	30	100	50	100	1.8	Connectorized-SMA
2690-1015 ♦	2000	18000	35	1000	100	1000	2.3	Connectorized-SMA
MADL-011125-DIE	2000	20000	19	16	17	45	0.7	Lead-Free; Die
MADL-011126-DIE	2000	40000	22	10	17	25	1.4	Lead-Free; Die
MADL-011122-DIE	18000	40000	—	4	—	40	0.5	Lead-Free; Die
Power Detectors								
Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Sensitivity (dBm)	Directivity (dB)	Max Power (dBm)	Package	
MACP-010571	2000	6000	0.2	-15	15	30	1.5 x 1.2 mm; TDFN-6	
MACP-010572	6000	18000	0.25	-18	16	30	1.5 x 1.2 mm; TDFN-6	
MACP-010573	10000	30000	0.5	-17	14	30	1.5 x 1.2 mm; TDFN-7	

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Power Detectors (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Sensitivity (dBm)	Directivity (dB)	Max Power (dBm)	Package
MADT-011000	5000	44000	—	—	—	15	3 mm; QFN
MADT-011000-DIE	5000	44000	—	—	—	15	Die

Digital Phase Shifters

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Bit Count	LSB (°)	P3 (dBm)	RMS Phase (dBm)	Package
MAPS-011021	900	1200	3.5	6	5.6	42	—	4 mm; PQFN-24
MAPS-011007	1200	1400	3.8	6	5.6	48	2	4 mm; PQFN-24
MAPS-010143	1400	2400	3.2	4	22.5	40	2	4 mm; PQFN-24
MAPS-010163-DIE	1400	2400	3.8	6	5.6	40	3	Die
MAPS-010163	1400	2400	5	6	5.6	40	3	4 mm; PQFN-24
MAPS-010144	2300	3800	2.5	4	22.5	47	2.2	4 mm; PQFN-24
MAPS-010164	2300	3800	3.2	6	5.6	45	3	4 mm; PQFN-24
MAPS-010164-DIE	2300	3800	3.6	6	5.6	45	3	Die
MAPS-011019	2400	5100	4.5	6	5.6	48	—	4 mm; PQFN-24
MAPS-010165-DIE	3500	6000	4.9	6	5.6	40	4	Die
MAPS-010145	3500	6000	5	4	22.5	45	3	4 mm; PQFN-24
MAPS-010165	3500	6000	5.5	6	5.6	40	4	4 mm; PQFN-24
MAPS-011008	5000	6000	4	6	5.6	48	2	4 mm; PQFN-24
CGY2177AUH	4800	6800	5	6	5.625	—	2	Die
MAPS-010146	8000	12000	6.5	4	22.5	40	5	4 mm; PQFN-24
MAPS-010166	8000	12000	6.5	6	5.6	40	5	4 mm; PQFN-24
CGY2172XAUH	8000	12000	8	6	5.625	—	2	Die
CGY2172XBUH	8000	12000	8	6	5.625	—	2	Die
CGY2174UH	14000	16000	8	6	5.625	—	6	Die
CGY2392SHV	6000	18000	10.8	6	5.625	—	1.09	5 x 5 mm
CGY2392SUH	6000	18000	10.8	6	5.625	—	1.7	Die
CGY2173UH	6000	18000	13	6	5.625	—	4	Die

Attenuators

Part Number	Description	Min Freq (GHz)	Max Freq (GHz)	Loss (dB)	RL In/Out (dB)	OP1dB (dBm)	Bits (dB or °)	Control Voltages (V)	Package
ENGAT00135	Attenuator; Selectable	DC	22	N/A	16/16	—	—	—	Die
ENGAT00127	Digital Attenuator	10	40	0.5	18/18	20	0.25; 0.5; 1.5	0; -3; -5	Die
ENGAT00128	Digital Attenuator	20	40	1.5	18/18	20	2.0; 4.0; 8.0	0; -3; -5	Die
ENGAT00000 thru 00010	Attenuators	DC	50	N/A	25/25	—	—	—	Die

Digital Attenuators

Product	Min Freq (MHz)	Max Freq (MHz)	Bit Count	Attenuator Range (dB)	Insertion Loss (dB)	IIP3 (dBm)	Package
MAAD-008866	50	1000	6	31.5	1.4	40	4 mm; PQFN-24
MAAD-010305	50	1100	1	15.1	0.3	50	SOT-25
AT20-0273	DC	2000	2	32.0	1.9	48	CR-11; CSM
AT-232-PIN	DC	2000	4	30.0	2.5	50	CR-6; CSM
AT-357-SMA ♦	DC	2000	5	31.0	6.5	47	C-46; Connectorized
AT20-0106	DC	2000	6	50.0	4.6	46	CR-13; CSM
AT20-0107	DC	2000	6	31.5	3.8	48	CR-13; CSM
MAAD-007084-000100	DC	2000	5	15.5	3.0	48	SOW16; PSM
MAAD-007086-000100	DC	2000	6	50.0	3.5	48	SOW24; PSM
MAADSS0009	DC	2000	4	30	1.6	50	SOIC16
MAATCC0005	DC	2000	6	31.5	3.1	48	SOW24; PSM
MAATSS0015	DC	2000	4	15	2	50	SOIC16

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

Digital Attenuators (continued)

Product	Min Freq (MHz)	Max Freq (MHz)	Bit Count	Attenuator Range (dB)	Insertion Loss (dB)	IIP3 (dBm)	Package
MAATCC0007	DC	2000	5	31	2.3	48	SOIC16; PSM
AT-273-PIN	5	2000	2	32	1.3	48	CR-11; CSM
AT-233-PIN	5	2000	4	30	1.9	50	CR-12; CSM
AT-106-PIN	5	2000	6	50	3.2	46	CR-13; CSM
AT-107-PIN	5	2000	6	31.5	2.6	48	CR-13; CSM
AT-263-PIN	5	2000	5	31	2.1	48	CR-12; CSM
AT-283-PIN	5	2000	5	15.5	2.2	47	CR-12; CSM
AT20-0263	5	2000	5	31	2.1	48	CR-12; CSM
MAADSS0008	50	2000	1	15	1	50	SOT-25
MADA2030G	50	2000	5	15.5	1.9	45	Die
MAATSS0021	50	2000	5	15.5	1.5	45	SOIC16
MAATSS0018	100	2000	1	10	0.4	50	SOT-25
MAAD-007080-000100	DC	2400	6	50	6.0	48	4 x 6 mm; PQFN-32; PSM
MAAD-007082-000100	DC	2400	6	50	4.5	48	4 x 6 mm; PQFN-32; PSM
MAAD-007079-000100	DC	2500	4	30	2.7	48	4 x 6 mm; PQFN-32; PSM
MAATCC0012	DC	2500	4	30	2.7	48	4 x 6 mm; PQFN-32; PSM
MAATSS0017	400	2500	5	15.5	2.0	47	QSOP16; PSM
MAATSS0022	500	2500	5	15.5	1.8	46	MSOP-10
MAATCC0006	DC	3000	4	30	2.6	50	SOIC16; PSM
MAATCC0008	DC	3000	4	15	1.7	50	SOIC16; PSM
MAATCC0010	DC	3000	5	31	3.6	48	4 x 6 mm; PQFN-32; PSM
MAAD-007078-000100	DC	3000	5	31	3.5	48	4 x 6 mm; PQFN-32; PSM
AT-213-PIN	5	3000	4	15	1.6	50	CR-11; CSM
MAAD-009194-000100	50	3000	5	31	5.3	41	CR-12; CSM
MAAD-009195-000100	50	3000	5	15.5	5.3	40	CR-12; CSM
MAAD-009260-000100	50	3000	2	32	2.7	42	CR-12; CSM
MAATCC0014	DC	3500	5	15.5	3.2	48	4 x 6 mm; PQFN-32; PSM
MAAD-007081-000100	DC	3500	5	15.5	3.2	48	4 x 6 mm; PQFN-32; PSM
MAATCC0009	DC	4000	6	31.5	3.4	48	4 x 6 mm; PQFN-32; PSM
MAATCC0011	DC	4000	6	31.5	5.1	48	4 x 6 mm; PQFN-32; PSM
MAAD-008790-000100	DC	4000	5	31	5.5	37	4 x 6 mm; PQFN-32; PSM
MAAD-007077-000100	50	4000	4	15	2.5	48	4 x 6 mm; PQFN-32; PSM
MAAD-009170-000100	50	4000	5	15.5	5.2	40	4 x 6 mm; PQFN-32; PSM
MAADCC0006	50	4000	4	15	2.5	48	4 x 6 mm; PQFN-32; PSM
MAADSS0016	50	4000	5	31	1.5	42	3 mm; PQFN-16
MAAD-007083-000100	DC	6000	5	31	3.0	48	4 x 6 mm; PQFN-32; PSM
MAAD-000523	700	6000	6	31.5	1.9	52	4 mm; PQFN-24
MAADSS0019	2000	6000	4	15	1.9	42	3 mm; PQFN-16
MAADSS0012	800	8000	1	21	0.6	41	2 mm; DFN-8
CGY2176AUH	1000	8000	6	31.5	5.6	–	Die
CGY2171XBUH	1000	15000	5	31.5	5	–	Die
CGY2169UH	10000	18000	6	23.5	4	–	Die
MAAD-011045	DC	18000	6	31.5	3	45	3 mm; PQFN-20
CGY2390SUH	6000	18000	3	35	2.2	–	Die
MAAD-011061	DC	26500	6	31.5	–	49	3 mm; PQFN-20
MAAD-011021	DC	30000	6	31.5	6	38	3 mm; PQFN-16
MAAD-011053-DIE	DC	30000	1	2	1	40	Die
MAAD-011054-DIE	DC	30000	1	4	1.2	40	Die
MAAD-011055-DIE	DC	30000	1	5	1.2	40	Die

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
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Digital Attenuators (continued)

Product	Min Freq (MHz)	Max Freq (MHz)	Bit Count	Attenuator Range (dB)	Insertion Loss (dB)	IIP3 (dBm)	Package
MAAD-011056-DIE	DC	30000	1	5	1.2	40	Die
MAAD-011057-DIE	DC	30000	1	10	1.4	40	Die
MAAD-011035	100	30000	5	31	4.8	42	4 mm; PQFN-24
MAAD-011035-DIE	100	30000	5	31	4	43	Die
MAAD-011036-DIE	100	30000	6	31.5	4.2	43	Die
MAAD-011036	100	30000	6	31.5	4.8	41	4 mm; PQFN-24
MAAD-011021-DIE	DC	40000	6	31.5	6	38	Die
MAAD-011047	DC	40000	6	31.5	2.5	50	3 mm; PQFN-20
MAAD-011049	DC	55000	4	30	2	50	3 mm; PQFN-20
MAAD-011048	DC	55000	5	31	2	50	3 mm; PQFN-20
MAAD-011038-DIE	80000	100000	3	7	5	38	Die

Fixed Attenuators

Part Number	Min Freq (MHz)	Max Freq (MHz)	Attenuation (dB)	Return Loss (dB)	Input P1dB (dBm)	Input OIP3 (dBm)	Package
MAAT-011022-DIE	DC	50000	0.2	17.5	—	—	Die
MAAT-011023-DIE	DC	50000	0.3	17.5	—	—	Die
MAAT-011024-DIE	DC	50000	2.0	17.5	27	40	Die
MAAT-011025-DIE	DC	50000	3.1	17.5	27	40	Die
MAAT-011026-DIE	DC	50000	4.2	17.5	27	40	Die
MAAT-011027-DIE	DC	50000	6.3	17.5	27	40	Die
MAAT-011028-DIE	DC	50000	10.3	17.5	27	40	Die
MAAT-011029-DIE	DC	50000	15.4	17.5	27	40	Die
MAAT-011030-DIE	DC	50000	20.4	17.5	27	40	Die
ENGFD00076	DC	50000	—	20	20	36	Die

CMOS Switch Drivers

Part Number	Type	Rise Time/Fall Time (ns)	V _{CC} (V)	V _{EE} (-V)	I _{CC} (mA)	Package
MADD-00802	Diode drive; Supply: 54 V, 5V, +60V		5	54	—	QFN
MADR-007131-000100	Dual Linearizer	25000	5	—	1	CSP-9
MADR-007097-000100	Single	2	5	-5	1	SOIC8
MADR-010574	PIN	2	3	—	170	7 mm; PQFN-16
MADR-011021	4 CH HV Driver	3	5	180 (V _{DD})	5.0	6 mm; PQFN-18
MADR-010410	TR Module	6	3	3	—	5 mm; PQFN-40
MADR-011007	FET	6	6	-5	—	6 mm; PQFN-48
MADR-010269-DIE	Hex FET	8/4.5	3.3	-5	1	Die
MADRCC0004	Quad	25	5	-5	—	SOIC16
MADRCC0005	Single	25	5	-5	1	SOIC8
MADR-009150	PIN	30	3.3	-5	.05	3 mm; PQFN-16
MADR-011022	2 CH Driver	30	5	-25	20.0	4 mm; PQFN-16
MADR-011020	2 CH Driver	50	5	-50	50.0	4 mm; PQFN-16
MADR-009151-000DIE	Single	300	5	-5	1	Die
MADR-009190-000100	Quad	300	5	-5	1	SOIC16
MADR-009269-000100	Single; PIN	300	5	5	1	SOIC8
MADR-009443-000100	Quad	500	5	-5	20	4 mm; PQFN-20
MADRCC0006	Single	500	5	-5	—	SO-8
MADRCC0007	Quad	500	5	-5	—	SOIC16
MADRCC0002 ♦	Dual	5000	20	—	—	CSP-9

Note: Part numbers are RoHS compliant.
 Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
 All specifications are subject to change.

Voltage Variable Attenuators

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Attenuator Range (dB)	IIP3 (dBm)	Voltage (V)	Current (mA)	Package
LG1 *	—	—	—	—	—	—	—	TO-8
CLG1	—	—	—	—	—	—	—	SMA
MAATCC0013	824	960	1.7	25	40	—	—	SOT-25
MAAV-007088-000100	50	1000	2.8	42	34	—	—	SOW16
MA4VAT900-1277T	800	1000	1	24	40	—	—	3 mm; PQFN-16
MA4VAT904-1061T	800	1000	1	24	49	—	—	SOIC8
MA4VAT907-1061T	800	1000	1	24	49	—	—	SOIC8
MAAV-007092-000100	800	1000	3.6	34	40	—	30	6 mm; PQFN-28
MAAV-007941	DC	2000	3.2	12	36	-4	0.02	SOIC8
SMG2	5	2000	2.3	23	—	—	—	SMT
MAAM-007987-000CG2	5	2000	2.6	23	—	—	—	SMA
SMG1	5	2000	2	30	—	—	—	SMTO-8
G1 †	5	2000	2.5	25	—	+15	15	TO-8; SMT; SMA
G2	5	2000	2.6	28	—	+5	15	TO-8
G30	100	2000	2.3	44	—	—	—	TO-8
CG30	100	2000	2.3	44	—	—	—	SMA
SMG30	100	2000	2.3	44	—	—	—	SMTO-8
MAAV-008022	500	2000	2.7	40	32	+5	0.05	SOIC8
MAAVSS0008	500	2000	2.8	30	28	+5	0.3	SOIC8
MA4VAT2004-1061T	1700	2000	1.4	24	49	—	—	SOIC8
MA4VAT2007-1061T	1700	2000	1.4	23	52	—	—	SOIC8
MAAV-007090-000100	1700	2000	3.5	35	31	—	—	SOW16
MA4VAT2000-1277T	1700	2200	1.2	24	21	—	—	3 mm; PQFN-16
MAAVSS0006	DC	2500	3.6	25	36	-3	0.025	SOT-25
MAAVSS0001	1800	2500	2.4	42	32	+2.25	0.05	SOT-25
MADP-007167-12250T	5	3000	2.8	36	50	—	—	SOT-25
MA4P7455-1225T	10	4000	1	29	43	—	—	SOT-25
SMG40	500	4000	2.5	25	—	—	—	SMT
CG40	500	4000	2.5	32	—	—	—	SMA
G40	500	4000	2.5	32	—	+15	12	TO-8
MAAV-011018	DC	6000	1.8	31	52	5	1.5	3 mm; PQFN-16
MAAV-011017	DC	12000	2.1	32	52	5	1	3 mm; PQFN-16
MAAT-010521-L2	5800	12000	2	30	29	—	—	3 mm; PQFN-16
MAAT-010521-L1	5800	16000	2	30	29	—	—	3 mm; PQFN-16
MAAT-010521-H1	17600	40000	2	30	29	—	—	3 mm; PQFN-16
MAAV-011013	5000	45000	1.5	30	42	—	—	3 mm; PQFN-16
MAAV-011014-DIE	80000	100000	3	25	40	—	—	Die

Switches

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	IIP3 (dBm)	Package
SPST						
MASW-008177	5	1000	0.7	53	52	3 mm; PQFN-12
MASW-001150-1316 S	45	2500	0.3	65	40	Die
MASWSS0162	50	2500	1	48	46	SOIC8
SW-209-PIN	DC	3000	1.5	27	40	CR10
SW05-0311	DC	3000	40	46	CR-9	CR-9
SW-231-PIN	5	4000	2	22	46	FP-16
MASWSS0148	300	4000	1.6	51	49	3 mm; PQFN-12
MASW6020G	100	6000	0.9	45	46	Die

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Switches (continued)						
Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	IIP3 (dBm)	Package
SPDT (continued)						
MASW-011138-CS0240 S	50	26500	0.6	48	40	HMIC; Die
MASW-011138-CS0240 S	1000	26500	3.1	50	38	2.4 mm; Connector; Hermetic
MASW-011138-CS0292 S	1000	26500	3.1	50	38	2.92 mm; Connector; Hermetic
MA4AGSW1 S	50	50000	0.2	43	40	Die
MA4AGSW1A S	50	50000	1.2	48	40	Die
MASWSS0103	5	1000	0.8	71	47	4 mm; PQFN-20
MA8334-001	20	1000	0.4	25	80	844-001
MA8334-004	20	1000	0.4	25	—	844-004
MASWSS0179	50	2000	0.5	28	52	SOT-26
MASWSS0161	500	2000	0.6	30	55	SOIC8
MASWSS0157	50	2500	0.6	35	45	SOIC8
MASWSS0180	50	2500	0.6	38	46	SOIC8
MASWSS0201	50	2500	1	45	44	3 mm; PQFN-12
MASWSS0136	DC	3000	0.4	27	48	SC-70 (SOT-363)
MASWSS0151	DC	3000	0.6	28	55	SC-70 (SOT-363)
MASW2000	DC	3000	0.6	40	53	Die
MASW-007935	DC	3000	0.7	34	50	SOT-26
MASW-007075-000100	DC	3000	1.8	36	46	SOW24
MASW-009101	5	3000	1	65	39	3 mm; PQFN-16
MASWSS0178	10	3000	0.6	57	43	MSOP-8
MASWSS0192	50	3000	0.2	24	53	SC-70 (SOT-363)
MASWSS0176	50	3000	0.3	23	45	SOT-26
MASWSS0115	50	3000	0.3	24	46	SC-70 (SOT-363)
SW-313-PIN	50	3000	0.8	52	46	CR-9
MASWSS0143	100	3000	0.4	18	58	SOT-26
MASWSS0166	100	3000	0.4	21	55	SC-70 (SOT-363)
MASWSS0169	100	3000	0.7	48	50	MSOP-10
MASWSS0204	300	3000	0.3	22	56	SC-70 (SOT-363)
MASWSS0181	300	3000	0.5	23	57	SOT-26
MASW-008899	500	3000	0.3	24	48	SC-70 (SOT-363)
MASW-007221	500	3000	0.4	22	52	SC-70 (SOT-363)
MASWSS0167	500	3000	0.4	28	48	1.2 x 1.5 mm; PQFN-6
MASWSS0121	500	3000	0.7	54	46	4 mm; PQFN-16
SW-228-PIN	DC	4000	0.7	42	46	CR-2
SW-226-PIN	DC	4000	1	48	46	CR-2
MASW-007071-000100	DC	4000	1.8	30	46	4 x 6 mm; PQFN
MASW-008543	10	4000	0.7	58	53	MSOP-8
MASW-000932	10	4000	53	43	72	4 mm; PQFN-16
MASW4030G	50	4000	0.6	53	46	Die
MASW-011258	50	7000	0.2	42	-2	—
MASW-009588	500	4000	0.4	26	55	1 mm; PDFN-6
MASW-010370	1500	4000	0.5	37	—	3 mm; PQFN-16
MASW-008853	DC	5000	0.3	25	56	SC-70 (SOT-363)
MASW-011184	1000	5000	0.35/0.5	29/27	54/51	3 mm; PQFN-16
MASW-008206-000DIE	2400	5800	0.85	30	54	Die
MASW6010	DC	6000	0.8	38	46	Die
MASW-011120	30	6000	0.25	44	68	5 mm; HQFN-20
MASW-000822-12770T	50	6000	0.2	32	60	3 mm; PQFN-16

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Switches (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	IIP3 (dBm)	Package
SPDT (continued)						
MASW-000936	50	6000	0.2	45	72	4 mm; PQFN
MASW-000834-13560T	50	6000	0.2	53	65	4 mm; PQFN-16
MASW-000825-12770T	50	6000	0.3	35	64	3 mm; PQFN-16
MASW-009444	200	6000	0.3	28	54	1 mm; PDFN-6
MASW6010G	200	6000	0.8	38	46	Die
MASWSS0202	1000	6000	0.6	25	52	3 mm; PQFN-12
MASW-007588	1000	6000	0.9	28	55	3 mm; PQFN-12
MASW-011238	50	67000	0.7	33	23	—
MASW-011240	100	67000	1.6	39	52	2.25 mm; 12-lead; SMT
MASW-011241	100	67000	2.2	42	52	3 mm; 20-lead; SMT
MASW-007921	50	7000	0.7	30	58	2 mm; PDFN-8
MASW-011191	500	7500	—	—	—	PQFN
MASW-007107	DC	8000	0.5	30	54	2 mm; PDFN-8
MASW-011186-Q	6000	8500	0.8	30	57	1.5 mm; PDFN-6
MASW-011227	100	9000	0.27	30	64	2 mm; Lead-Free; DFN-8
MASW-010647 S	8000	10500	0.8	37	60	Die
MASW-011071	8000	10500	1	38	60	7 mm; PQFN-44
MASW-011021 S	6000	14000	0.7	34	60	SURMOUNT; DIE
MASW-002102-13580 S	2	18000	1.8	55	40	Die
MASW-011108-DIE S	6000	18000	0.6	44	—	Die
CGY2890SUH	6000	18000	1.5	50	—	Die
MASW-002103-1363 S	50	20000	0.8	38	40	SURMOUNT; Die
MASW20000	50	20000	1.4	58	43	Die
MASW-008322	500	20000	1	45	48	4 mm; PQFN-24
MASW-011057 Reflective	13000	20000	0.8	42	55	4 mm; QFN-20
MASW-011129-DIE	2000	22000	0.6	45	50	Die
MASW-011052 S	2000	26000	0.8	50	43	Die
MA4SW210B-1 S	2000	26000	1.2	48	40	Die
MASW-011135-CS0240 S	2000	26000	3.3	30	45	2.4 mm; Connector; Hermetic
MASW-011135-CS0292 S	2000	26000	3.3	30	45	2.92 mm; Connector; Hermetic
MASW-011107-DIE	DC	26500	1.3	46	45	Die
MASW-002100-1191 S	50	26500	0.3	65	40	Die
MA4SW210 S	50	26500	0.6	52	40	HMIC Die
MASW-011128-DIE	50	26500	1.7	48	42	Die
MASW-011102	DC	30000	1.8	40	45	3 mm; PQFN-14
MASW-011105	17700	31000	1.6	30	43	3 mm; PQFN-14
MASW-011145	27000	31000	1.3	45	60	3 mm; 20-lead; Laminate
MASW-011144-DIE S	20000	40000	0.65	30	—	Die
MASW-010646 S	26000	40000	0.6	39	60	Die
MASW-011036 S	26000	40000	0.7	40	60	Die
MASW-011098	26000	40000	1.17	38	—	5 mm; 20-lead; Laminate
MASW-011197	DC	44000	1.4	46	52	2.25 mm; 12-lead; Laminate
MASW-011198	DC	44000	1.8	47	52	3 mm; 20-lead; Laminate
MA4AGSW2 S	50	50000	0.6	46	40	Die
MASW-011131-CS0240 S	8000	50000	2.2	35	—	1.85 mm; Connector; Hermetic
MASW-011173	20000	55000	1.0	35	50	Die
MASW-011152	DC	67000	3.3	38	52	3 mm; 20-lead; Laminate
MASW-011151	DC	67000	3.0	33	52	2.25 mm; 12-lead; Laminate

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Switches (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	IIP3 (dBm)	Package
MASW-011111-DIE S	80000	100000	0.8	25	—	Die
SP3T						
MASW-011041	50	1500	0.3	51	73	9 mm; HQFN-20
MASW-011030	50	2500	0.4	27	77	7 mm; HQFN-16
MASWSS0199	500	2500	0.5	30	58	3 mm; PQFN-12
MASWSS0200	500	2500	0.6	24	61	3 mm; PQFN-12
MASW-008955	DC	3000	0.6	22	54	2 mm; PDFN-8
MASW-007074-000100	DC	3000	2	32	45	SOW24
MASW-008330	500	3000	0.5	24	50	2 mm; PQFN-8
MASWSS0144	500	3000	0.6	24	55	3 mm; PQFN-12
MASWSS0191	500	3000	0.7	30	58	2 mm; STDFN-8
MASW-010612	DC	3500	0.6	21	54	1.5 mm; PDFN-8
MASW-009482	50	4000	0.75	23	65	2 mm; STQFN-12
MASW-011053 S	2000	18000	0.8	50	48	Die
MASW-003102-13590 S	2000	18000	0.8	50	40	Die
MASW-003103-1364 S	50	20000	0.8	40	40	SURMOUNT; Die
MASW-011130-DIE	2000	22000	0.6	45	45	Die
MA4SW310B-1 S	2000	26000	1.2	47	40	Die
MASW-003100-1192 S	50	26500	0.3	65	40	Die
MA4SW310 S	50	26500	0.8	48	40	Die
MA4AGSW3 S	50	50000	0.6	48	40	Die
MASW-011185	50	60000	1.5	35	44	5 mm; QFN-4
MASW-011029 S	75000	100000	1.3	33	—	Die
SP4T						
MASW-011077	50	1000	0.3	48	50	12 mm; XHQFN-28
MASW-011040	50	1500	0.3	51	73	9 mm; HQFN-20
MASWCC0009	3	3000	1.4	42	46	QSOP24
MASW-008566	100	3000	0.7	26	57	4 mm; PQFN-16
MASW-007813-000000	500	3000	0.8	27	58	3 mm; PQFN-16
MASW4060G	DC	4000	1.3	50	46	Die
MASWCC0010	DC	4000	2.3	38	40	CSP-2
MASW-010350	10	4000	0.8	60	50	4 mm; PQFN-24
MASW-011127	DC	4200	0.55	—	78	4 mm; QFN
MASW-011226	DC	10000	1.35	50	51	4 mm; QFN
MASW-004102-12760 S	2	18000	1.5	50	40	Die
MA4SW410B-1 S	2000	18000	0.8	48	40	Die
MASW-004103-1365 S	50	20000	0.8	50	63	SURMOUNT; Die
MASW-004240-13170 S	10	24000	2.5	50	—	Die
MASW-004100-1193 S	50	26500	0.3	65	40	Die
MA4SW410 S	50	26500	0.7	48	40	Die
MASW-011137-CS0240 S	500	30000	3.8	30	45	2.4 mm; Connector; Hermetic
MASW-011087 S	27000	30000	0.85	50	55	Die
MASW-011199	DC	44000	2.6	34	51	3 mm; 22-lead; Laminate
MASW-011200	DC	44000	3.3	41	51	3 mm; 22-lead; Laminate
MA4AGSW4 S	50	50000	0.8	42	40	Die
MASW-011153	DC	57000	3.5	34	51	3 mm; 22-lead; Laminate
MASW-011154	DC	57000	4.0	39	51	3 mm; 22-lead; Laminate

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Switches (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	IIP3 (dBm)	Package
SP5T						
MASW-010351	10	4000	1.4	57	50	4 mm; PQFN-24
MA4SW510B-1 S	2000	18000	0.9	40	40	Die
MASW-005102-13600 S	2000	18000	0.9	40	40	Die
MASW-006102-13610 S	50	26500	0.3	65	40	Die
MA4SW510 S	50	26500	0.9	38	40	Die
MASW-005100-1194 S	50	26500	0.9	38	40	Die
MA4AGSW5 S	50	50000	1.1	47	40	Die
MASW-011170	50	50000	1.1	47	40	Die
SP6T						
MASWCC0006	DC	4000	2.1	25	40	CSP-2
MA4SW610B-1 S	2000	18000	1.3	45	40	Die
MASW-006102-13610 S	2000	18000	1.3	45	40	Die
SP8T						
MA4AGSW8-1 S	50	50000	1.5	37	40	Die
DPDT						
MASW2040	DC	2000	0.4	20	46	Die
MASW-009460	500	3000	0.6	19	52	3 mm; PQFN-12
MASWSS0130	500	3000	0.6	25	55	3 mm; PQFN-12
MASWSS0184	200	4000	0.7	35	58	3 mm; PQFN-12
MASW-007587-000000	200	4000	0.7	38	59	3 mm; PQFN-12
MASW6030G	DC	6000	0.6	40	45	Die
MASWSS0190	2000	6000	0.8	43	50	2 mm; UTQFN-8

Switched Filter Modules

Part Number	Min Freq (GHz)	Max Freq (GHz)	Channels (#)	Channel BW (GHz)	Insertion Loss (dB)	RL In/Out (dB)	Switching Speed (ns)	Voltage (V)	DC Current (mA)	Package
ENGAD00031	8.5	12.5	4	1	4	15/15	100	5; -5	60; 30	1.9" x 0.75" x 0.25"
ENGAD00032	12	18	3; Bypass	2	45	15/15	100	5; -5	60; 30	1.9" x 0.75" x 0.25"

Phase Detectors

Part Number	SRD VBR Min (V)	SRD CJ Typ (pF)	SRD TL Typ (ns)	SRD TT Max (ps)	Cap CT Typ (pF)	SD CJ Typ (pF)	SD VF Typ (mV)	SD RD Typ (Ω)	FMW Typ (GHz)	Package
MSPD2018-E50/E50SM	15	0.35	5	55	0.6	0.1	430	16	22	E50/E50SM
MSPD2018-H50 S	15	0.35	5	55	0.6	0.1	430	16	22	H50
MSPD1012-E50/E50SM	15	0.5	10	70	2.5	0.18	270	9	12	E50/E50SM
MSPD1012-H50 S	15	0.5	10	70	2.5	0.18	270	9	12	H50
MSPD1002-E50/E50SM	15	0.5	20	70	3.5	0.22	270	8	2	E50/E50SM
MSPD1000-E50/E50SM	15	1	35	95	20	0.4	270	7	0.5	E50/E50SM
MSPD1000-H50 S	15	1	35	95	20	0.4	270	7	0.5	H50
MSPD1011-122/121	15	22	10	100	0.5	0.08	300	20	20	CS122/CS121
MSPD1012-121	15	22	10	100	0.5	0.08	450	20	20	CS121
MSPD1012-122	15	22	10	100	0.5	0.08	450	20	20	CS122
MSPD1013-121	15	22	10	100	0.5	0.08	550	20	20	CS121
MSPD1013-122	15	22	10	100	0.5	0.08	550	20	20	CS122

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MACOM's frequency conversion products include hybrid mixers, mixers, receivers, transceivers, upconverters and frequency multipliers. Our frequency conversion devices are ideal for point-to-point radio, aerospace and defense and other broadband communications applications. Available as surface mount devices, our reliable products enable easy assembly and integration for real estate constrained applications.



Frequency Multipliers

- > Combining an active doubler with an output buffer amplifier to deliver constant power over a range of input powers
- > Available as bare die or in surface mount lead-free QFN packages

Hybrid Mixers

- > For aerospace and defense, wireless, test and measurement and broadband communications applications
- > Available in subsets of the frequency range:
 - RF and LO: 50 kHz to 24 GHz
 - IF: DC to 8 GHz
- > Double and triple balanced designs
- > Variety of technologies
 - GaAs pHEMT
 - Si HMIC
- > Connectorized, flatpack, drop-in and surface mount packages

Receivers

- > Widely used in point-to-point radio, aerospace and defense and broadband communications applications
- > Features an integrated LNA, mixer and LO buffer amplifier on a single chip
- > 4,500 to 45,000 MHz frequency range
- > Excellent noise figure and conversion gain performance
- > Lead-free QFN or SMD packages

Transceivers

- > Monolithic and stereo doppler transceivers for directional motion detection
- > Used in automatic door openers, ground speed recorders and police radar detectors

Upconverters

- > Applications include point-to-point radio and broadband communications
- > Featuring an integrated image reject (balanced) mixer, LO buffer, RF buffer and LO doubler or variable attenuator on a single chip
- > 5,600 to 40,000 MHz frequency range
- > Lead-free QFN or SMD packages
- > Excellent variable gain control with adjustable bias, high linearity and image rejection, with low LO leakage

Mixers

- > Constructed using broadband ferrite balun transformers and matched silicon Schottky diodes
- > Ideal for use in CATV head-end systems and upconverter applications

Frequency Multipliers								
Part Number	Min Freq RF (MHz)	Max Freq RF (MHz)	Min Output (MHz)	Max Output (MHz)	Input Power (dB)	Multiply Factor	Conversion Loss (dB)	Package
FM-105-PIN ♦	10	750	20	1500	24	2	12	RH-3
FM-104-PIN ♦	75	1500	150	3000	24	2	10	FP-3
FM-107-PIN ♦	5	2400	10	4800	10	2	11	FP-2
FMS-109-PIN ♦	5	2400	10	4800	10	2	11	SF-1
FD25 ♦	5	2400	10	4800	10	2	11.5	TO-8
FD25C ♦	5	2400	10	4800	10	2	11.5	Conn
FD25E ♦	5	2400	10	4800	10	2	11.5	Flatpack
FD25H ♦	5	2400	10	4800	23	2	12	TO-8
FD25HC ♦	5	2400	10	4800	23	2	12	Conn
SFD25H	5	2400	10	4800	23	2	12	SMT
CSFD25 ♦	10	2400	20	4800	10	2	11.5	SMT
CSFD25H ♦	10	2400	20	4800	23	2	12	SMT
SFD26	50	3300	100	6600	10	2	13	SMT
CSFD26 ♦	50	3300	100	6600	10	2	13.5	SMT
FD26	50	3300	100	6600	10	2	13	TO-8
FD26C ♦	50	3300	100	6600	110	2	13	Conn
XX1002-QH	2500	6000	5000	12000	3	2	13	4 mm; PQFN-24
FDC2310 ♦	1500	8000	3000	16000	10	2	11	Open Carrier
FDC2710 ♦	3500	8000	7000	16000	10	2	11.2	Open Carrier
FD93 ♦	2000	9000	4000	18000	12	2	12	Versapac
FD93C ♦	2000	9000	4000	18000	12	2	12	Conn
FD93H	2000	9000	4000	18000	19	2	12	Versapac
FD93HC ♦	2000	9000	4000	18000	19	2	12	Conn
FDZ5013 ♦	3000	12000	6000	24000	13	2	12	Versapac
FDZ5013C ♦	3000	12000	6000	24000	13	2	12	Conn
MAFC-004403	8000	12000	16000	24000	0	2	17	QFN; 4 mm
MAFC-010511	8000	12000	16000	24000	0	2	17	3 mm; PQFN-16
XX1010-QT	14625	15000	29250	30000	4.5	2	14	3 mm; QFN-16
XX1007-QT	13500	17000	27000	34000	8	2	10	3 mm; PQFN-16
XX1007-BD	13500	17000	27000	34000	8	2	12	Die
XX1000-QT	7500	22500	15000	45000	6	2	12	3 mm; QFN-16
XX1000-BD	7500	25000	15000	50000	0	2	13	Die
Hybrid Mixers								
Part Number	Min Freq RF/LO (MHz)	Max Freq RF/LO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	LO Drive (dB)	Conversion Loss/Gain (dB)		Package
M6D-50 ♦	0.05	200	0	200	7	7		Relay Can
SM6D	0.05	200	0	200	7	7		SMT
MAC-50-PIN ♦	0.2	200	0	200	7	6		TO-5-2
MDS-222-PIN ♦	0.2	200	0.2	200	7	7.5		SF-1
SM6V	0.4	500	0	500	7	6.5		SMT
M9BC ♦	0.5	500	0	500	17	7		Relay Can
MD-161-PIN ♦	1	500	0	500	13	8		FP-2
MAC-51-PIN ♦	5	500	0	500	7	7		TO-5-2
MDS-223-PIN ♦	10	500	10	500	7	7		SF-1
M1H ♦	180	620	0	200	7	7		SMA; Relay Can
M6EH ♦	5	750	0	500	20	7.5		Relay Can
SM6EH	5	750	0	500	20	7.5		SMT
M2E	10	1000	0	600	20	8		TO-8
M2EC ♦	10	1000	0	600	20	8		SMA

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant.
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 All specifications are subject to change.

Hybrid Mixers (continued)							
Part Number	Min Freq RF/LO (MHz)	Max Freq RF/LO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	LO Drive (dB)	Conversion Loss/Gain (dB)	Package
SM2E	10	1000	0	600	20	8	SMT
MD-160-PIN ♦	1	1500	1	1000	13	9	RH-3
MDS-158-PIN ♦	5	1500	5	1500	7	9	SF-1
MD-158-PIN ♦	5	1500	5	1000	7	7	FP-2
M9HC ♦	10	1500	0	600	20	8	SMA
M2AC ♦	10	1500	0	800	7	7.5	SMA
M4A ♦	10	1500	0	1000	7	7.5	Flatpack
SM4A	10	1500	0	1000	7	7.5	SMT
SM4B ♦	10	1500	0	1000	13	7.5	SMT
CSM1-13	10	1500	1	500	13	7.5	SMT
CSM1-17	10	1500	1	500	17	7.5	SMT
MD-149-PIN ♦	10	1500	10	1500	7	7.5	FP-2
MDS-149-PIN ♦	10	1500	10	1500	7	6	SF-1
MD-148-PIN ♦	10	1500	10	1500	10	6	FP-2
MDS-148-PIN	10	1500	10	1500	10	6	SF-1
M2B ♦	10	1600	0	800	13	7.5	TO-8
M2BC ♦	10	1600	0	800	13	7.5	SMA
CSM1-10	10	2000	1	500	10	7.5	SMT
M2TC ♦	10	2400	1	1000	13	8	SMA
SM4G ♦	800	2400	0	1500	7	7.5	SMT
CSM2-10	10	2800	10	2000	10	8.5	SMT
CSM2-13	10	2800	10	2000	13	8.5	SMT
CSM2-17	10	2800	10	2000	17	8.5	SMT
MD-123-PIN ♦	10	3000	10	3000	7	8	FP-2
M8T ♦	1	3400	1	2000	10	7	TO-8
M8TC ♦	1	3400	1	2000	10	7	SMA
CSM4T	1	3400	1	2000	10	8	SMT
SM4T	1	3400	1	2000	10	8	SMT
SM4T17	1	3400	1	2000	17	8	SMT
CSM4T17	1	3400	1	2000	17	8	SMT
M8TH ♦	1	3400	1	2000	23	7.5	TO-8
M8THC ♦	1	3400	1	2000	23	7.5	SMA
M4TH ♦	1	3400	1	2000	23	8	Flatpack
SM4TH	1	3400	1	2000	23	8	SMT
CSM4TH	1	3400	1	2000	23	8	SMT
MD-169-PIN ♦	1	3500	1	3500	10	10	FP-2
MDC-169-SMA ♦	1	3500	1	3500	10	10	C-7
MD-189-PIN ♦	1	3500	1	3500	23	8	FP-2
MDS-189-PIN ♦	1	3500	1	3500	23	8	SF-1
MDS-169-PIN ♦	1	3500	5	1500	10	8	SF-1
M2G	800	3500	0	1500	7	8	TO-8
M2GC ♦	800	3500	0	1500	7	8	SMA
MD-179-PIN ♦	1	4000	5	1500	7	10.5	FP-2
MDC-179-SMA ♦	1	4000	5	1500	7	10.5	C-7
M8H-3 ♦	3700	4200	0	2000	7	5	TO-8
MC2110 ♦	3400	4700	0	1000	10	6.2	Open Carrier
CSM5T	50	4800	50	3000	10	7.2	SMT
CSM5T17	50	4800	50	3000	17	7.8	SMT
CSM5TH	50	4800	50	3000	23	7	SMT

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Hybrid Mixers (continued)							
Part Number	Min Freq RF/LO (MHz)	Max Freq RF/LO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	LO Drive (dB)	Conversion Loss/Gain (dB)	Package
SM5T	50	5000	50	3000	10	7.5	SMT
SM5T17	50	5000	50	3000	17	7.5	SMT
SM5TH	50	5000	50	3000	23	7.7	SMT
MZ6310C ♦	250	5500	DC	1500	10	7	SMA
M63C ♦	2500	5500	DC	1500	9	5.5	SMA
M8H-7 ♦	2400	6000	DC	2000	7	6	TO-8
M8HC-7 ♦	2400	6000	DC	2000	7	6	SMA
MDC-162-SMA ♦	1000	7000	10	2000	13	6	C-2
MY63 ♦	2500	7000	DC	15000	9	5.8	Versapac
MY63C ♦	2500	7000	DC	15000	9	5.8	SMA
M63H ♦	2500	7500	DC	1500	20	6	Minpac
M63HC ♦	2500	7500	DC	1500	20	6	SMA
MY63H ♦	2500	7500	DC	1500	20	6	Versapac
MY63HC ♦	2500	7500	DC	1500	20	6	SMA
MC2307 ♦	2200	8000	DC	2000	7	7	Open Carrier
M76H ♦	4500	8500	DC	2000	20	7	Minpac
MY76H ♦	4500	8500	DC	2000	20	7	Versapac
MY76HC ♦	4500	8500	DC	2000	20	7	SMA
M76 ♦	4500	9500	DC	2000	10	6	Minpac
M76C ♦	4500	9500	DC	2000	10	6	SMA
MY76 ♦	4500	9500	DC	2000	10	6	Versapac
MY76C ♦	4500	9500	DC	2000	10	6	SMA
MY84 ♦	1800	10000	DC	1000	9	6.5	Versapac
MY84C ♦	1800	10000	DC	1000	9	6.5	SMA
MC4107 ♦	2000	10000	DC	2000	7	7.5	Open Carrier
MC4113 ♦	2000	10000	DC	2000	13	7.5	Open Carrier
MC4120 ♦	2000	10000	DC	2000	20	7.5	Open Carrier
M77C ♦	8000	12500	DC	2500	10	5.5	SMA
MY77 ♦	8000	12500	DC	2500	10	5.5	Versapac
MY77C ♦	8000	12500	DC	2500	10	5.5	SMA
M14A ♦	6000	14000	DC	2000	7	6.5	SMA
M67C ♦	9000	15000	DC	2500	10	6.5	SMA
MC2707 ♦	10000	15000	DC	2000	7	7	Open Carrier
MC2710 ♦	10000	15000	DC	2000	10	6	Open Carrier
MC2720 ♦	10000	15000	DC	2000	20	6	Open Carrier
MC3013 ♦	20000	16000	1000	8000	13	8	Open Carrier
MY83H ♦	2000	18000	30	5000	20	8.5	Versapac
MY83HC ♦	2000	18000	30	5000	20	8.5	SMA
M83	1000	18000	30	5000	13	7.5	Minpac
M83C ♦	1000	18000	30	5000	13	7.5	SMA
M89C ♦	1000	18000	1000	8000	10	8	SMA
MY88HC ♦	1000	18000	1000	8000	21	8	SMA
MY85C ♦	2000	18000	DC	1000	7	8	SMA
M85 ♦	2000	18000	DC	1000	7	8	Minpac
M85C ♦	2000	18000	DC	1000	7	8	SMA
MY85 ♦	2000	18000	DC	1000	7	8	Versapac
M93C ♦	2000	18000	30	4000	10	8	SMA
MY93 ♦	2000	18000	30	4000	10	8	Versapac
MY93C ♦	2000	18000	30	4000	10	8	SMA

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Hybrid Mixers (continued)							
Part Number	Min Freq RF/LO (MHz)	Max Freq RF/LO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	LO Drive (dB)	Conversion Loss/Gain (dB)	Package
MZ9310 ♦	2000	18000	30	5000	10	7.5	Versapac
MY82 ♦	2000	18000	30	5000	13	7.5	Versapac
MY82C ♦	2000	18000	30	5000	13	7.5	SMA
MZ8810C ♦	2000	18000	1000	8000	10	7.5	SMA
MZ8813 ♦	2000	18000	1000	8000	13	7	Versapac
M88C ♦	2000	18000	1000	8000	13	8	SMA
MY88	2000	18000	1000	8000	13	8	Versapac
MY88C ♦	2000	18000	1000	8000	13	8	SMA
MZ9313 ♦	2000	18000	30	5000	13	7	Versapac
MZ9313C ♦	2000	18000	30	5000	13	7	SMA
MY89 ♦	2000	18000	2000	8000	10	8	Versapac
MY89C ♦	2000	18000	2000	8000	10	8	SMA
M88H ♦	2000	18000	2000	8000	21	8	Minpac
M88HC ♦	2000	18000	2000	8000	21	8	SMA
M50A ♦	2000	18000	2000	18000	10	8	Minpac
M86C ♦	3500	18000	DC	3000	7	7	SMA
M80C ♦	4000	18000	DC	3000	7	6.5	SMA
M79C ♦	5000	18000	DC	3000	10	7	SMA
M79H ♦	5000	18000	DC	3000	20	7.5	Minpac
M79HC ♦	5000	18000	DC	3000	20	7.5	SMA
MZ7407 ♦	6000	18000	DC	3000	7	6.5	Versapac
MZ7407C ♦	6000	18000	DC	3000	7	6.5	SMA
MZ7410 ♦	6000	18000	DC	3000	10	6.5	Versapac
MZ7410C ♦	6000	18000	DC	3000	10	6.5	SMA
MZ7420 ♦	6000	18000	DC	3000	20	7.5	Versapac
MZ7420C ♦	6000	18000	DC	3000	20	7.5	SMA
M74 ♦	7000	18000	DC	3000	10	6.5	Minpac
M74C ♦	7000	18000	DC	3000	10	6.5	SMA
M87C ♦	500	19000	30	5000	13	9	SMA
MY87 ♦	500	19000	30	5000	13	10.5	Versapac
MY87C ♦	500	19000	30	5000	13	10.5	SMA
MC4507 ♦	4000	20000	DC	4000	7	7.5	Open Carrier
MC4510 ♦	4000	20000	DC	4000	10	7.5	Open Carrier
MC4513 ♦	4000	20000	DC	4000	13	7.5	Open Carrier
M52C ♦	2000	24000	100	5000	10	8	SMA
MY52 ♦	2000	24000	100	5000	10	8	Versapac
MY52C ♦	2000	24000	100	5000	10	8	SMA
MY51 ♦	2000	24000	1000	15000	10	8	Versapac
M51C ♦	2000	24000	1000	15000	10	8	SMA
MY51C ♦	2000	24000	1000	15000	10	8	SMA
MZ5010 ♦	2000	26000	1	15000	10	8.5	Versapac
MZ5010C ♦	2000	26000	1	15000	10	8.5	SMA
M53C ♦	2000	26000	100	6000	10	8	SMA
MY50A ♦	2000	26000	1000	12000	10	8	Versapac
MY50AC ♦	2000	26000	1000	12000	10	8	SMA
MY50 ♦	2000	26000	1000	15000	10	8	Versapac
M50C ♦	2000	26000	1000	15000	10	8	SMA
MY50C ♦	2000	26000	1000	15000	10	8	SMA

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Receivers/Downconverters								
Part Number	Min Freq (MHz)	Max Freq (MHz)	Conversion Gain (dB)	Noise Figure (dBm)	Image Rejection (dBm)	LO Input Power (dBm)	Package	
XR1011-QH	45000	10500	13	1.8	20	5	4 mm; QFN-24	
XR1015-QH	10000	16000	12	2.5	20	5	4 mm; QFN-24	
XR1019-QH	27500	33400	13	2.5	20	4	4 mm; QFN-24	
XR1008-QB	37000	40000	9	3.5	18	2	7 mm; SMT	
MADC-011010	37400	40000	13	3.8	25	4	4 mm; QFN-24	
MADC-011021	71000	86000	12	5	-20	-5	8 mm; SMT	
Transceivers								
Part Number	Description	Op Freq (GHz)	Output Power (mW)	Op Current (mA)	IF Bandwidth	Package		
MACS-007801-0M1R10	Mono Transceiver	24.125 +/-25 MHz	8	175	10 Hz to 5 kHz	Die Cast Waveguide		
MACS-007802-0M1R10	Stereo Transceiver	24.125 +/-25 MHz	8	175	10 Hz to 5 kHz	Die Cast Waveguide		
MACS-007801-0M1RM0	Mono Transceiver	24.125 +/-25 MHz	5	85	10 Hz to 5 kHz	Die Cast Waveguide		
MACS-007802-0M1RS0	Stereo Transceiver	24.125 +/-25 MHz	5	85	10 Hz to 5 kHz	Die Cast Waveguide		
MACS-007800-0M1R00	Local Oscillator	24.125 +/-25 MHz	8	175	—	Die Cast Waveguide		
Upconverters								
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package		
MAUC-010506	Upconverter	17680	23620	14	35	4 mm; PQFN-24		
MAUC-011003	Upconverter	27500	33400	12	32	4 mm; PQFN-24		
XU1019-QH	Upconverter	37000	40000	7	27	4 mm; PQFN-24		
MAMF-011142	Upconverter	71000	86000	30	31	SMT		
Mixers								
Part Number	Min Freq RF/LO (MHz)	Max Freq RF/LO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	Conversion Loss/ Gain (dB)	LO Drive (dBm)	IIP3 (dBm)	Package
MAMX-009722-25MHL	30	512	1227	1227	7.5	13	—	SM-89
MAMX-008611	800	1000	70	270	9.3	-5	20	SOT-26
MAMXSS0012	800	1000	DC	200	8	5	—	SOT-25
MA4EXP950H1-1277T	850	1050	DC	200	8.3	15	32	3 mm; PQFN-16
MAMX-090950-1277LT	850	1050	DC	400	8.2	7	—	3 mm; PQFN-16
MA4EX950L1-1225T	700	1200	DC	400	8	5	15	SOT-25
MA4EX950H1-1225T	700	1200	DC	400	6.6	15	25	SOT-25
MAMX-000900-1061LT	700	1400	DC	500	8	7	16	SOIC8
MAMXSS0013	1400	2100	DC	500	8	5	—	SOT-25
MAMX-009239-001500	10	2500	10	2500	9	17	25	SM-87
MA4EX240L1-1225T	1700	2500	DC	400	7	5	12.5	SOT-25
MA4EXP240L-1277T	2300	2800	DC	200	8.3	5	18	3 mm; PQFN-16
MD-156	600	3000	DC	1000	9	7	—	FP-2
CGY2180UH	700	3700	DC	1700	-7	15	—	Die
CGY2181UH	1000	4500	DC	2500	-7	—	—	Die
CGY2183UH	100	6000	DC	3000	11	-5	—	Die
CGY2184UH	100	6000	DC	3000	18	0	—	Die
MA4EX580L1-1225T	4700	6000	DC	1050	7.6	5	8.5	PSM
MA4EX600L1-1225T	4200	6000	DC	2000	5.8	5	7	PSM
MAMX-011033	2500	8000	DC	3500	6.5	+15	—	3 mm; PQFN-12
MAMX-011033	2500	8000	DC	3500	7	15	16	3 mm; PQFN-12
MAMX-011044-DIE	2500	9000	DC	3500	7.5	18	22	Bare Die
MAMX-011044	2500	9000	DC	3500	8.5	18	22	4 mm; QFN-24
CGY2182UH	3000	10000	DC	3000	-7	—	—	Die

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Mixers (continued)								
Part Number	Min Freq RF/LO (MHz)	Max Freq RF/LO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	Conversion Loss/ Gain (dB)	LO Drive (dBm)	IIP3 (dBm)	Package
MAMX-011034	3000	12000	DC	4000	7.5	+15	—	3 mm; PQFN-12
MAMX-011034	3000	12000	DC	4000	7.5	15	22	3 mm; 12-lead; AQFN
MAMX-011144	5500	19000	DC	6000	6	+15	—	3 mm; AQFN-12
MAMX-011035	5500	19000	DC	6000	6	15	20	3 mm; AQFN-12
MAMX-011144	5500	19000	DC	3000	6	15	20	Lead-Free; AQFN
MAMX-011067	5000	20000	DC	6000	6	15	21	3 mm; PQFN-12
MAMX-011126	13000	24000	DC	8000	8.5	7	14	3 mm; 12-lead; AQFN
MAMX-011023	5000	25000	4000	2300	9	-2	7	1.5 x 1.2 mm; TDFN-6
MAMX-011038	6000	26000	DC	4000	7	+15	—	3 mm; PQFN-12
MAMX-011038	6000	26000	DC	4000	8	15	20	3 mm; 12-lead; AQFN
MAMX-011040	8000	26000	DC	4000	8	14	17	4 mm; AQFN-24
MAMX-011040-DIE	8000	26000	DC	4000	8	—	17	Bare Die
MAMX-011075	8000	26000	DC	4000	8	—	17	4 mm; AQFN-24
MAMX-011126	17000	31000	DC	8000	8.5	+7	—	3 mm; AQFN-12
MAMX-011009	14000	32000	DC	7000	-10	15	13	1.5 x 1.2 mm; TDFN-6
MAMX-011021	5000	35000	DC	4500	8	14	23	1.5 x 1.2 mm; TDFN-6
MAMX-011071	8000	36000	DC	10000	9.5	—	20	3 mm; PQFN-12
MAMX-011066	5000	37000	DC	4500	8	20	20	1.5 x 1.2 mm; TDFN-6
XM1001-BD	12000	40000	DC	4000	8	12	25	Die
MAMX-011116	27000	42000	DC	5000	9	13	16	2 mm; PDFN-8
MAMX-011097	27000	42000	DC	5000	9	23	28	2 mm; PDFN-8
XM1003-BD	32000	42000	DC	4000	9	12	14	Die
MAMX-011036-DIE	8000	43000	DC	10000	8	15	22	Die
MAMX-011036	8000	43000	DC	10000	8.5	15	20	3 mm; AQFN-12
CGY2460UH	40500	43500	5000	6000	33	—	—	Die
MAMX-011043	15000	45000	DC	10000	9	15	18	4 mm; QFN-24
MAMX-011043-DIE	15000	45000	DC	10000	9	16	18	Bare Die
MAMX-011148	17000	47000	DC	20000	7	+15	—	3 mm; AQFN-12
MAMX-011037-DIE	18000	46000	DC	20000	6.5	15	20	Die
MAMX-011054	18000	46000	DC	20000	6.5	15	20	3 mm; AQFN-12
MAMX-011074	18000	46000	DC	20000	7	—	20	3 mm; PQFN-12
XM1002-BD	34000	46000	DC	4000	9	12	24	Die
MAMX-011148	17000	47000	DC	20000	7	15	20	3 mm; AQFN-12
MAMX-011122	17000	53000	DC	20000	8	15	20	3 mm; QFN-12
MAMX-011088	17000	55000	DC	20000	8	15	20	3 mm; AQFN-12
MAMX-011088-DIE	17000	64000	DC	20000	8	15	20	1.3 x 1.0 mm; Die

Note: Part numbers are RoHS compliant.
 Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
 All specifications are subject to change.

FREQUENCY GENERATION

Leading-edge Solutions for Challenging Communications Needs

MACOM voltage controlled oscillators (VCOs) generate frequency in aerospace and defense, point-to-point microwave backhaul and other commercial communications applications. IC VCOs support a variety of applications operating between the 500 to 14,400 MHz frequency range. Featuring low phase noise, stable performance over temperature, low power consumption and highly linear tuning, MACOM's VCOs provide leading edge solutions for challenging communications needs.



VCOs

- > Low phase noise
- > Wide tuning range
- > Low power consumption
- > Bandwidths greater than 10%
- > RoHs compliant package

NLTL GaAs Comb Generators

- > Superior phase noise performance up to -18 dBc/Hz better than a SRD
- > Usable harmonics out to 50 GHz
- > Available in SMT or connectorized packages



Voltage Controlled Oscillators (VCOs)									
Part Number	Min Freq (MHz)	Max Freq (MHz)	Phase Noise at 10 kHz Offset (Vt = 5 V)(dBc/Hz)	Phase Noise at 100 kHz Offset (Vt = 5 V)(dBc/Hz)	P _{OUT} at Fo (dBm)	DC Current (mA)	Package		
MAOC-011030	5458	6129	-93	-117	14	185	5 mm; PQFN-32		
MAOC-009259	5700	6400	-93	-117	12	190	5 mm; PQFN-32		
MAOC-009260	6100	7000	-92	-117	8.5	205	5 mm; PQFN-32		
MAOC-009261	7100	7900	-93	-116	10	180	5 mm; PQFN-32		
MAOC-009262	7400	8210	-92	-117	14	170	5 mm; PQFN-32		
MAOC-009263	7800	8700	-90	-115	10.5	180	5 mm; PQFN-32		
MAOC-010334	8400	9250	-88	-115	10	168	5 mm; PQFN-32		
MAOC-009264	8800	9800	-88	-115	9	185	5 mm; PQFN-32		
MAOC-009871	9200	10200	-86	-113	7	185	5 mm; PQFN-32		
MAOC-009265	9400	10800	-86	-113	8.5	175	5 mm; PQFN-32		
MAOC-009266	10200	11300	-87	-114	8.5	200	5 mm; PQFN-32		
MAOC-009872	11000	11800	-83	-112	7	165	5 mm; PQFN-32		
MAOC-009267	11200	12600	-82	-112	6	175	5 mm; PQFN-32		
MAOC-009269	11400	12800	-83	-110	5	180	5 mm; PQFN-32		
MAOC-009270	12200	13800	-78	-107	6.5	165	5 mm; PQFN-32		
MAOC-009268	12700	14200	-79	-108	9	165	5 mm; PQFN-32		
MAOC-011027	13400	14400	-79	-108	8	205	5 mm; PQFN-32		
NLTL GaAs Comb Generators									
Part Number	Power Min (dBm)	Power Max (dBm)	Output Harmonics 1	Output Harmonics 2	Output Harmonics 3	Package			
MLPNC-7100S1-SMA800 S	18 @ 75 MHz	24 @ 250 MHz	-15 @ 1 GHz	-18 @ 2 GHz	-24 @ 4 GHz	SMA800			
MLPNC-7100S1-SMT580	18 @ 75 MHz	24 @ 250 MHz	-15 @ 1 GHz	-18 @ 2 GHz	-24 @ 4 GHz	SMT580			
MLPNC-7100-SMA850 S	20 @ 100 MHz	24 @ 400 MHz	-8 @ 4 GHz	-18 @ 12 GHz	-35 @ 20 GHz	SMA850			
MLPNC-7102S1-SMA800 S	18 @ 300 MHz	24 @ 700 MHz	-10 @ 4 GHz	-15 @ 8 GHz	-22 @ 12 GHz	SMA800			
MLPNC-7102S1-SMT580	18 @ 300 MHz	24 @ 700 MHz	-10 @ 4 GHz	-15 @ 8 GHz	-22 @ 12 GHz	SMT580			
MLPNC-7102-SMA800 S	19 @ 300 MHz	24 @ 700 MHz	-8 @ 4 GHz	-16 @ 12 GHz	-20 @ 20 GHz	SMA800			
MLPNC-7102-SMT680	19 @ 300 MHz	24 @ 700 MHz	-8 @ 4 GHz	-16 @ 12 GHz	-20 @ 20 GHz	SMT680			
MLPNC-7103S1SMA800 S	18 @ 600 MHz	24 @ 1500 MHz	-10 @ 4 GHz	-8 @ 8 GHz	-20 @ 15 GHz	SMA800			
MLPNC-7103S1SMT580	18 @ 600 MHz	24 @ 1500 MHz	-10 @ 4 GHz	-8 @ 8 GHz	-20 @ 15 GHz	SMT580			
MLPNC-7103-SMA800 S	19 @ 600 MHz	24 @ 1500 MHz	-5 @ 6 GHz	-15 @ 18 GHz	-20 @ 30 GHz	SMA800			
MLPNC-7103-SMT680	19 @ 600 MHz	24 @ 1500 MHz	-5 @ 6 GHz	-15 @ 18 GHz	-20 @ 30 GHz	SMT680			
Low Noise Gain Block Amplifiers									
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (dB)	OIP3 (dBm)	Bias Voltage (V)	Bias Current (mA)	Package
MAAM-011229-CQ3	Broadband	50	4000	19	1.3	38	5	80	3 mm; CQFN-12
MAAM-011252-CQ3	Broadband	30	8000	19.5	1.4	34	5	65	3 mm; CQFN-12

Note: Part numbers are RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

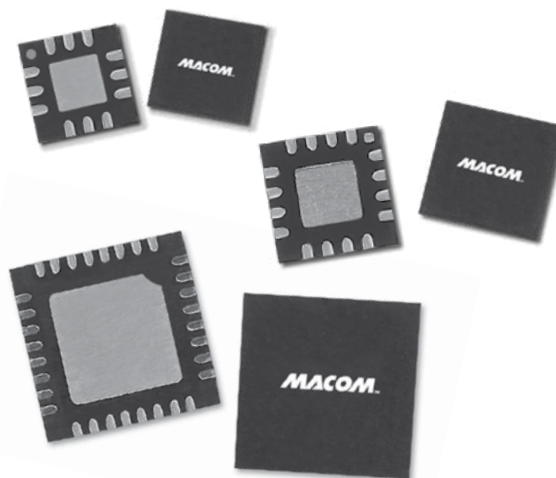
All specifications are subject to change.

INTEGRATED IC & MODULES

Integrating Size, Weight, Power and Cost for Next Generation Applications

MACOM's multifunctional modules are designed to provide customers with an affordable, highly integrated unit while delivering reliability and performance.

Applications such as radar and commercial 5G face size constraints and the need for higher frequency necessitates multifunction integration. From MACOM, one can expect an even higher level of integration of RF and microwave chipsets. In the data center and optical transport world, integrated products will provide data conversion and data transport solutions coupled with RF and microwave solutions to provide a very high level of integration that will ultimately drive optimal affordability and reliability.



Radar Core Chips

- > Designed for communication radar and weather applications
- > Ideal for high levels of integration on a single IC
- > Includes "common path" circuit which incorporates a 4-Bit digital attenuator, a 6-Bit digital phase shifter and a T/R SPDT switch
- > RoHS compliant

5G Switch LNA Modules

- > Multifunction MMIC includes a SPDT switch and LNA with by-pass mode for RDX path
- > Compact surface mount module
- > Ideally suited for base stations and for use on the front end of WLAN 802.11a modules where small size is critical

High Power Switch and Integrated Bias Module

- > High power broadband PIN SPDT switch with 5 V power management chip for 0.7 – 6 GHz TDD-LTE applications
- > Integrated bias controller utilizes a boost circuit
- > Requires only a single 5 V supply
- > Single Tx/Rx control signal is compatible with 1.8 V or 3.3 V logic



Radar Core Chips									
Part Number	Min Freq (GHz)		Max Freq (GHz)	Transmit Gain (dB)	Transmit P1dB (dBm)		Receive Gain (dB)	Receive Noise Figure (dBm)	Package
CGY2175AHV	4		6	—	20		—	—	QFN
CGY2175AUH	4		6	—	20		—	—	Die
MAMF-011015	8		11	11	23		24	2	7 mm; PQFN-44
CGY2170YHV	8		12	6	12		6	—	QFN
CGY2170YUH	8		12	6	11		6	—	Die
CGY2179UH	11		13	12	3		—	2	Die
CGY2179HV	11		13	12	3		—	1.9	QFN
CGY2330UH	13		15	—	—		—	—	Die
MAMF-011099	24.25		29.5	21	28		24	3.6	6.5 mm; AQFN
CGY2351UH	26		30	—	—		—	—	Die
CGY2350UH	34		36	3	—		—	—	Die
ENGSD00083	15000		18000	20	10		23	4	4
5G Switch LNA Modules									
Part Number	Min Freq (GHz)	Max Freq (GHz)	Rx Gain (dB)	Rx Noise Figure (dB)	Rx OIP3 (dBm)	Tx IPO.1 dB CW (dBm)	Bias Voltage (V)	Bias Current (mA)	Package
MAMF-011152	1.7	2.7	34	1.6	30	—	—	Tx: 100 mA @ 5 V (500 mW) Rx: 130 mA @ 5 V (650 mW)	8 mm; 16-lead; Lead-Free
MAMF-011144	2.3	3.8	38	1.25	—	—	5	—	6 mm; QFN-40
MAMF-011069	1.8	3.9	33 @ 2.6 GHz 34 @ 3.5 GHz	1.2 @ 2.6 GHz 1.5 @ 3.5 GHz	32	44	LNA3 Switch 3/28	LNA: 105; Switch: 20 (per Channel)	5 mm; PQFN-32
MAIA-011002	0.4	4	34 @ 2.7 GHz 32 @ 3.5 GHz	1.1 @ 2.7 GHz 1.3 @ 3.5 GHz	36	50	LNA3 Switch 3/28	Tx: 100 (3 V); 10 (28 V) Rx: 240 (3 V); 0 (28 V)	5 mm; HQFN-32
MAMF-011145	2.3	4.2	38	1.25	—	—	—	—	6 mm; QFN-40
MAMF-011150	1.5	4.2	37	1.1	—	—	—	—	6 mm; Lead-Free; HQFN-40
MAIA-011004	0.4	5	34 @ 2.7 GHz 32 @ 3.5 GHz	1.1 @ 2.7 GHz 1.3 @ 3.5 GHz	36	50	LNA3 Switch 3/28	Tx: 100 (3 V); 10 (28 V) Rx: 240 (3 V); 0 (28 V)	5 mm; HQFN-32
MAMF-011153	1.5	5	34	1.6	30	—	—	Tx: 100 mA @ 5 V (500 mW) Rx: 130 mA @ 5 V (650 mW)	8 mm; 16-lead; Lead-Free
MAMF-011133	2.3	5	32 – 34 in HG mode 18 – 20 in LG mode	1.3 @ 3.5 GHz	34	43	5	Tx: 2 (per Channel) Rx: 95 HG; 45 LG	6 mm; QFN-40
MAMF-011170	2	5	38.5	0.9	—	41	—	—	3 mm; Lead-Free; QFN-16
MAMF-011119	1	6	35 @ 2.5 GHz 33.5 @ 4.5 GHz	1.2 @ 2.5 GHz 1.5 @ 4.5 GHz	31	40.5	5	Tx: 1.4 Rx: 78	6 mm; QFN-20
MAMF-011126	1	6	35.2 @ 2.5 GHz 34 @ 3.75 GHz 33.5 @ 4.5 GHz	1.2 @ 2.5 GHz 1.3 @ 3.75 GHz 1.4 @ 4.5 GHz	30	40.5	5	78	6 mm; QFN-20
MAMF-011139	1.4	6	34	1.2	—	51	—	—	5 mm; 32-lead
MAMF-011138	2	6	35	1.2	35	42	5	115	6 mm; QFN-40
MAMF-011038	5	6	12	2.2	22	31	3	10	2 mm; STQFN-12
MAMF-011139	1.4	6	34	1.2	35	51	—	—	5 mm; 32-lead
MAMF-011149	1	6	34	1.2	—	—	—	—	3 mm; QFN-16
MAMF-011156	1	6	35	0.9	—	40.6	—	—	3 mm; QFN-16
MAMF-011164	1	6	36	1.2	—	41	—	—	3 x 5 mm; Lead-Free; QFN-24

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
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Power Management Controllers															
Part Number	Description		ADC Channels (#)		ADC Resolution (mV)		DAC Channels (#)		DAC Resolution (Bits)		GPIOs (#)		Output Current Capability (mA)		Package
MABC-11040	Bias Controller (PMIC)/ Sequencer Supply		4		12		4		12		4		+100 mA/-60 mA		6 x 6 mm; PQFN-48
MABC-11050	5G GaN FEM (PMIC) Supply: -6 V; +5 V		4		12		4		12		4		+10 mA/-6 mA		6 x 6 mm; PQFN-48
5G Transmit/Receive Front End Modules															
Part Number	Description		Min Freq (GHz)		Max Freq (GHz)		Transmit Gain (dB)		Transmit P1dB (dB)		Rx Gain (dB)		Rx Noise Figure (dB)		
MAMF-011099	24.25 – 29.5 GHz; Ka-Band; TR Front End Module		24.25		29.5		21		28		24		3.6		
Transmit Receive Modules															
Part Number	Min Freq (GHz)	Max Freq (GHz)	Rx Gain (dB)	Rx NF (dB)	Rx RL In/Out (dB)	Tx Gain (dB)	Tx P _{SAT} (dBm)	Tx P _{SAT} (W)	Tx PAE (%)	Isolation (dB)	Rx Voltage (V)	Rx DC Current (A)	Tx Voltage (V)	Tx DC Current (A)	Package
ENGSD00083	15	18	23	3.25	17/21	20	30.8	1.2	30	36	3.3	0.045	20	0.1	7 mm; QFN
ENGSD00088	2	18	27	3.5	12/10	35	34	3	25	20	3.3; -1	0.23	20; -1.5	0.3	0.427" x 0.254" x 0.060"; QFN
ENGSD00063	17	22	22	3.25	14/14	20	30	1	25	32	3.3	0.045	20	0.1	7 mm; QFN
High Power Switch and Bias Modules															
Part Number	Description		Min Freq (GHz)		Max Freq (GHz)		Transmit Input P0.1dB CW (dBm)		Transmit Insertion Loss (dB)		Receive Insertion Loss (dB)		Receive Isolation (dB)		
MAMF-011070	High Power Switch with Integrated Bias Control		0.03		6		50.5		0.3		0.4		43		

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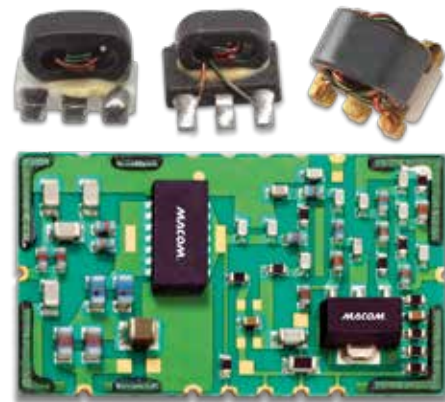
PASSIVES

A Variety of Solutions for A&D and Communications

MACOM offers a variety of passive solutions for a wide range of A&D, wireless and wireline communication applications. Passive components include transformers, capacitors, dividers/combiners, couplers and filters/diplexers.

MACOM KV CAPS.

Silicon high voltage capacitors are high density, high working voltage silicon capacitors which employ a novel topology that essentially folds the parallel plates of the capacitors into three-dimensional structures, producing greater capacitance per unit area of die footprint than that of a simple parallel plate capacitor.



Bias Networks

MACOM offers 30 MHz to 67 GHz bias networks suitable for DC biasing of PIN diode control circuits.

- > Functions as RF to DC decoupling networks, as well as a DC return
- > Can also be used as bi-directional reactive couplers for Schottky detector circuits in multi-market applications

Couplers

- > Used extensively in a range of A&D, wireless and wireline communications applications. MACOM offers connectorized and surface mount devices with a broad range of coupling values

Hybrid Couplers

- > Products available in subsets of the 2 – 3000 MHz frequency range
- > Available as TO-Cans, flatpacks, surface mount and connectorized

Directional Couplers

- > Coupling values of 6 dB to 30 dB
- > Products available in subsets of the 2 MHz to 18 GHz frequency range
- > 75 Ω products available for CATV, DTV and DBS applications

Power Dividers/Combiners

Used in a range of A&D, wireless and wireline communications applications.

- > 50 Ω and 75 Ω devices
- > Products available in subsets of 400 kHz to 26 GHz frequency range
- > 2-, 3-, 4-, 5-, 6- and 8-channel versions available

Transformers/Baluns

MACOM offers many standard transformers used for a variety of wireless, wireline and A&D communications applications.

- > Standard impedance ratios up to 4:1
- > Balanced/unbalanced versions
- > 50 Ω and 75 Ω nominal impedance devices available
- > Surface mount, flatpack and connectorized packages

Filters/Diplexers

MACOM offers a variety of highpass, lowpass, and diplex filter components and assemblies used in common wireless communications standards and CATV, DBS and DTV applications.

- > 50 Ω and 75 Ω diplexers
- > Multi-chip and MMIC products
- > Low cost surface mount packaging

Capacitors

- > Suitable for DC blocking and RF bias networks in a variety of control and filter circuits
- > Capacitance-temperature coefficient provides <200 ppm/°C
- > Insertion loss <0.1 dB at 15 GHz
- > Ideal for chip and wire/ribbon microwave high performance circuits

MACOM KV CAPS. 50 V

Part Number	Capacitance Value (pF)	Capacitance Tolerance	Working Voltage (V)	Die Size (mil ²)	Package Type	Package
MKVC-0547R0-1453	47	+/-5	50	15	Waffle & Gel	ODS-1453
MKVC-0547R0-14460T	47	10	50	—	—	—
MKVC-0547R0-13920T	47	10	50	—	—	—
MKVC-050100-1453	100	+/-5	50	15	Waffle & Gel	ODS-1453
MKVC-050100-13920T	100	10	50	—	—	—
MKVC-050100-1454	100	+/-5	50	15X45	Waffle & Gel	ODS-1454

MACOM KV CAPS. 200 V

Part Number	Capacitance Value (pF)	Capacitance Tolerance	Working Voltage (V)	Die Size (mil ²)	Package Type	Package
MKVC-2A02R7	2.7	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A03R0	3	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A03R3	3.3	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A03R6	3.6	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A03R9	3.9	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A04R3	4.3	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A04R7	4.7	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A05R1	5.1	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A05R6	5.6	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A06R2	6.2	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A06R8	6.8	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A07R5	7.5	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A08R2	8.2	+/-1	200	15	Waffle & Gel	ODS-1438
MKVC-2A09R1	9.1	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A10R0	10	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A11R0	11	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A12R0	12	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A13R0	13	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A15R0	15	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A16R0	16	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A18R0	18	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A20R0	20	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A22R0	22	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A24R0	24	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A27R0	27	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A30R0	30	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A33R0	33	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A36R0	36	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A39R0	39	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A43R0	43	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A47R0	47	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A51R0	51	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A56R0	56	+/-1	200	21	Waffle & Gel	ODS-1439
MKVC-2A62R0	62	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A68R0	68	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A75R0	75	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A82R0	82	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A91R0	91	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0100	100	+/-1	200	32	Waffle & Gel	ODS-1440

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

MACOM KV CAPS. 200 V (continued)

Part Number	Capacitance Value (pF)	Capacitance Tolerance	Working Voltage (V)	Die Size (mil ²)	Package Type	Package
MKVC-2A0110	110	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0120	120	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0130	130	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0150	150	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0160	160	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0180	180	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0200	200	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0220	220	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0240	240	+/-1	200	32	Waffle & Gel	ODS-1440
MKVC-2A0270	270	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0300	300	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0330	330	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0360	360	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0390	390	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0430	430	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0470	470	+/-1	200	40	Waffle & Gel	ODS-1441
MKVC-2A0510	510	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A0560	560	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A0620	620	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A0680	680	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A0750	750	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A0820	820	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A0910	910	+/-1	200	50	Waffle & Gel	ODS-1442
MKVC-2A1000	1000	+/-1	200	64	Waffle & Gel	ODS-1443
MKVC-2A1100	1100	+/-1	200	64	Waffle & Gel	ODS-1443
MKVC-2A1200	1200	+/-1	200	64	Waffle & Gel	ODS-1443
MKVC-2A1300	1300	+/-1	200	64	Waffle & Gel	ODS-1443
MKVC-2A1500	1500	+/-1	200	64	Waffle & Gel	ODS-1443
MKVC-2A1600	1600	+/-1	200	64	Waffle & Gel	ODS-1443
MKVC-2A1800	1800	+/-1	200	100	Waffle & Gel	ODS-1444
MKVC-2A2000	2000	+/-1	200	100	Waffle & Gel	ODS-1444
MKVC-2A2200	2200	+/-1	200	100	Waffle & Gel	ODS-1444
MKVC-2A2400	2400	+/-1	200	100	Waffle & Gel	ODS-1444
MKVC-2A2700	2700	+/-1	200	100	Waffle & Gel	ODS-1444

MACOM KV CAPS. 500 V

Part Number	Capacitance Value (pF)	Capacitance Tolerance	Working Voltage (V)	Die Size (mil ²)	Package Type	Package
MKVC-5A05R1	5.1	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A05R6	5.6	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A06R2	6.2	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A06R8	6.8	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A07R5	7.5	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A08R2	8.2	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A09R1	9.1	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A10R0	10	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A11R0	11	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A12R0	12	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A13R0	13	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A15R0	15	+/-1	500	32	Waffle & Gel	ODS-1445

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

MACOM KV CAPS. 500 V (continued)

Part Number	Capacitance Value (pF)	Capacitance Tolerance	Working Voltage (V)	Die Size (mil ²)	Package Type	Package
MKVC-5A16R0	16	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A18R0	18	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A20R0	20	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A22R0	22	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A24R0	24	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A27R0	27	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A30R0	30	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A33R0	30	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A36R0	36	+/-1	500	32	Waffle & Gel	ODS-1445
MKVC-5A39R0	39	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A43R0	43	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A47R0	47	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A51R0	51	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A56R0	56	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A62R0	62	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A68R0	68	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A75R0	75	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A82R0	82	+/-1	500	40	Waffle & Gel	ODS-1446
MKVC-5A91R0	91	+/-1	500	40	Waffle & Gel	ODS-1446

MACOM KV CAPS. 1000 V

Part Number	Capacitance Tolerance	Voltage (V)	Value (pF)	Package Type	Package
MKVC-1A03R6	+/-5%	1000	3.6	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A03R9	+/-5%	1000	3.9	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A04R7	+/-5%	1000	4.7	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A05R6	+/-5%	1000	5.6	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A06R8	+/-5%	1000	6.8	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A07R5	+/-5%	1000	7.5	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A08R2	+/-5%	1000	8.2	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A10R0	+/-5%	1000	10	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A11R0	+/-5%	1000	11	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A13R0	+/-5%	1000	13	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A15R0	+/-5%	1000	15	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A18R0	+/-5%	1000	18	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A20R0	+/-5%	1000	20	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A24R0	+/-5%	1000	24	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A27R0	+/-5%	1000	27	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A33R0	+/-5%	1000	33	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A36R0	+/-5%	1000	36	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A39R0	+/-5%	1000	39	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A47R0	+/-5%	1000	47	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A51R0	+/-5%	1000	51	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A62R0	+/-5%	1000	62	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A75R0	+/-5%	1000	75	Tape & Reel	3.4 x 2.5 x 0.9 mm
MKVC-1A0100	+/-5%	1000	100	Tape & Reel	3.4 x 2.5 x 0.9 mm

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
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Bias Networks

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation Loss (dB)	Package
MACP-011088	2	18	0.8	17	4 mm; 24-lead; PQFN
MAFL-011124	DC	20	1	—	3 mm; 16-lead; PQFN
MAFL-011124-DIE	-1	20	1	—	Die
MAFL-011125	DC	20	1	—	3 mm; 16-lead; PQFN
MAFL-011125-DIE	DC	20	1	—	Die
MAFL-011156	DC	20	1	—	3 mm; 16-lead; PQFN
MAFL-011156-DIE	DC	20	1	—	—
MAFL-011126	DC	20	—	—	—
MAFL-011127	-4	20	—	—	—
MAFL-011128	DC	20	—	—	—
MAFL-011126-DIE	DC	20	—	—	—
MAFL-011127-DIE	-2	20	—	—	—
MAFL-011128-DIE	DC	20	—	—	—
MAPD-011062-DIE	2	20	—	—	—
MAPD-011062	2	20	—	—	—
MABA-011125	2	20	2	—	—
MABT-011000-14230G	2000	18000	0.2	35	Die
MABT-011000-14230P	2000	18000	0.2	35	Die
MABT-011000-14230W	2000	18000	0.2	35	Die
MABT-011000-14235P	2000	18000	0.2	35	Die
MA4BN1840-1	18000	40000	0.2	35	Die
MA4BN1840-2	18000	40000	0.2	35	Die
MABT-011001	30	45000	1	—	4 mm; SMT
MABT-011011	30	67000	1.3	—	4 mm; SMT

Couplers

Part Number	Description	75 Ω	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Coupling, Nominal (dB)	Isolation (dB)
JHS-113-PIN ♦	Quad Hybrid	50	7	14	0.4	3	28
JHS-114-PIN ♦	Quad Hybrid	50	20	40	0.4	3	28
JH-114-PIN ♦	Quad Hybrid	50	20	40	0.4	3	30
JH-133-PIN ♦	Quad Hybrid	50	20	40	0.4	3	28
JHS-115-PIN ♦	Quad Hybrid	50	40	80	0.4	3	30
JH-115-PIN ♦	Quad Hybrid	50	40	80	0.4	3	30
JH-119-PIN ♦	Quad Hybrid	50	80	160	0.6	3	33
JHS-119-PIN ♦	Quad Hybrid	50	80	160	0.6	3	33
HH-106-PIN ♦	Hybrid Junction	50	2	200	1	3	30
JH-121-PIN ♦	Quad Hybrid	50	100	200	0.6	3	25
HHS-109-PIN	Hybrid Junction	50	5	200	1	3	40
HH-109-PIN ♦	Hybrid Junction	50	5	200	1	3	40
JHS-121-PIN	Quad Hybrid	50	100	200	0.6	3	25
MACP-010507-CH0160	17 dB; 5 – 120 MHz	75	5	300	0.5	17	38
MACP-011047	14 dB; 5 – 300 MHz	75	5	300	0.35	14	30
JH-136-PIN ♦	Quad Hybrid	50	175	350	0.4	3	28
CHS-137-PIN ♦	Bi-Directional	50	1	400	0.5	20	40
JHS-142-PIN ♦	Quad Hybrid	50	200	400	0.4	3	30
MACP-007984-MDC201	20 dB; 350 – 450 MHz	50	350	450	0.3	20	38
CHS-134-PIN ♦	Bi-Directional	50	10	500	1.6	11	31
CH-134-PIN ♦	Bi-Directional	50	10	500	1.6	11	31
JHS-139-PIN ♦	Quad Hybrid	50	250	500	0.4	3	30

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Couplers (continued)

Part Number	Description	75 Ω	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Coupling, Nominal (dB)	Isolation (dB)
HH-110-PIN ♦	Hybrid Junction	50	10	500	1.2	3	37
JH-139-PIN ♦	Quad Hybrid	50	250	500	0.4	3	30
HHS-110-PIN	Hybrid Junction	50	10	500	1.2	3	40
MACP-010389-CE0880	14 dB; 4 MHz – 862 MHz	75	4	862	1	14	38
MACP-010383-CH0A40	17 dB; 4 MHz – 862 MHz	75	4	862	0.6	17	35
MACP-009821-CG0650	16 dB; 5 – 862 MHz;	75	5	862	1.1	16	33
MACP-010382-CF0A40	15 dB; 4 MHz – 862 MHz	75	4	862	0.7	15	33
MACP-010252-CA0370	10 dB	75	5	870	1	10	30
MACPCT0038	17 dB; 5 – 870 MHz	75	5	870	0.5	17	42
ELDC-10	10 dB; 75 Ω	75	5	870	1	10	28
MACP-009598-C80160	9 dB; 5 – 900 MHz	75	5	900	1.9	8.5	26
MACPCC0002	Bi-Directional	50	824	960	0.3	17	32
MACP-009596-CA0160	10 dB; 5 – 1000 MHz	75	5	1000	1.3	10	30
MACP-009944-CK07F0	20 dB; 5 – 1000 MHz	75	5	1000	0.5	20	30
MACP-009943-CH07F0	17 dB; 5 – 1000 MHz	75	5	1000	0.6	17	37
MACP-009404-C80370	8 dB; 5 – 1000 MHz	75	5	1000	1.5	8	25
MACPCT0039	10 dB; 5 – 1000 MHz	75	5	1000	1.2	10	25
CH-132-BNC ♦	Bi-Directional	50	1	1000	0.7	20	40
MACP-007486-CH0010	17 dB; 5 – 1000 MHz	75	5	1000	0.6	17	38
MACP-008764-CH0370	17 dB; 5 – 1000 MHz	75	5	1000	1.3	17	39
MACP-007490-CA0010	10.5 dB; 5 – 1000 MHz	75	5	1000	1.3	11	30
MACP-008311-CE0370	14 dB; 5 – 1000 MHz	75	5	1000	1	14	39
MACP-008125-CK07F0	20 dB; 5 – 1000 MHz	75	5	1000	0.5	20	34
2031-6330-00 ♦	180° Hybrid Stripline	50	500	1000	0.4	3	25
CH-140-PIN ♦	Directional	50	5	1000	0.3	20	40
MACPCT0040	10 dB; 5 – 1000 MHz	75	5	1000	1.3	10	30
MACPES0028	7 dB; 40 – 1000 MHz	75	40	1000	1.9	7	22
MACP-009736-CD0160	13 dB; 5 – 1000 MHz	75	5	1000	1.3	13	28
MACP-010718-CG09E0	17 dB; 40 MHz – 1002 MHz	75	40	1002	0.6	17	35
MACP-011109	16 dB	75	5	1200	0.5	15.5	28
MACP-011090	16 dB; 5 – 1200 MHz	75	5	1200	1.6	16	32
MACP-010045-CA08A0	10 dB; Broadband CATV Directional	75	5	1200	1.4	10	29
MACP-010249-CI08A0	18 dB; 5 – 1200 MHz	75	5	1200	0.6	18	32
MACP-010446-C80370	8 dB; 5 MHz – 1200 MHz	75	5	1200	1.9	8	21
MACP-010414-CA0370	10 dB; 5 MHz – 1200 MHz	75	5	1200	1.3	10	21
MACP-009730-C60370	6 dB; 5 – 1200 MHz	75	5	1200	2.5	6	16
MACP-009945-CH0670	18 dB; 5 – 1200 MHz	75	5	1200	1.3	17.5	33
MACP-007741-CG09E0	17 dB; 5 – 1200 MHz	75	5	1200	0.8	17	32
MACP-007727-CI07B0	18 dB; 5 – 1200 MHz	75	5	1200	1	18	26
MACP-009011-C80370	8 dB; 5 – 1200 MHz	75	5	1200	1.8	8	25
MACPCT0030	16 dB; 5 – 1200 MHz	75	5	1200	1	16	29
MACP-011095	13 dB; 5 – 1218 MHz	75	5	1218	0.8	13	39
MACP-010250-C808A0	8 dB; 5 – 1200 MHz	75	5	1218	1.6	9	24
MACP-011029	17.5 dB; 5 – 1218 MHz	75	5	1218	0.6	17.5	30
MACP-011114	7 dB	75	5	1225	2	7	43
MACP-011054	9 dB; 5 – 1225 MHz	75	5	1225	1.6	9	42
MACP-011055	15.2 dB; 5 – 1225 MHz	75	5	1225	0.9	15.2	37
MACP-011062	12.5 dB; 5 – 1225 MHz	75	5	1225	0.95	12.5	42

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Couplers (continued)

Part Number	Description	75 Ω	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Coupling, Nominal (dB)	Isolation (dB)
MACP-011056	16 dB; 5 – 1225 MHz	75	5	1225	0.7	16	43
MACP-011050	9 dB; 5 – 1225 MHz	75	5	1225	1.6	9	42
MACP-011051	7.5 dB; 5 – 1225 MHz	75	5	1225	2	7.5	42
MACP-011036	16 dB; 5 – 1225 MHz	75	5	1225	1	16	34
MACP-011035	12 dB; 5 – 1225 MHz	75	5	1225	1.5	12	29
MACP-011038	16 dB; 5 – 1225 MHz	75	5	1225	0.9	16	33
MACP-011032	7 dB; 5 – 1225 MHz	75	5	1225	1.8	7	17
MACP-011010	12 dB; 5 – 1225 MHz	75	5	1225	1.6	12	20
MACP-011014	17.5 dB; 5 – 1225 MHz	75	5	1225	0.65	17	36
MACP-011033	8 dB; 5 – 1225 MHz	75	5	1225	1.5	8	18
MACP-011037	10 dB; 5 – 1225 MHz	75	5	1225	1.5	10	24
MACP-011045	23 dB; 5 – 1225 MHz	50	5	1225	0.6	23	39
MACP-011059	12 dB; 5 – 1250 MHz	75	5	1250	0.95	12	32
MACP-011015	8 dB; 5 – 1250 MHz	75	40	1250	1.8	8	27
MACP-011058	10 dB; 5 – 1250 MHz	75	5	1250	1.5	10	42
MACP-011034	10 dB; 5 – 1255 MHz	75	5	1255	1.35	7	30
MACP-011013	20 dB; 5 – 1500 MHz	75	5	1500	0.9	20	27
MACP-011120	10.5 dB; 5 – 1800 MHz	75	5	1800	19	10.5	24
MACP-011129	17.1 dB; 5 – 1800 MHz	75	5	1800	25	17.1	26
MACP-011128	17.1 dB; 5 – 1800 MHz	75	5	1800	25	17.1	32
MACP-011119	12 dB; 5 – 1800 MHz	75	5	1800	1.1	12	31
MACP-011083	12.7 dB; 5 – 1800 MHz	75	5	1800	0.8	12.7	20
MACP-011117	8 dB	75	5	1800	1.7	8	26
MACP-011118	17.3 dB; 5 – 1800 MHz	75	5	1800	1.1	17.3	34
MACP-011079	8 dB	75	5	1800	1.8	8	28
MACP-011108	17.3 dB	75	5	1800	1.1	17.3	—
MACP-011102	9 dB	75	5	1800	1.2	9	30
MACP-011099	14.5 dB	75	5	1800	1	14.5	35
MACP-011081	14.5 dB; 5 – 1800 MHz	75	5	1800	1	14.5	35
MACP-011098	17.3 dB; 5 MHz – 2 GHz	75	5	2000	1.4	17.3	23
MACP-011068	17.3 dB; 5 – 2000 MHz	75	5	2000	1.1	17.3	26
2031-6331-00 ♦	180° Hybrid Stripline	50	1000	2000	0.5	3	25
2025-6002-10 ♦	Directional Stripline	50	500	2000	0.4	10	28
2035-6364-00 ♦	90° Hybrid Air Dielectric	50	1000	2000	0.2	3	20
2032-6344-00 ♦	90° Hybrid Stripline	50	1000	2000	0.2	3	22
H-9-N ♦	Hybrid Junction	50	2	2000	0.4	4	40
2025-6004-20 ♦	Directional Stripline	50	500	2000	0.3	20	42
2020-6607-30 ♦	Directional Mini Octave	50	1000	2000	0.2	30	55
JH-141-PIN ♦	High-Freq Quad Hybrid	50	1000	2000	0.2	3	27
HH-128-PIN ♦	Hybrid Junction	50	20	2000	1.5	3	35
2020-6605-10 ♦	Directional Mini Octave	50	1000	2000	0.2	10	35
MACPCC0001	Bi-Directional	50	1700	2000	0.3	17	34
2020-6606-20 ♦	Directional Mini Octave	50	1000	2000	0.2	20	45
MACP-010381-C70880	7 dB; 5 – 2400 MHz	75	5	2400	2.5	7	21
MACP-011086	14 dB; 5 – 3000 MHz	75	5	3000	2.7	14	25
H-183-4-N ♦	Hybrid Junction	50	30	3000	1.5	5	20
MACP-011074	14 dB; 5 – 3250 MHz	75	5	3250	1	14	36
MACP-011031	14 dB; 5 – 3250 MHz	75	5	3250	1.8	14	36
2032-6345-00 ♦	90° Hybrid Stripline	50	2000	4000	0.3	3	22

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Couplers (continued)

Part Number	Description	75 Ω	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Coupling, Nominal (dB)	Isolation (dB)
2020-6609-10 ♦	Directional Mini Octave	50	2000	4000	0.2	10	32
MACP-011097	90° Hybrid	50	2000	5000	0.75	—	30
2020-6614-20 ♦	Directional Mini Octave	50	2600	5200	0.3	20	40
2020-6615-30 ♦	Directional Mini Octave	50	2600	5200	0.3	30	50
2032-6347-00 ♦	90° Hybrid Stripline	50	4000	8000	0.3	3	20
2020-6616-06 ♦	Directional Mini Octave	50	4000	8000	0.3	6	28
2031-6334-00 ♦	180° Hybrid Stripline	50	4000	8000	0.7	3	20
2020-6618-20 ♦	Directional Mini Octave	50	4000	8000	0.3	20	40
2020-6617-10 ♦	Directional Mini Octave	50	4000	8000	0.3	10	30
2020-6619-30 ♦	Directional Mini Octave	50	4000	8000	0.3	30	50
2025-6012-20 ♦	Directional Stripline	50	2000	8400	0.4	20	40
2025-6010-10 ♦	Directional Stripline	50	2000	8400	0.4	10	28
2025-6009-06 ♦	Directional Stripline	50	2000	8400	0.4	6	24
2026-6001-10 ♦	Directional Stripline	50	1000	12400	0.4	10	28
2020-4018-20 ♦	Mini Octave Directional	50	7000	12400	0.3	20	38
2025-6016-20 ♦	Directional Stripline	50	4000	12400	0.5	20	35
2031-6335-00 ♦	180° Hybrid Stripline	50	8000	12400	0.8	3	17
2020-6623-30 ♦	Directional Mini Octave	50	7000	12400	0.3	30	47
2020-6622-20 ♦	Directional Mini Octave	50	7000	12400	0.3	20	38
2025-6014-10 ♦	Directional Stripline	50	4000	12400	0.5	10	25
MACP-011088	17 dB; 2 – 18 GHz; Bi-Directional	75	2000	18000	0.8	17	18
2032-6371-00 ♦	90° Hybrid Stripline	50	2000	18000	0.6	3	20
2025-6018-10 ♦	Directional Stripline	50	6000	18000	0.6	10	26
2025-6017-06 ♦	Directional Stripline	50	6000	18000	0.7	6	21
2026-6007-10 ♦	Directional Stripline	50	1000	18000	0.3	10	25
2026-6010-10 ♦	Directional Stripline	50	500	18000	0.9	10	25
2020-6628-06 ♦	Directional Mini Octave	50	12400	18000	0.6	6	21
2031-6339-00 ♦	180° Hybrid Stripline	50	7000	18000	1.2	3	14
2032-6374-00 ♦	90° Hybrid Stripline	50	6500	18000	0.6	3	18
2020-6626-20 ♦	Directional Mini Octave	50	7000	18000	0.5	20	35
2026-6009-20 ♦	Directional Stripline	50	1000	18000	0.3	20	37
2020-6624-06 ♦	Directional Mini Octave	50	7000	18000	0.6	6	21
2020-6627-30 ♦	Directional Mini Octave	50	7000	18000	0.5	30	45
2026-6004-10 ♦	Directional Stripline	50	2000	18000	30	10	25
2025-6019-16 ♦	Directional Stripline	50	6000	18000	0.6	16	32
MACP-011096	Bi-Directional	50	5000	55000	1	18	40
MACP-011113	Directional	50	5000	55000	1	18	35

Power Dividers/Combiners

Part Number	Min Freq (MHz)	Max Freq (MHz)	Channels (#)	Amplitude Balance (dB)	Phase Bal (°)	Isolation (dB)	Max Input Power (dBm)	Impedance (Ω)	Package
MTH-50-PIN ♦	1	100	2	0.1	1	30	30	50	TO-5-1
M3H-50-PIN ♦	1	100	3	0.2	1	30	30	50	TO-5
MAPD-008762-ES0001	120	160	2	1	1	20	30	50	FR4
MAPD-009850-HW1268	112	168	2	1	1	18	30	50	FR4
THV-50-N ♦	2	200	2	0.2	1	30	33	50	Conn
THV-50-BNC ♦	2	200	2	0.2	1	30	33	50	Conn
THV-50-TNC ♦	2	200	2	0.2	1	30	33	50	Conn
MAPD-008109-C30040	5	200	3	0.1	1	30	30	75	FR4
THV-50-SMA ♦	2	200	33	0.2	1	30	33	50	Conn

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All specifications are subject to change.

Power Dividers/Combiners (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Channels (#)	Amplitude Balance (dB)	Phase Bal (°)	Isolation (dB)	Max Input Power (dBm)	Impedance (Ω)	Package
DS-310-PIN ♦	DC	300	4	0.2	4	25	30	50	FP-5
DS-117-PIN ♦	1	300	3	0.3	4	20	30	50	FP-3
DS-308-BNC ♦	1	300	3	0.3	4	20	30	50	C-8
MAPD-011026	5	300	3	0.1	0.6	22	27	75	FR4
M3V-50-PIN ♦	50	300	3	0.2	2	25	30	50	TO-5
DS-113-PIN ♦	DC	400	2	0.2	1	25	30	50	FP-2
DSS-113-PIN ♦	DC	400	2	0.2	1	25	30	50	SF-1
TU-50-N ♦	20	400	2	0.2	1	35	33	50	Conn
TU-50-SMA ♦	20	400	2	0.2	1	35	33	50	Conn
TU-50-BNC ♦	20	400	33	0.2	1	35	33	50	Conn
MTV-50-PIN ♦	40	400	2	0.2	2	30	30	50	TO-5-1
DS-309-BNC ♦	2	500	8	0.2	2	30	33	50	C-18
DS-318-PIN ♦	5	500	2	0.2	2	18	30	50	RH-1
MAPD-007249-ESML21	5	500	2	0.2	1	25	30	50	Ceramic
DS-109-PIN ♦	10	500	2	0.2	1	25	30	50	FP-2
DS-319-PIN ♦	10	500	2	0.2	1	25	30	50	TO-8-2
DSS-333-PIN ♦	10	500	2	0.2	2	25	30	50	SF-1
DS-312-BNC ♦	10	500	4	0.2	2	25	30	50	C-14
DS-112-PIN ♦	10	500	4	0.2	5	25	30	50	FP-5
DS-328-PIN ♦	3	700	3	0.3	3	20	30	50	TO-8-2
MAPD-011078	5	700	30	3	0.3	2	22	75	SMT
MAPDCT0030	5	1000	2	0.2	1	20	30	75	SOT
DS-327-PIN ♦	5	1000	2	0.2	3	20	30	50	FP-2
MAPD-010038-C209C0	5	1000	2	0.3	0.3	30	30	75	FR4
MAPD-009918-C209C0	5	1000	2	0.3	0.9	26	30	75	FR4
MAPDCT0029	5	1000	2	0.3	1	14	30	75	FR4
MAPDCT0027	5	1000	2	0.3	1	15	30	75	FR4
DSS-327-PIN ♦	5	1000	2	0.3	3	16	30	50	SF-1
MAPDCT0033	5	1000	2	0.4	0	22	30	75	FR4
MAPD-010362-C20FA0	5	1000	2	0.4	3	19	24	75	FR4
H-81-4-N ♦	5	1000	2	0.5	2.5	25	33	50	Conn
H-81-4-SMA ♦	5	1000	2	0.5	2.5	25	33	50	Conn
ELPD-20-1	5	1000	2	0.5	4	22	30	50	SM-139
MAPD-008812-0003HW	5	1000	3	0.2	2	20	24	50	FR4
MAPDCT0028	5	1000	4	0.3	0.5	20	30	75	FR4
T-1000-N ♦	10	1000	2	0.1	1	25	33	50	Conn
T-1000-BNC ♦	10	1000	2	0.1	1	25	33	50	Conn
T-1000-SMA ♦	10	1000	2	0.1	1	25	33	50	Conn
T-1000-TNC ♦	10	1000	2	0.1	1	25	33	50	Conn
DS-323-PIN ♦	25	1000	3	0.4	4	24	30	50	FP-3
DS-324-PIN ♦	25	1000	4	0.3	6	20	30	50	FP-5
MAPD-011020	5	1200	2	0	0.6	19	30	75	FR4
MAPD-010047-C2W24M	5	1200	2	0.2	1.3	—	30	75	FR4
MAPD-010281-C2W024	5	1200	2	0.2	1.3	—	30	75	FR4
MAPDCT0024	5	1200	2	0.3	2.1	—	14	75	FR4
MAPDCT0032	5	1200	3	0.3	3	20	24	75	FR4
MAPD-009492-C2W180	5	1200	2	1.3	1.3	—	17	75	FR4
MAPDCT0017	46	1200	3	0.3	3	20	24	75	SM-4

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Power Dividers/Combiners (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Channels (#)	Amplitude Balance (dB)	Phase Bal (°)	Isolation (dB)	Max Input Power (dBm)	Impedance (Ω)	Package
MAPD-010274-C209C0	5	1218	2	0.2	0.6	16	30	75	FR4
MAPD-011053	5	1218	2	0.3	3	41	33	75	FR4
MAPD-011050	5	1218	2	0.4	1.5	27	27	75	FR4
MAPD-011039	5	1218	2	0.6	2.5	26	30	75	FR4
MAPD-011040	5	1225	2	0.3	5	17	30	75	FR4
MAPD-011052	5	1225	2	0.3	0	27	27	75	FR4
MAPD-011035	5	1225	2	0.5	5	17	30	75	FR4
MAPD-011051	5	1225	2	0.5	5	27	27	75	FR4
MAPD-011032	5	1250	2	0.2	0.4	18	27	75	SOT
MAPD-011027	5	1500	3	0.3	6	18	27	75	FR4
DS-331-PIN ♦	750	1500	2	0.2	6	10	30	50	TO-8
MAPD-011002	5	1600	2	0.3	0.7	26	30	75	FR4
MAPD-010638-C2WSOT	5	1600	2	0.3	1	23	24	75	FR4
MAPDCC0003	1510	1660	2	0.1	1	15	30	50	SOIC8
MAPD-011059	5	1800	3	0.1	5	20	30	75	SMT
MAPD-011059	5	1800	3	0.1	—	—	—	75	SMT
MAPDCC0004	1700	1900	2	0.1	2	15	30	50	SOIC8
MAPDCC0002	1850	1990	2	0.1	1	15	30	50	SOIC8
MAPDCC0006	1850	1990	3	0.3	7	12	30	50	SOIC8
H-8-4-SMA ♦	2	2000	2	0.1	2.5	25	33	50	Conn
DS-4-4-N ♦	2	2000	4	1	5	30	30	50	Conn
DS-4-4-BNC ♦	2	2000	4	1	5	30	30	50	Conn
DS-4-4-SMA ♦	2	2000	4	1	5	30	30	50	Conn
DS-313-PIN ♦	10	2000	2	0.3	4	23	24	50	FP-2
DSS-313-PIN ♦	10	2000	2	0.3	4	23	24	50	SF-1
DS-409-4BNC ♦	10	2000	4	0.5	5	25	37	50	Conn
DS-409-4SMA ♦	10	2000	4	0.5	5	25	37	50	Conn
DS-409-4TNC ♦	10	2000	4	0.5	5	25	37	50	Conn
DS-808-4TNC ♦	20	2000	8	0.6	5	20	37	50	Conn
DS-808-4N ♦	20	2000	8	5	0.6	20	37	50	Conn
DS-808-4BNC ♦	20	2000	8	0.6	5	20	37	50	Conn
DS-808-4SMA ♦	20	2000	8	0.6	5	20	37	50	Conn
2089-6206-00 ♦	500	2000	2	0.3	4	20	36	50	Conn
2089-6406-00 ♦	500	2000	4	0.4	6	20	36	50	Conn
2089-6201-00 ♦	1000	2000	2	0.2	4	20	33	50	Conn
2089-6401-00 ♦	1000	2000	4	0.4	6	20	36	50	Conn
2089-6801-00 ♦	1000	2000	8	0.8	8	20	38	50	Conn
MAPD-007530-000100	1700	2000	2	0.2	1.5	16	30	50	SOT-26
MAPDCC0014	1700	2000	4	0.8	5	18	30	50	SOIC16
MAPDCC0018	1700	2000	6	0.5	8	18	30	50	SOW16
MAPD-011007	5	2150	2	0.3	1	30	27	75	FR4
MAPD-010424-C20C80	5	2400	2	0.2	5	6	24	75	FR4
MAPDCT0026	5	2400	2	0.8	2	10	30	75	FR4
MAPDCC0010	2200	2500	2	0.1	2	22	30	50	SOT-25
MAPD-008957-CT0012	1	2700	2	0.5	2	12	30	50	FR4
2089-6202-00 ♦	2000	4000	2	0.2	4	20	33	50	Conn
2089-6402-00 ♦	2000	4000	36	0.4	6	20	36	50	Conn

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Power Dividers/Combiners (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Channels (#)	Amplitude Balance (dB)	Phase Bal (°)	Isolation (dB)	Max Input Power (dBm)	Impedance (Ω)	Package
ENGP00322A-SM	800	4000	2	0.1	1	20	42	50	9 mm; QFN
2089-6203-00 ♦	4000	8000	2	0.2	6	20	33	50	Conn
2089-6207-00 ♦	2000	8000	2	0.3	8	18	36	50	Conn
2089-6403-00 ♦	4000	8000	4	0.4	8	20	36	50	Conn
2089-6807-00 ♦	2000	8000	8	1.2	16	15	41	50	Conn
2089-6204-00 ♦	8000	12400	2	0.2	6	20	33	50	Conn
2089-6404-00 ♦	8000	12400	4	0.5	8	18	36	50	Conn
ENGP000015	4000	13000	2	0.1	—	—	—	50	Die
ENGP000014	2000	18000	2	0.1	1	16	27	50	Die
ENGP000014-SM	2000	18000	2	0.1	1	16	27	50	5 x 5 mm; Die
ENGP000014	2000	18000	2	0.1	—	—	—	50	Die
ENGP000014-SM	2000	18000	2	0.1	—	—	—	50	Die
2090-6304-00 ♦	500	18000	3	0.5	—	18	49	50	Conn
2090-6214-00 ♦	1000	18000	2	0.4	5	22	47	50	Conn
2090-6414-00 ♦	1000	18000	4	1	12	18	47	50	Conn
2090-6205-00 ♦	2000	18000	2	0.3	5	23	46	50	Conn
2089-6208-00 ♦	2000	18000	2	0.3	8	17	40	50	Conn
2089-6408-00 ♦	2000	18000	4	0.5	12	17	20	50	Conn
2089-6808-00 ♦	2000	18000	8	1.8	24	15	45	50	Conn
2089-6209-00 ♦	4000	18000	2	0.3	8	17	36	50	Conn
2089-6409-00 ♦	4000	18000	4	0.5	12	15	39	50	Conn
2089-6410-00 ♦	7000	18000	4	0.5	12	15	38	50	Conn
2089-6405-00 ♦	12400	18000	4	0.5	8	15	38	50	Conn
2089-6805-00 ♦	12400	18000	8	0.8	24	15	40	50	Conn
MAPD-011062-DIE	2000	20000	2	2	0.2	2	15	50	3 mm; PQFN
MAPD-011062	2000	20000	2	2	0.2	2	15	50	Die
ENGP000016	6000	30000	2	0.1	1	18	27	50	Die

Power Dividers and Couplers

Part Number	Description	Min Freq (GHz)	Max Freq (GHz)	Loss at FC (dB)	RL In/Out (dB)	Isolation (dB)	Power Handling (dBm)	Size (mm)	Package
ENGP000015	Wilkinson	4	13	0.7	18/18	18	27	2.26 x 1.56	Die
ENGP000014	Wilkinson	2	18	1	16/18	18	27	2.76 x 2.26	Die
ENGP000014-SM	Wilkinson	2	18	1	16/16	17	27	5 x 5	QFN
ENGP00190A	Wilkinson	2	20	0.9	17/17	18	33	2.89 x 2.26	Die
ENGP000016	Wilkinson	6	30	0.7	17/20	18	27	2.26 x 1.56	Die
ENGP00191A	Wilkinson	6	30	0.7	18/18	18	33	2.26 x 1.65	Die
ENGP00196A	Branchline Coupler	27	33	0.5	18/18	18	35	1.91 x 1.56	Die
ENGP00195A	Branchline Coupler	31	39	0.5	18/18	18	35	1.56 x 1.55	Die
ENGP000017	Wilkinson	18	50	1	16/16	18	27	1.56 x 2.26	Die
ENGP00192A	Wilkinson	12	52	0.7	18/18	18	33	2.26 x 1.65	Die
ENGP00194A	Wilkinson	18	52	0.7	18/18	18	33	1.56 x 1.65	Die
ENGP00193A	Wilkinson	40	90	0.5	18/18	18	33	1.00 x 1.33	Die

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Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
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Transformers/Baluns							
Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Impedance Ratio	Insertion Loss (dB)	Impedance (Ω)	Package
MABA-009807-CF4010	Flux Coupled Balun; Sealed Cover	DC	3	1:4	1	50	Ceramic
MABA-011006	Flux Coupled Unun	8	8	1:20	0.9	50	FR4
MABA-011125	Balun	2	20	1:2	2	—	3 mm; PQFN-16
MABA-009412-CF1BC0	Flux Coupled Balun, CT on both sides	1	50	1:1	0.4	75	FR4 8
MABA-010411-CT1160	Transmission Line Balun	30	60	1:1	0.8	75	SOT
MABA-011017	Flux Coupled Balun; Step Down	5	85	2:1	0.5	75	SOT
MABA-008282-CFGA40	Flux Coupled Balun	5	90	1:16	1.5	75	FR4
MABA-010181-CF9A40	Flux Coupled Balun	5	90	1:9	1.3	75	FR4
MABA-010655-CF1A40	Flux Coupled Transformer; Ethernet	1	100	1:1	0.3	50	FR4
MABA-011073	Flux Coupled Balun	1	100	1:1	0.3	75	SOT
MABA-008124-CF1FA0	Flux Coupled Balun	5	100	1:1	0.7	75	SOT
MABA-009573-CF1A40	Flux Coupled Balun	5	100	1:1.77	0.3	75	FR4
MABA-010061-CF4FA0	Flux Coupled Balun	5	100	1:4	1.2	75	SOT
MABA-009776-CF28A0	Flux Coupled Unun; Step Down	5	100	2:1	0.4	75	FR4
MABA-008570-ETC414	Flux Coupled Unun	3	110	1:4	0.3	50	Ceramic
MABA-008965-CF1160	Flux Coupled Balun	5	120	1:1	0.2	75	Ceramic
MABA-009005-CF1A40	Flux Coupled Balun	5	120	1:1	0.2	75	FR4
MABA-009650-CF1160	Flux Coupled Balun	5	120	1:1	0.4	75	Ceramic
ETC1-1T-2TR	Flux Coupled Balun	DC	200	1:1	0.3	50	Ceramic
MABA-009274-TC11T2	Flux Coupled Balun	DC	200	1:1	0.5	50	Ceramic
MABAE50060	Flux Coupled Balun	DC	200	1:1	1	50	Ceramic
MABACT0062	Flux Coupled Balun	3	200	1:1	0.5	75	Ceramic
MABACT0071	Flux Coupled Balun	3	200	1:1	0.5	75	FR4
MABACT0012	Flux Coupled Balun	3	200	1:1	0.8	75	Ceramic
MABA-007532-CF18A0	Flux Coupled Balun	5	200	1:1	0.4	75	SOT
MABA-009594-CF18A0	Flux Coupled Balun	5	200	1:1	0.4	75	SOT
MABA-009572-CF18A0	Flux Coupled Balun	5	200	1:1	0.5	75	SOT
MABA-011026	Flux Coupled Balun	5	200	1:1	0.5	75	SOT
MABA-008482-CF1A40	Flux Coupled Balun	5	200	1:1.78	0.4	75	FR4
MABACT0048	Flux Coupled Balun	5	200	1:2	0.4	75	FR4
MABACT0068	Flux Coupled Balun	5	200	1:2	0.4	75	FR4
MABA-009836-CF48A0	Flux Coupled Balun	5	200	1:4	0.5	50	SOT
MABACT0018	Flux Coupled Balun	5	200	1:4	0.7	50	SOT
MABA-008260-CF4A40	Flux Coupled Balun	5	200	1:4	0.8	75	FR4
MABA-011002	Flux Coupled Balun; Step Down	5	200	4:1	1	75	FR4
MABA-008354	Flux Coupled Balun; Step Down	5	200	4:1	1.1	75	FR4
MABA-010400-CT18A0	Transmission Line Balun with Tertiary Winding	40	200	1:1	0.4	75	SOT
MABA-007488-CT9550	Transmission Line Balun	5	220	1:9	0.8	75	FR4
MABAE50008	Flux Coupled Balun	3	250	1:4	0.6	50	Ceramic
MABA-011062	Flux Coupled Balun	1	300	1:2	0.6	75	SOT
MABA-011038	Flux Coupled Balun	1	300	1:3	0.6	50	SOT
MABA-011039	Flux Coupled Balun	1	300	1:4	0.7	75	SOT
MABA-011040	Flux Coupled Balun	1	300	1:6	0.6	50	SOT
MABA-009250-CT0068	Flux Coupled Balun	3	300	1:2	0.7	50	Ceramic
MABA-009852-CF1A40	Flux Coupled Balun	5	300	1:1	0.2	75	FR4
MABA-011050	Flux Coupled Balun	5	300	1:2	0.6	75	FR4
MABA-011056	Flux Coupled Balun; Step Down	5	300	2:1	0.8	75	SOT
MABA-011063	Flux Coupled Balun; Step Down	5	300	2:1	0.8	75	SOT
MABA-011064	Flux Coupled Balun; Step Down	5	300	4:1	1.5	75	SOT

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Transformers/Baluns (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Impedance Ratio	Insertion Loss (dB)	Impedance (Ω)	Package
MABA-009387-ES0040	Flux Coupled Balun	1	350	1:2	1.6	50	SOT
MABA-011020	Flux Coupled Balun	1	350	1:4	0.8	50	Ceramic
MABA-007237-ETC410	Flux Coupled Balun	1	350	1:4	1.2	50	Ceramic
MABACT0067	Flux Coupled Balun	1	350	1:4	1.3	50	FR4
MABA-007493-CF4160	Flux Coupled Balun	1	350	1:4	1.6	50	Ceramic
MABA-007766-CF28A0	Flux Coupled Balun	5	350	1:1.5	1.4	50	SOT
MABA-009126-ET115M	Flux Coupled Unun; Sealed Cover	DC	400	1:1	1	50	Ceramic
TP-104-PIN ♦	Pulse	1	400	4:01	0.4	50	FP-1
MABA-010721-CF1670	Transmission Line Balun with Center Tap	5	400	1:1	0.5	75	FR4
ETC36-1T-2TR	Flux Coupled Balun	5	400	1:36	12	50	Ceramic
MABA-009180-500MHZ	Flux Coupled Balun	DC	500	1:1	1	50	Ceramic
MABA-009947-CF3160	Flux Coupled Balun	DC	500	1:3	0.7	50	Ceramic
TP-102-PIN	Pulse Transformer	1	500	4:01	0.4	50	FP-1
ETC1-1T-5	Transmission Line Balun with Tertiary Winding	2	500	1:1	2	50	Ceramic
MABA-009484-ETC31T	Flux Coupled Balun	2	500	1:3	0.7	50	Ceramic
MABA-010143-FLUX18	Flux Coupled Balun	2	500	1:8	1	50	Ceramic
MABAE50031	Flux Coupled Balun; Wide Bandwidth	1	650	1:4	1	50	SOT
MABACT0064	Flux Coupled Balun	1	650	1:4	1.5	50	SOT
MABA-009298-CT48A0	Flux Coupled Balun; Wide Bandwidth	1	650	1:4	1.5	50	SOT
ETC4-1-2TR	Flux Coupled Balun; Wide Bandwidth	2	800	1:4	1.2	50	Ceramic
MABAE50061	Flux Coupled Balun; Wide Bandwidth	2	800	1:4	1.2	50	Ceramic
MABA-009488-61HWCA	Flux Coupled Balun	3	800	1:4	1	50	FR4
ETC1-1-6	Transmission Line Balun with Tertiary Winding	760	960	1:1	0.2	50	Ceramic
TP-105-PIN ♦	Pulse Transformer	0.5	1000	1.4:1	0.4	50	FP-1
TP-103-PIN ♦	Pulse Transformer	0.5	1000	4:01	0.4	50	FP-1
MABA-011037	Transmission Line Balun; Low Profile	2	1000	1:4	0.7	50	FR4
MABA-009711-ETK2MM	Transmission Line Balun; Low Profile	2	1000	1:4	0.7	50	FR4
MABA-008752-TC1P57	Auto Transformer	2	1000	1:1.5	0.4	50	Ceramic
MABA-007569-ETK42T	Transmission Line Balun	2	1000	1:4	0.3	50	Ceramic
MABA-011016	Transmission Line Balun with Center Tap	5	1000	1:1	0.8	50	Ceramic
MABA-009092-CT1A40	Transmission Line Balun	5	1000	1:1.33	0.7	75	FR4
MABACT0063	Auto Transformer	5	1000	1:1.5	0.5	75	Ceramic
ETC1.5-4	Auto Transformer	5	1000	1:1.5	1	75	Ceramic
MABA-010449-CA2A40	Auto Transformer	5	1000	1:2	0.8	75	FR4
MABACT0066	Transmission Line Balun	5	1000	1:4	1.3	50	SOT
MABA-008639-TC41T7	Transmission Line Balun	6	1000	1:4	3	50	Ceramic
MABA-010463-CA2A40	Auto Transformer	20	1000	1:1.77	1.2	75	Ceramic
MABA-011032	Transmission Line Balun	40	1000	1:3	1	75	SOT
MABA-010245-CT1160	Transmission Line Balun	46	1002	1:1	0.4	75	Ceramic
TP-108-PIN ♦	Flux Coupled Balun	350	1125	2.5:1	0.8	50	FP-1
MABA-011031	Transmission Line Balun	5	1200	1:1	0.2	75	FR4
MABA-009691-CT1881	Transmission Line Balun	5	1200	1:1	0.2	75	FR4
MABACT0043	Transmission Line Balun	5	1200	1:1	0.5	75	SOT
MABA-007748-CT1160	Transmission Line Balun with Tertiary Winding	5	1200	1:1	0.6	75	Ceramic
MABA-011086	Transmission Line Balun	5	1200	1:1	1.3	75	FR4
MABA-011010	Transmission Line Balun with Tertiary Winding	5	1200	1:1.33	0.95	75	FR4
MABA-011051	Transmission Line Balun with Tertiary Winding	5	1200	1:1.33	2.9	75	FR4
MABA-011029	Transmission Line Balun	5	1200	1:2	1.5	75	FR4
MABA-010441-CT38A0	Transmission Line Balun	5	1200	1:3	1.1	75	FR4

Note: Part numbers are RoHS compliant. ♦ indicates non-RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Transformers/Baluns (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Impedance Ratio	Insertion Loss (dB)	Impedance (Ω)	Package
MABA-011027	Transmission Line Balun	5	1200	1:3	2.1	75	FR4
MABA-011014	Transmission Line Balun	45	1200	1:1	0.9	75	FR4
MABA-011015	Transmission Line Balun	45	1200	1:2.78	1.7	75	FR4
MABA-011058	Transmission Line Balun with Tertiary Winding	50	1200	1:1	0.6	75	FR4
MABA-009231-CT1A4B	Transmission Line Balun	5	1200	1:1	0.7	50	FR4
MABA-010392-CT18A0	Transmission Line Balun	5	1200	1:1	0.7	50	SOT
MABACT0060	Transmission Line Balun with Tertiary Winding	5	1200	1:1	0.7	50	FR4
MABA-010314-CT1370	Transmission Line Balun	5	1200	1:1	0.9	75	FR4
MABA-007681-CT2010	Transmission Line Balun	5	1200	1:2	0.6	75	FR4
MABA-010238-CT4A80	Transmission Line Balun	5	1200	1:2	1.3	75	FR4
MABA-010129-CT4A40	Transmission Line Balun	5	1200	1:4	0.7	50	SOT
MABA-010268-CT4160	Transmission Line Balun	5	1200	1:4	0.7	50	Ceramic
MABA-009232-CT4A4B	Transmission Line Balun	5	1200	1:4	1	50	FR4
MABACT0061	Auto Transformer	5	1200	1:4	1.6	50	Ceramic
MABA-009210-CT1760	Transmission Line Balun with Tertiary Winding	50	1200	1:1	0.6	75	FR4
MABA-008483-CT1760	Transmission Line Balun with Tertiary Winding	50	1200	1:1	0.63	75	FR4
MABA-008979-CF0290	Transmission Line Balun with Tertiary Winding	50	1200	1:1	0.7	75	SOT
MABA-010321-CT1A42	Transmission Line Balun with Tertiary Winding	50	1200	1:1	0.7	75	FR4
MABA-010321-CT1A43	Transmission Line Balun with Tertiary Winding	50	1200	1:1	0.7	75	FR4
MABA-009602-ES2922	Transmission Line Balun with Tertiary Winding	50	1200	1:1	0.8	50	Ceramic
MABACT0069	Transmission Line Balun with Tertiary Winding	50	1200	1:1	0.8	75	SOT
MABAE50029	Transmission Line Balun with Tertiary Winding	50	1200	1:1	1	75	SOT
MABA-011103	Auto Transformer	40	1215	1:1.77	2.8	75	Ceramic
MABACT0040	Transmission Line Balun with Center Tap	5	1218	1:1	1.1	75	FR4
MABA-011104	Auto Transformer	5	1218	1:1.5	0.4	75	Ceramic
MABA-011085	Transmission Line Balun with Tertiary Winding	5	1225	1:1	0.4	75	FR4
MABA-011094	Transmission Line Balun	5	1225	1:1	0.9	75	Ceramic
TP-101-PIN ♦	Pulse Transformer	DC	1500	1.6:1	0.4	50	FP-1
TPX-75-4N ♦	50/75 Ω	10	1500	1.5:1	0.3	50/75	Conn
MABA-010247-2R1250	Transmission Line Balun	1	1600	1:2	1.5	50	FR4
MABA-011112	Transmission Line Balun	5	1800	1:1	0.9	75	FR4
MABA-011113	Transmission Line Balun	5	1800	1:2	0.7	75	FR4
MABA-010374-CT4A40	Transmission Line Balun	10	1900	1:4	1.8	75	FR4
MABA-010386-CA3A40	Auto Transformer	5	2400	1:3	3	75	FR4
MABA-010012-ES4302	Transmission Line Balun	30	2500	1:4	1.8	50	Ceramic
ETC1-1-13	Transmission Line Balun	5	3000	1:1	0.3	50	Ceramic
MABA-007159-000000	Transmission Line Balun	5	3000	1:1	0.3	50	Ceramic
MABA-009822-715254	Transmission Line Balun	5	3000	1:1	0.3	50	Ceramic
MABA-007871-CT1A40	Transmission Line Balun	5	3000	1:1	0.6	50	FR4
MABA-011047	Transmission Line Balun	5	3000	1:1	0.7	50	Ceramic
MABACT0039	Transmission Line Balun	5	3000	1:1	1.3	75	SOT
MABA-010125-TC1113	Transmission Line Balun	5	3000	1:1	1.5	50	Ceramic
MABA-007327-CT1A40	Transmission Line Balun	5	3000	1:1	1.6	75	FR4
MABA-008757-CT1160	Transmission Line Balun	5	3000	1:1	2	75	Ceramic
MABACT0059	Transmission Line Balun	5	3000	1:1	2	75	Ceramic
ETC1.6-4-2-3	Transmission Line Balun	500	3000	1:4	0.2	50	Ceramic
MABACT0065	Transmission Line Balun	500	3000	1:4	0.2	50	Ceramic
MABA-007236-C16423	Transmission Line Balun	500	3000	1:4	3	50	Ceramic
MABA-011042	Transmission Line Balun	2500	3200	1:1	0.9	50	Ceramic

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Transformers/Baluns (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Impedance Ratio	Insertion Loss (dB)	Impedance (Ω)	Package
MABA-011100	Transformer Balun	20	4000	1:2	1.5	50	SMT
MABA-011082	Transmission Line Balun with Tertiary Winding	5	8000	1:1	1.4	50	SMT
MABA-011108	Transmission Line Balun with Tertiary Winding	5	10000	1:1	1.4	50	SMT
MABA-011118	Transmission Line Balun	10	10000	1:2	1.9	50	SMT

MNS Chip Capacitors

Part Number	Capacitance (pF)	Standoff Voltage (V)	Chip Style	Package
MA4M3010 S	10	200	350	Die
MA4M2020 S	20	200	132	Die
MA4M3030 S	30	200	352	Die
MA4M1050 S	50	100	132	Die
MA4M3050 S	50	200	354	Die
MA4M3100 S	100	50	358	Die
MA4M1100 S	100	100	199	Die
MA4M3150 S	150	50	359	Die

High Q MNOS Series Chip Capacitors: 9000 Series VB >50 V & 9100 Series VB >100 V

Part Number	Capacitance (pF)	Working Voltage (V)	Chip Size + .002"	Package
910R1 thru 911R9 S	0.1 to 1.9	100	0.010" x 0.010" x 0.005"	Die
912R0 thru 919R9 S	2 to 9.9	100	0.015" x 0.015" x 0.005"	Die
902R0 thru 9010R S	2 to 10	50	0.010" x 0.010" x 0.005"	Die
9110R thru 9129R S	10 to 29	100	0.020" x 0.020" x 0.006"	Die
9011R thru 9029R S	11 to 29	50	0.015" x 0.015" x 0.005"	Die
9030R thru 9049R S	30 to 49	50	0.020" x 0.020" x 0.006"	Die
9130R thru 9149R S	30 to 49	100	0.030" x 0.030" x 0.006"	Die
9050R thru 9099R S	50 to 99	50	0.030" x 0.030" x 0.006"	Die
9150R thru 9199R S	50 to 99	100	0.040" x 0.040" x 0.008"	Die
90100 thru 90199R S	100 to 199	50	0.040" x 0.040" x 0.008"	Die
91100 thru 91199 S	100 to 199	100	0.050" x 0.050" x 0.008"	Die
91200 thru 91399 S	200 to 399	100	0.070" x 0.070" x 0.008"	Die
90200 thru 90399R S	200 to 399	50	0.050" x 0.050" x 0.008"	Die
90400 thru 90600R S	400 to 600	50	0.070" x 0.070" x 0.008"	Die

Beam Lead Capacitors: 9000 Series VB >50 V

Part Number	Capacitance Range (pf)	Package
90R1 thru 90R9 S	0.1 to 0.9	14-1
90R5 thru 901R0 S	0.5 to 1.0	14-2
901R0 thru 901R5 S	1 to 1.5	14-1
901R0 thru 902R2 S	1 to 2.2	14-2
902R2 thru 904R7 S	2.2 to 4.7	14-2
905R6M S	5.6 + 20%	14-2
906R8M S	6.8 + 20%	14-2
908R2M S	8.2 + 20%	14-2
9010R0M S	10 + 20%	14-3
9015R0M S	15 + 20%	14-3
9022R0M S	22 + 20%	14-3
9033R0M S	33 + 20%	14-3
9047R0M S	47 + 20%	14-4

Note: Part numbers are RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Beam Lead Capacitors: 9000 Series VB >50 V (continued)

Part Number	Capacitance Range (pF)	Package
9068R0M S	68 + 20%	14-4
9082R0M S	82 + 20%	14-4
90100R0M S	100 + 20%	14-4

Binary Chip Capacitors

Part Number	Pad 1 (pF)	Pad 2 (pF)	Pad 3 (pF)	Pad 4 (pF)	Total (pF)	Chip Size
9115R0K-BOO	1	2	4	8	15	0.020 x 0.020
9115R0K-BSP-1	1	2	4	8	15	0.030 x 0.020
911R5K-BSP-3	0.1	0.2	0.4	0.8	1.5	0.015 x 0.015
9122R5K-BOO	1.5	3	6	12	22.5	0.020 x 0.020
9122R5K-BSP-1	1.5	3	6	12	22.5	0.030 x 0.020
913R0K-BSP-3	0.2	0.4	0.8	1.6	3	0.015 x 0.015
913R7K-BOO	0.25	0.5	1	2	3.75	0.020 x 0.020
913R7K-BSP-1	0.25	0.5	1	2	3.75	0.030 x 0.020
913R7K-BSP-3	0.25	0.5	1	2	3.75	0.015 x 0.015
915R6K-BSP-3	0.35	0.75	1.5	3	5.6	0.015 x 0.015
917R5K-BOO	0.5	1	2	4	7.5	0.020 x 0.020
917R5K-BSP-1	0.5	1	2	4	7.5	0.030 x 0.020

DC Floating/RF Bypass Mounting Capacitors: 9100 & 9000 Series

Part Number	Capacitance Range (pF)	Chip Size A	Chip Size B	Pad Size D	Pad Size E	Customer Specified Field D
SP49 S	5 – 50	0.014	0.034	0.011	0.031	0.005 – 0.020
SP84 S	7 – 70	0.02	0.04	0.016	0.03	0.005 – 0.020
SP51 S	8 – 80	0.015	0.045	0.013	0.043	0.005 – 0.020
SP14 S	9 – 90	0.02	0.04	0.016	0.036	0.005 – 0.020
SP34 S	9 – 90	0.024	0.034	0.02	0.03	0.005 – 0.020
SP6 S	10 – 100	0.014	0.055	0.012	0.053	0.005 – 0.020
SP89 S	12 – 120	0.02	0.06	0.014	0.055	0.005 – 0.020
SP80 S	13 – 130	0.016	0.065	0.014	0.063	0.005 – 0.020
SP12 S	14 – 140	0.02	0.055	0.018	0.053	0.005 – 0.020
SP87 S	15 – 150	0.013	0.12	0.009	16	0.005 – 0.020
SP81 S	17 – 170	0.015	0.09	0.013	0.088	0.005 – 0.020
SP22 S	24 – 240	0.025	0.08	0.021	0.075	0.005 – 0.020
SP88 S	25 – 250	0.021	0.121	0.015	0.115	0.005 – 0.020
SP48 S	29 – 290	0.035	0.065	0.031	0.061	0.005 – 0.020
SP64 S	75 – 750	0.055	0.102	0.051	0.098	0.005 – 0.020
SP120 S	90 – 900	0.055	0.12	0.05	0.115	0.005 – 0.020
SP7 S	100 – 1000	0.085	0.085	0.081	0.081	0.005 – 0.020
SP2 S	150 – 1500	0.11	0.11	0.1	0.1	0.005 – 0.020
SP68 S	175 – 1750	0.101	0.124	0.097	0.12	0.005 – 0.020
SP1 S	200 – 2000	0.11	0.14	0.1	0.13	0.005 – 0.020
SP5 S	200 – 1000	0.1	0.1	0.095	0.095	0.005 – 0.020
SP20 S	200 – 2000	0.12	0.14	0.11	0.13	0.005 – 0.020
SP29 S	200 – 2000	0.121	0.121	0.115	0.115	0.005 – 0.020
SP38 S	200 – 2000	0.094	0.152	0.091	0.148	0.005 – 0.020
SP40 S	200 – 2000	0.107	0.134	0.103	0.13	0.005 – 0.020
SP39 S	200 – 2000	0.12	0.134	0.11	0.13	0.005 – 0.020
SP77 S	300 – 3000	0.118	0.175	0.114	0.171	0.005 – 0.020
SP52 S	300 – 3000	0.13	0.17	0.124	0.164	0.005 – 0.020

Note: Part numbers are RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

DC Floating/RF Bypass Mounting Capacitors: 9100 & 9000 Series (continued)

Part Number	Capacitance Range (pF)	Chip Size A	Chip Size B	Pad Size D	Pad Size E	Customer Specified Field D
SP104 S	350 – 3500	0.142	0.171	0.138	0.167	0.005 – 0.020
SP111 S	350 – 3500	0.143	0.18	0.138	0.167	0.005 – 0.020
SP37 S	350 – 3500	0.151	0.168	0.147	0.164	0.005 – 0.020
SP44 S	350 – 3500	0.14	0.17	0.135	0.165	0.005 – 0.020
SP55 S	360 – 3600	0.117	0.22	0.113	0.216	0.005 – 0.020

MNOS Series Capacitors

Part Number	Type	Capacitance Range Min (pF)	Range (pF)	Capacitance Dvw Min (V)	R Min (Ω)	TCC Typ (ppm/+°C)	Package
MBC50-0.2B14 S	Beam Lead	0.16	0.24	50	1000	55	B14
MBC50-1B12 S	Beam Lead	0.8	1.2	50	1000	55	B12
MBC50-1.0B14 S	Beam Lead	0.8	1.2	50	1000	55	B14
MBC50-1.5B14 S	Beam Lead	1.2	1.8	50	1000	55	B14
MBC50-2B12 S	Beam Lead	1.6	2.4	50	1000	55	B12
MBC50-2.0B14 S	Beam Lead	1.6	2.4	50	1000	55	B14
MBC50-3B12 S	Beam Lead	2.4	3.6	50	1000	55	B12
MBC50-4B12 S	Beam Lead	3.2	4.8	50	1000	55	B12
MBC50-6B12 S	Beam Lead	4.8	7.2	50	1000	55	B12
MBC50-8B12 S	Beam Lead	6.4	9.6	50	1000	55	B12
MBC50-10B12 S	Beam Lead	8	12	50	1000	55	B12
MBC50-15B12 S	Beam Lead	12	18	50	1000	55	B12
MBC50-20B12 S	Beam Lead	16	24	50	1000	55	B12
MBC50-33B13 S	Beam Lead	26.4	39.6	50	1000	55	B13
MBC50-47B13 S	Beam Lead	37.6	56.4	50	1000	55	B13
MBC50-68B13 S	Beam Lead	54.4	81.6	50	1000	55	B13
MBC50-82B13 S	Beam Lead	65.6	96	50	1000	55	B13
MBC50-100B13 S	Beam Lead	80	120	50	1000	55	B13
MC2DXXX010-010 S	Chips	0.1	5	50	1000	55	Die
MC2SXXX010-010 S	Chips	0.25	8	50	1000	55	Die
MC2SXXX011-011 S	Chips	1	12	50	1000	55	B12
MC2DXXX015-015 S	Chips	1.5	15	50	1000	55	Die
MC2RXXX010-015 S	Chips	2	20	50	1000	55	Die
MC2SXXX015-015 S	Chips	3	30	50	1000	55	Die
MC2SXXX016-016 S	Chips	3	35	50	1000	55	Die
MC2RXXX015-020 S	Chips	5	42	50	1000	55	Die
MC2DXXX020-020 S	Chips	5	50	50	1000	55	Die
MC2SXXX020-020 S	Chips	5	55	50	1000	55	Die
MC2SXXX022-022 S	Chips	5	60	50	1000	55	Die
MC2RXXX015-032 S	Chips	5	62	50	1000	55	Die
MC2SXXX025-025 S	Chips	10	100	50	1000	55	Die
MC2RXXX022-042 S	Chips	15	120	50	1000	55	Die
MC2SXXX030-030 S	Chips	10	120	50	1000	55	Die
MC2SXXX035-035 S	Chips	15	150	50	1000	55	Die
MC2SXXX040-040 S	Chips	20	200	50	1000	55	Die
MC2SXXX050-050 S	Chips	25	250	50	1000	55	Die
MC2SXXX055-055 S	Chips	25	300	50	1000	55	Die
MC2SXXX060-060 S	Chips	35	375	50	1000	55	Die
MC2SXXX070-070 S	Chips	50	550	50	1000	55	Die
MC2SXXX080-080 S	Chips	70	700	50	1000	55	Die
MC2RXXX097-107 S	Chips	100	999	50	1000	55	Die

Note: Part numbers are RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

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MNOS Series Capacitors (continued)

Part Number	Type	Capacitance Range Min (pF)	Range (pF)	Capacitance Dvw Min (V)	R Min (Ω)	TCC Typ (ppm/+°C)	Package
MC2RXXX099-138 S	Chips	100	999	50	1000	55	Die
MC2SXXX100-100 S	Chips	100	999	50	1000	55	Die
MC2RXXX127-145 S	Chips	200	1800	50	1000	55	Die
MC2RXXX142-160 S	Chips	200	2200	50	1000	55	Die
MC2B0.8020-020 S	Binary Chip	1.2	1.8	50	1000	55	C20
MC2B002020-020 S	Binary Chip	3	4.5	50	1000	55	C20
MC2B004020-020 S	Binary Chip	6.4	9.6	50	1000	55	C20
MC2B008020-020 S	Binary Chip	12	18	50	1000	55	C20
MC2B016020-020 S	Binary Chip	24	36	50	1000	55	C20

Filters/Diplexers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Rejection (dB)	Crossover Freq (dB)	Package
MAFL-011082	Reflectionless Low Pass Filter	5	684	0.75	0.75	24	SMT
MAFLCT0083	CATV Diplex Filter	5	860	0.9	59	65/94	—
MAFLCT0066	CATV Diplex Filter	5	870	0.8	46	30/46	SMT
MAFLES0102	CATV Diplex Filter	5	870	1	45	42/54	—
MAFL-007529-CD0550	CATV Diplex Filter	5	1000	0.5	—	36/48	30 x 30 mm
MAFL-011013	5 – 42/54 – 1000 MHz; Broadband CATV Diplexer	5	1000	0.5	50	42/54	SMT
MAFL-007988-CD0550	5 – 65/88 – 1000 MHz; CATV Diplex Filter	5	1000	0.5	50	65/88	SM-85
MAFL-009511-CD0A10	5 – 42/52 – 1000 MHz; CATV Diplex Filter	5	1000	0.5	55	42/52	SM-161
MAFL-009055-CD4254	Broadband CATV Diplexer	5	1000	0.5	55	42/54	SMT
MAFL-009593-CD0A10	CATV Diplex Filter	5	1000	1	57	65/86	SMT
MAFL-011015	5 – 42/54 – 1002 MHz; CATV Diplex Filter	5	1002	0.5	—	42/54	SMT
MAFL-011024	Broadband CATV Diplexer	5	1002	0.5	50	85/108	SMT
MAFL-011025	5 – 65/108 – 1002 MHz; Broadband CATV Diplexer	5	1002	0.5	50	65/108	SMT
MAFL-011014	5 – 65/88 – 1002 MHz; CATV Diplex Filter	5	1002	0.5	55	65/88	SMT
MAFL-011027	Vertical Plug-in	5	1002	1.2	45	85/102	—
MAFL-010467-CD0B20	CATV Diplexer	5	1002	1.5	60	65/108	SMT
MAFL-008098-CD0550	5 – 42/54 – 1100 MHz; CATV Diplex Filter	5	1100	0.5	50	42/54	SM-85
MAFLCT0068	5 – 42/54 – 1100 MHz; CATV Diplex Filter	5	1100	1.2	50	42/54	SM-161
MAFL-011055	5 – 42/54 – 1218 MHz; SMT DOCSIS 3.1 Diplex Filter	5	1218	0.5	50	42/54	30 x 30 mm
MAFL-011078	5 – 42/54 – 1218 MHz; CATV Diplex Filter	5	1218	0.5	50	42/54	30 x 30 mm
MAFL-011057	5 – 85/102 – 1218 MHz; SMT DOCSIS 3.1 Diplex Filter	5	1218	0.5	50	85/102	30 x 30 mm
MAFL-011081	5 – 204/208 MHz; SMT DOCSIS 3.1 Diplex Filter	5	1218	0.5	50	204/208	SMT
MAFL-011047	5 – 42/54 – 1218 MHz; Plug-and-Play; Horizontal Filter	5	1218	1	—	42/54	31 x 27.8 mm
MAFL-011048	Plug-and-Play Horizontal Filter	5	1218	1	—	42/54	31 x 27.8 mm
MAFL-011059	Plug-and-Play Vertical Filter	5	1218	1	—	42/54	50.8 x 19.05 mm
MAFL-011049	5 – 65/86 – 1218 MHz; Plug-and-Play; Horizontal Filter	5	1218	1	—	65/85	31 x 27.8 mm
MAFL-011050	5 – 65/86 – 1218 MHz; Plug-and-Play; Horizontal Filter	5	1218	1	—	65/85	31 x 27.8 mm
MAFL-011060	Plug-and-Play Vertical Filter	5	1218	1	—	65/85	50.8 x 19.05 mm
MAFL-011061	Plug-and-Play Vertical Filter	5	1218	1	—	85/102	50.8 x 19.05 mm
MAFL-011053	5 – 204/258 – 1218 MHz; Plug-and-Play; Horizontal Filter	5	1218	1	—	204/258	31 x 27.8 mm
MAFL-011054	Plug-and-Play Horizontal Filter	5	1218	1	—	204/258	31 x 27.8 mm
MAFL-011062	Plug-and-Play Vertical Filter	5	1218	1	—	204/258	50.8 x 19.05 mm
MAFL-011051	5 – 85/102 – 1218 MHz; Plug-and-Play; Horizontal Filter	5	1218	1.4	—	85/102	31 x 27.8 mm
MAFL-011052	Plug-and-Play Horizontal Filter	5	1218	1.4	—	85/102	31 x 27.8 mm
MAFL-011077	CATV Diplex Filter	5	1218	1.4	50	85/102	SMT
MAFLCT0081	C 50 – 870/975 – 1025/1125 – 1425 MHz; ATV Bandpass Filter	50	1425	1.1	56	870/1125	SMT

Note: Part numbers are RoHS compliant. S indicates these parts are also available with Space and Hi-Rel Screening & Qualification. Detailed specifications can be found on our website at macom.com by typing the part number into the search box. All specifications are subject to change.

Filters/Diplexers (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Rejection (dB)	Crossover Freq (dB)	Package
MAFL-009217-CD0AC0	5 – 864/1128 – 1525 MHz; CATV Diplex Filter	5	1525	1	44	864/1128	SMT
MAFL-010464-CD0B20	35 x 25 mm; CATV Diplexer	5	1525	1.8	60	42/88	SMT
MAFL-008070-CLOAD0	50 – 870/975 – 1525 MHz; CATV MoCA Low Pass Filter	50	1525	1.8	30	—	SMT
MAFL-009906-CLOAD0	5 – 1550 MHz; MoCA Low Pass Filter	5	1550	1	32	—	SMT
MAFL-010412-CLOAD0	MoCA Low Pass Filter	5	1550	1.5	37	5 – 1002	15 x 15 mm
MAFL-008290-CD0AC0	5 – 1002/1125 – 1550 MHz; CATV Diplex Filter	5	1550	1.7	40	1002/1125	SMT
MAFL-010101-CB0AD0	1125 – 1550 MHz; MoCA Band Pass Filter	1125	1550	1.7	40	1125/1550	SMT
MAFL-010256-CB0AD0	1125 – 1550 MHz; MoCA Band Pass Filter	1125	1550	1.7	38	1125/1550	SMT
MAFL-011023	5 – 65/88 – 1002/1125 – 1675 MHz; MoCA Triplex Filter	5	1675	1.2	50	65/88 & 1002/1125	SMT
MAFL-011018	5 – 42/54 – 1002/1125 – 1675 MHz; MoCA Triplex Filter	5	1675	1.2	70	42/54 & 1002/1125	SMT
MAFL-011026	5 – 85/105 – 1002/1125 – 1675 MHz; MoCA Triplex Filter	5	1675	1.2	70	85/105 & 1002/1125	SMT
MAFL-009272-CD0AC0	Diplexer	5	1675	1.7	40	1002/1125	SM-172
MAFL-010140-CT0C60	5 – 2000 MHz; MoCA Triplex Filter	5	2000	1.5	62	42/52 & 1002/1125	SMT
MAFL-009478-CD0AC0	MoCA Diplex Filter	50	3000	1.5	40	870/950	SMT
MAFL-010670-CB0AD0	500 – 3000 MHz; MoCA Band Pass Filter	350	3000	2	50	650/875	SMT
MAFL-010608	SAT Diplexer	350	3000	2.5	35	875/950	Tape & Reel
MAFL-010639-CB0AD0	500 – 3000 MHz; MoCA Band Pass Filter	500	3000	2	40	650/875	SM-173
MAFL-010609	SAT Triplexer	500	4500	2.5	40	1450/1650 & 2150/2500	SMT
ENGFC00022	12 GHz; Lowpass Filter	DC	12000	0.2	—	—	Die

Equalizers

Part Number	Min Freq (GHz)	Max Freq (GHz)	Insertion Loss @ 20 GHz (dB)	Insertion Loss @ DC (dB)	Package
MAFL-011126	DC	20	1	6	3 mm; PQFN
MAFL-011126-DIE	DC	20	1	6	Die
MAFL-011127	DC	20	1	9	3 mm; PQFN
MAFL-011127-DIE	DC	20	1	9	Die
MAFL-011128	DC	20	1	12	3 mm; PQFN
MAFL-011128-DIE	DC	20	1	12	Die
MAFL-011156	0.5	20	0.5	0	3 mm; PQFN
MAFL-011156-DIE	0.5	20	0.5	0	Die
MAFL-011124	0.5	20	0.5	3	3 mm; PQFN
MAFL-011124-DIE	0.5	20	0.5	3	Die
MAFL-011125	0.5	20	0.5	4.5	3 mm; PQFN
MAFL-011125-DIE	0.5	20	0.5	4.5	Die
ENGQ00134	2	18	1.0	—	Die

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

SMALL SIGNAL TRANSISTORS

Small signal transistors are essential components in electronic circuits that amplify small signals with low power. They are commonly used in applications such as amplifiers, oscillators, mixers, and filters. MACOM offers a wide selection of small signal transistors all in die form with a wide range of specifications.

Silicon Bipolar Transistors

Part Number	Description	Gain BW FT (GHz)	Gain SS @ 1 GHz (dB)	Gain SS @ 2 GHz (dB)	Noise Figure @ 1 GHz (dB)	Noise Figure @ 2 GHz (dB)	Current Gain (hFE)	Max Power Dissipation (mW)	Package
MATB-068100-0DIEW0	NPN High Frequency	9	15	12	1.2	1.6	100	200	Die

Silicon MMIC Gain Blocks

Part Number	Noise Figure @ 1 GHz (dB)	Power Gain @ 0.1 GHz (dB)	3 dB Bandwidth (GHz)	1 dB Gain Compression @ 1 GHz (dBm)	IP3 (dBm)	ABS Max Current (mA)	Typical Operating Voltage (V)	Typical Operating Current (mA)	Package
MAAM-011006-0DIEW0	3	20.5	1	3	14.5	50	3.5	16	Die
MAAM-011008-0DIEW0	3	32.5	—	12.5	27	80	7.8	36	Die
MAAM-011011-0DIEW0	3.5	12.5	1	17.5	30	80	5.5	60	Die
MAAM-011007-0DIEW0	4.5	13.5	2	5.5	19	60	4	22	Die
MAAM-011041-0DIEW0	5.5	15.5	1.6	10	23	80	3.3	35	Die
MAAM-011009-0DIEW0	6	8	4.5	11.5	23	80	7.8	35	Die
MAAM-011003-0DIEW0	6	12.5	2	10	23	80	5	35	Die
MAAM-011004-0DIEW0	6.5	8.5	2.8	12.5	25.5	100	5.25	50	Die



SPACE & HIGH-RELIABILITY

Discrete Components, MMICs and Integrated Modules

MACOM continues to build upon our legacy of providing high-reliability semiconductor products to the Aerospace and Defense industry by adding to our product portfolio and capabilities. MACOM's standard line of RF and microwave components meet the requirements commonly found on airborne applications, high MTBF ground-based equipment and space applications.

From our US Trusted Foundry in Lowell, Massachusetts, we continue to improve our ability to provide the highest quality aerospace and defense products.

When program screening requirements call for more than MACOM's standard catalog screening, custom screening programs can be created by adding screening options or by generating a program-specific sequence.

MACOM's Space & High-Reliability Evolution

Watkins Johnson Company/Stellex Microwave Systems/Tyco Electronics/Anzac/RHG/Phoenix Microwave/Metelics/Micrometrics/Hi-Rel Components & MACOM

1960s

- > Pioneered production of traveling wave tubes (TWTs) for Pioneer, Voyager and DSCS satellites

1970s

- > First solid state flight qualified production amplifiers and mixers

1980s/1990s/through Today

- > Participated in more than 85 programs (USA & International)
- > Provided hundreds of space qualified solid state space component models

High-Reliability Catalog Screened Products

- > 65+ year history of proven Hi-Rel manufacturing processes supporting both thin film & solder circuit assemblies
- > Same proven manufacturing processes as used in equivalent component designs for custom military and space programs
- > Long established cost-effective standardized screening programs for catalog products available in a variety of hermetically sealed metal package styles
- > Available for screening: hybrid amplifiers, hybrid mixers, switches, diodes
- > MACOM has an extensive "in-house" environmental screening capability
- > US Screening Lab to perform specific environmental test requirements
- > Working to expand our partner network
- > Custom environmental screening plans available for hermetically-sealed, packaged products (MIL-PRF-19500, MIL-PRF-38534, MIL-DTL-28837B, MIL-STD-202, etc.)

Please contact your local sales representative to discuss any environmental screening options.



General Purpose Gain Block Hybrid Amplifiers

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
A75-2	5	250	21	19	TO-8
EA54	5	250	27	16	TO-5
A181	10	250	16.5	35	TO-8
CA181	10	250	16.5	35	Connectorized-SMA
SMA181	10	250	16.5	35	SMT
A79	5	300	14	38	TO-8
CA79	5	300	14	38	Connectorized-SMA
SMA79	5	300	14	38	SMT
A56	5	400	26	27	TO-8
EA2	5	400	13.5	21	TO-5
A87	10	400	14	33	TO-8
CA87	10	400	14	33	Connectorized-SMA
SMA87	10	400	14	33	SMT
AMC-151-SMA	5	500	12	36	Connectorized-SMA
A5	5	500	14.8	22	TO-8
A72	5	500	15	26	TO-8
SMA72	5	500	15	26	SMT
A54	5	500	15.5	21	TO-8
A77	5	500	16.5	30	TO-8
CA77	5	500	16.5	30	Connectorized-SMA
SMA77	5	500	16.5	30	SMT
A88	5	500	18.7	30	TO-8
SMA88	5	500	18.7	30	SMT
A74-2	5	500	26	10	TO-8
SMA74-2	5	500	26	10	SMT
SMRA89	5	500	26.5	35	SMT
RA89	5	500	26.5	35	TO-8
CRA89	5	500	26.5	35	Connectorized-SMA
EA54-2	5	500	29.5	20	TO-5
PA511	10	500	12.7	40	TO-8
SMPA511	10	500	12.7	40	SMT
A55	10	500	14.7	24	TO-8
A57	10	500	14.7	28	TO-8
SMA57	10	500	14.7	28	SMT
PA512	10	500	18	40	TO-8
MAAM-007502-CPA512	10	500	18	40	Connectorized-SMA
MAAM-007502-SPA512	10	500	18	40	SMTO-8
SMA513	10	500	20	30	SMT
AMC-146-SMA	10	500	21	35	Connectorized-SMA
RA89-1	10	500	30	36	TO-8
CRA89-1	10	500	30	36	Connectorized-SMA
SMRA89-1	10	500	30	36	SMT
MAAM-008200-000A83	10	500	30	10	TO-8
A77-1	5	600	16	30	TO-8
CA77-1	5	600	16	30	Connectorized-SMA
SMA77-1	5	600	16	30	SMT
A5-6	6	600	15.5	21	TO-8
SMA5-6	6	600	16	21	SMT
A59-1	10	700	10.5	36	TO-8

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

General Purpose Gain Block Hybrid Amplifiers (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
SMA59-1	10	700	10.5	36	SMT
A89	50	800	22	30	TO-8
SMA89	100	800	22	30	SMT
AMC-184-SMA	5	1000	20	20	Connectorized-SMA
AMC-145-SMA	10	1000	10.7	32	Connectorized-SMA
A19-1	10	1000	11.5	35	TO-8
CA19-1	10	1000	11.5	35	Connectorized-SMA
A17	10	1000	12	27	TO-8
CA17	10	1000	12	27	Connectorized-SMA
SMA17	10	1000	12	27	SMT
CA1021	10	1000	26	26	Connectorized-SMA
RA69	10	1000	25	34	TO-8
CRA69	10	1000	25	34	Connectorized-SMA
SMRA69	10	1000	25	34	SMT
A1021	10	1000	26	26	TO-8
SMA1021	10	1000	26	26	SMT
A66-1	10	1000	27.5	28	TO-8
CA66-1	10	1000	27.5	28	Connectorized-SMA
SMA66-1	10	1000	27.5	28	SMT
RA66	10	1000	37	30	TO-8
CRA66	10	1000	37	30	Connectorized-SMA
SMRA66	10	1000	37	30	SMT
AMC-155-SMA	300	1000	12.3	30	Connectorized-SMA
A66	10	1200	23.5	28	TO-8
CA66	10	1200	23.5	28	Connectorized-SMA
SMA66	10	1200	23.5	28	SMT
A64	10	1200	26	20	TO-8
CA64	10	1200	26	20	Connectorized-SMA
SMA64	10	1200	26	20	SMT
A27	5	1500	8.5	28	TO-8
CA24	5	1500	10	21	TO-8
A24	5	1500	20	21	TO-8
SMA24	5	1500	20	21	SMT
A29-1	10	1500	9	32	TO-8
CA29-1	10	1500	9	32	Connectorized-SMA
SMA29-1	10	1500	9	32	SMT
A28	10	1500	11	29	TO-8
CA28	10	1500	11	29	Connectorized-SMA
SMA28	10	1500	11	29	SMT
A26	10	1500	20.5	27	TO-8
CA26	10	1500	20.5	27	Connectorized-SMA
SMA26	10	1500	20.5	27	SMT
A39	10	2000	7.5	34	TO-8
SMA39	10	2000	7.5	34	SMT
A38	10	2000	9.5	30	TO-8
CA38	10	2000	9.5	30	Connectorized-SMA
SMA38	10	2000	9.5	30	SMT
A35	10	2000	10	21	TO-8
CA35	10	2000	10	21	Connectorized-SMA

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

General Purpose Gain Block Hybrid Amplifiers (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
SMA35	10	2000	10	21	SMT
A37	10	2000	10	28	TO-8
SMA37	10	2000	10	28	SMT
A34	100	2000	16	18	TO-8
SMA34	100	2000	16	18	SMT
A36	100	2000	16.5	23	TO-8
SMA36	100	2000	16.5	23	SMT
CRA36	100	2000	24	22	Connectorized-SMA
RA36	100	2000	24	22	TO-8
SMRA36	100	2000	24	22	SMT
SMPA2010	200	2000	10	33	SMT
A36-1	100	2300	16.2	23	TO-8
CA36-1	100	2300	16.2	23	Connectorized-SMA
SMA36-1	100	2300	16.2	23	SMT
A33-1	2	2400	9	19	TO-8
CA33-1	2	2400	9	19	Connectorized-SMA
SMA33-1	2	2400	9	19	SMT
CA3010	DC	2500	9.5	35	Connectorized-SMA
A36-2	100	2600	15	30	TO-8
SMA36-2	100	2600	15	30	SMT
MAAM-007947-CA3602	100	2600	15	30	Connectorized-SMA
PA38-2	200	2600	8.5	33	TO-8
SMPA38-2	200	2600	8.5	33	SMT
A43	100	3200	11.5	21	TO-8
SMA43	100	3200	11.5	21	SMT
PA48	1000	4000	16	34	TO-8
CPA48	1000	4000	16	34	Connectorized-SMA
SMPA48	1000	4000	16	34	SMT
RA46	DC	4000	25.5	30	TO-8
SMRA46	1000	4000	25.5	30	SMT
SMRA62	2000	6000	16	28	SMT
AM42-0039	5900	7100	33	45	CR-15
AM42-0002	14000	14500	22	39	R380/CR15
AM42-0007	14000	14500	22	41	R380/CR15

Low Noise Hybrid Amplifiers

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
A101	5	100	17	3	36	TO-8
SMA101	5	100	17	3	36	SMT
AM-162-PIN	10	100	12.5	1.1	32	TO-8
AMC-162-SMA	10	100	12.5	1.5	30	Connectorized-SMA
AMS-162-PIN	10	100	12.5	1.5	30	SF-1
MAAM-007844-OCA801	10	200	27.3	2	28	Connectorized-SMA
A80-1	10	200	27.3	2	28	TO-8
SMA80-1	10	200	27.3	2	28	SMT
A74-1	5	250	31	4.5	21	TO-8
A70	10	250	8	1.6	24	TO-8
SMA70	10	250	8	1.6	24	SMT
A70-1	10	250	8	1.8	28	TO-8

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Low Noise Hybrid Amplifiers (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
SMA70-1	10	250	8	1.8	28	SMT
A70-2	10	250	8	2.2	38	TO-8
CA70-2	10	250	8	2.2	38	Connectorized-SMA
A231	10	250	26	1.7	22	TO-8
CA231	10	250	26	1.7	22	Connectorized-SMA
SMA231	10	250	26	1.7	22	SMT
A83-1	10	250	35.5	2.5	9	TO-8
CA83-1	10	250	35.5	2.5	9	Connectorized-SMA
SMA83-1	10	250	35.5	2.5	9	SMT
A70-3	20	250	8	2.8	40	TO-8
A82-1	20	250	19	2.8	26	TO-8
SMA82-1	20	250	19	2.8	26	SMT
SMA81	20	250	24.5	2.6	28	SMT-TO-8
A81-1	20	250	25	2.5	27	TO-8
SMA81-1	20	250	25	2.5	27	SMT
A82	20	250	25	2.8	31	TO-8
CA82	20	250	25	2.8	31	Connectorized-SMA
SMA82	20	250	25	2.8	31	SMT
A81	20	250	25.5	3	28	TO-8
A78	5	300	14	3.5	35	TO-8
CA78	5	300	14	3.5	35	Connectorized-SMA
SMA78	5	300	14	3.5	35	SMT
SMA70-2	10	300	8	2.2	38	SMT-TO-8
A87-2	10	300	16	2.9	24	TO-8
SMA87-2	10	300	16	2.9	24	SMT
SMA70-3	15	300	8	2.8	40	SMT-TO-8
PAW1027	35	350	38.5	3.7	43	SOT115J
EA1	5	400	14	4.3	13	TO-5
MAAM-008199-000A51	10	400	15	2.7	10	TO-8
A411	10	400	15.8	3	24	TO-8
SMA411	10	400	15.8	3	24	SMT
A87-1	10	400	16	3.4	31	TO-8
CA87-1	10	400	16	3.4	31	Connectorized-SMA
SMA87-1	10	400	16	3.4	31	SMT
AMC-123-SMA	5	500	10	5.5	30	Connectorized-SMA
A58	5	500	11.5	4	34	TO-8
SMA58	5	500	11.5	4	34	SMT
AM-131-PIN	5	500	11.5	4	34	TO-8
A59	5	500	11.5	4.3	36	TO-8
SMA59	5	500	11.5	4.3	36	SMT
AMC-143-SMA	5	500	15.8	2.5	20	Connectorized-SMA
A1	5	500	16	2.4	11	TO-8
SMA1	5	500	16	2.4	11	SMT
AMC-147-SMA	5	500	17	3.4	33	Connectorized-SMA
EA53-2	5	500	19	3.6	24	TO-5
A75	5	500	21	2.1	21	TO-8
CA75	5	500	21	2.1	21	Connectorized-SMA
SMA75	5	500	21	2.1	21	SMT
A76-1	5	500	27.5	3	26	TO-8

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Low Noise Hybrid Amplifiers (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
SMA76-1	5	500	27.5	3	26	SMT
A515	5	500	27.5	3.5	33	TO-8
MAAM-007272-0CA515	5	500	27.5	3.5	33	Connectorized-SMA
MAAM-007272-SMA515	5	500	27.5	3.5	33	SMT0-8
A76	5	500	28	3	28	TO-8
CA76	5	500	28	3	28	Connectorized-SMA
SMA76	5	500	28	3	28	SMT
A514	5	500	28	4	32	TO-8
MAAM-007272-0CA514	5	500	28	4	32	Connectorized-SMA
MAAM-007272-SMA514	5	500	28	4	32	SMT0-8
A74	5	500	30	3	20	TO-8
CA74	5	500	30	3	20	Connectorized-SMA
SMA74	5	500	30	3	20	SMT
A73	5	500	32	3.5	15	TO-8
SMA73	5	500	32	3.5	15	SMT
A180	10	500	16.5	3.4	33	TO-8
CA180	10	500	16.5	3.4	33	Connectorized-SMA
SMA180	10	500	16.5	3.4	33	SMT
A511	10	500	17	3.4	33	TO-8
CA511	10	500	17	3.4	33	Connectorized-SMA
A75-3	10	500	20.5	1.7	16	TO-8
SMA75-3	10	500	20.5	1.7	16	SMT
SMA80	10	550	29	2.3	27	SMT0-8
A531	10	500	31.7	2	14	TO-8
CA531	10	500	31.7	2	14	Connectorized-SMA
A81-3	20	500	17	4	20	TO-8
A81-2	20	500	24.5	3	28	TO-8
CA81-2	20	500	24.5	3	28	Connectorized-SMA
SMA81-2	20	500	24.5	3	28	SMT
A80	20	500	29	2.3	27	TO-8
A67-1	10	600	15	3.7	30	TO-8
CA67-1	10	600	15	3.7	30	Connectorized-SMA
SMA67-1	10	600	15	3.7	30	SMT
A611	5	700	15	3.2	24	TO-8
SMA611	5	700	15	3.2	24	SMT
A67	10	800	14	4	30	TO-8
AMC-176-SMA	5	1000	13.2	4	27	Connectorized-SMA
A11	5	1000	14.7	3.1	10	TO-8
SMA11-2	5	1000	16	2.5	10	SMT
A63	5	1000	16	3	15	TO-8
SMA63	5	1000	16	3	15	SMT
AMC-182-SMA	5	1000	28.2	3.5	20	Connectorized-SMA
A18-1	10	1000	14.7	3.8	30	TO-8
CA18-1	10	1000	14.7	3.8	30	Connectorized-SMA
SMA18-1	10	1000	14.7	3.8	30	SM
A12	10	1000	16	2.8	22	TO-8
A66-3	10	1000	26	3	13	TO-8
CA66-3	10	1000	26	3	13	Connectorized-SMA
SMA66-3	10	1000	26	3	13	SMT

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Low Noise Hybrid Amplifiers (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
A1031	10	1000	28.5	2.7	22	TO-8
SMA1031	10	1000	28.5	2.7	22	SMT
MAAM-008198-OCA162	10	1200	13	3.5	18	Connectorized-SMA
MAAM-008198-SMA162	10	1200	13	3.5	18	SMT0-8
CA12	10	1200	14	2.8	20	Connectorized-SMA
A1211	10	1200	14	2.8	20	TO-8
SMA1211	10	1200	14	2.8	20	SMT
A1212	100	1200	14	1.8	29	TO-8
CA1212	100	1200	14	1.8	29	Connectorized-SMA
SMA1212	100	1200	14	1.8	29	SMT
A25-1	2	1500	13.5	3	22	TO-8
A28-2	10	1500	14	3.5	24	TO-8
CA28-2	10	1500	14	3.5	24	Connectorized-SMA
SMA28-2	10	1500	14	3.5	24	SMT
A31-1	10	2000	11.5	3.5	9	TO-8
A32-1	100	2000	11.5	2.5	25	TO-8
CA32-1	100	2000	11.5	2.5	25	Connectorized-SMA
SMA32-1	100	2000	11.5	2.5	25	SMT
A32	100	2000	13	2.1	32	TO-8
CA32	100	2000	13	2.1	32	Connectorized-SMA
SMA32	100	2000	13	2.1	32	SMT
PA38	200	2000	10	4	34	TO-8
CPA38	200	2000	10	4	34	Connectorized-SMA
SMPA38	200	2000	10	4	34	SMT
MAAM-007501-0A2002	20	2700	11.5	2.5	40	TO-8
MAAM-007501-CA2002	20	2700	11.5	2.5	40	Connectorized-SMA
MAAM-007501-SA2002	20	2700	11.5	2.5	40	SMT0-8
A4011	1000	4000	15.5	2	29	TO-8
SMA4011	1000	4000	15.5	2	29	SMT
A45-1	1000	4000	17.5	4	26	TO-8
SMA45-1	1000	4000	17.5	4	26	SMT
A45	1000	4000	17.5	4	29	TO-8
CA45	1000	4000	17.5	4	29	Connectorized-SMA
SMA45	1000	4000	17.5	4	29	SMT
A4012	1000	4000	18	3.5	26	TO-8
SMA4012	1000	4000	18	3.5	26	SMT
SMA6011	1500	6000	14.8	1.5	30	SMT0-8
A61	2000	6000	7.5	3.2	25	TO-8
SMA61	2000	6000	7.5	3.2	25	SMT
A6011	2000	6000	14.8	1.5	30	TO-8
CA6011	2000	6000	14.8	1.5	30	Connectorized-SMA

Mixers

Part Number	Min Freq RF/RO (MHz)	Max Freq RF/RO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	Package
SM6D	0.05	200	0	200	SMT
M6D-50	0.05	200	0	200	Relay Header
MAC-50-PIN	0.2	200	0	200	TO-5
MDS-222-PIN	0.2	200	0.2	200	SF-1
SM6V	0.4	500	0	500	SMT

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Mixers (continued)

Part Number	Min Freq RF/RO (MHz)	Max Freq RF/RO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	Package
M9BC	0.5	500	DC	500	Relay Header
MD-161-PIN	1	500	DC	500	FP-2
M6E-50	5	500	DC	500	Relay Header
MAC-51-PIN	5	500	DC	500	TO-5
MDS-223-PIN	10	500	10	500	SF-1
M1H	180	620	DC	200	SMA
M6EH	5	750	DC	500	Relay Header
SM6EH	5	750	DC	500	SMT
M2E	10	1000	DC	600	TO-8
M2EC	10	1000	DC	600	SMA
SM2E	10	1000	DC	600	SMT
MD-160-PIN	1	1500	DC	1000	RH-3
MDS-158-PIN	5	1500	—	—	SF-1
M9H	10	1500	DC	600	TO-8
M9HC	10	1500	DC	600	SMA
M2AC	10	1500	DC	800	SMA
M4A	10	1500	DC	1000	Flatpack-SMT
SM4A	10	1500	DC	1000	SMT
SM4B	10	1500	DC	1000	SMT
MD-148-PIN	10	1500	10	1500	FP-2
MDS-148-PIN	10	1500	10	1500	SF-1
MD-149-PIN	10	1500	10	1500	FP-2
MDS-149-PIN	10	1500	10	1500	SF-1
M2B	10	1600	DC	800	TO-8
M2BC	10	1600	DC	800	SMA
M2TC	10	2400	1	1000	SMA
SM4G	800	2400	DC	1500	SMT
MD-123-PIN	10	3000	10	3000	FP-2
M4TH	1	3400	1	2000	Flatpack-SMT
SM4T	1	3400	1	2000	SMT
SM4T17	1	3400	1	2000	SMT
SM4TH	1	3400	1	2000	SMT
M8T	1	3400	1	2000	TO-8
M8TC	1	3400	1	2000	SMA
M8TH	1	3400	1	2000	TO-8
M8THC	1	3400	1	2000	SMA
MD-169-PIN	1	3500	1	3500	FP-2
MDC-169-SMA	1	3500	1	3500	C-7
MD-189-PIN	1	3500	1	3500	FP-2
MDS-189-PIN	1	3500	1	3500	SF-1
MDS-169-PIN	1	3500	5	1500	SF-1
M2G	800	3500	DC	1500	TO-8
M2GC	800	3500	DC	1500	SMA
MD-179-PIN	1	4000	5	1500	FP-2
MDC-179-SMA	1	4000	5	1500	C-7
M8H-3	3700	4200	DC	2000	TO-8
SM5T	50	5000	50	3000	SMT
SM5T17	50	5000	50	3000	SMT
SM5TH	50	5000	50	3000	SMT

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

Mixers (continued)

Part Number	Min Freq RF/RO (MHz)	Max Freq RF/RO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	Package
MZ6310C	250	5500	DC	1500	SMA
M63C	2500	5500	DC	1500	SMA
M8H-7	2400	6000	DC	2000	TO-8
M8HC-7	2400	6000	DC	2000	SMA
MDC-162-SMA	1000	7000	10	2000	C-2
MY63	2500	7000	DC	15000	Versapac
MY63C	2500	7000	DC	15000	SMA
M63H	2500	7500	DC	1500	Minpac
M63HC	2500	7500	DC	1500	SMA
MY63H	2500	7500	DC	1500	Versapac
MY63HC	2500	7500	DC	1500	SMA
M76H	4500	8500	DC	2000	Minpac
M76HC	4500	8500	DC	2000	SMA
MY76H	4500	8500	DC	2000	Versapac
MY76HC	4500	8500	DC	2000	SMA
M76	4500	9500	DC	2000	Minpac
M76C	4500	9500	DC	2000	SMA
MY76	4500	9500	DC	2000	Versapac
MY76C	4500	9500	DC	2000	SMA
MY84	1800	10000	DC	1000	Versapac
MY84C	1800	10000	DC	1000	SMA
M77C	8000	12500	DC	2500	SMA
MY77	8000	12500	DC	2500	Versapac
MY77C	8000	12500	DC	2500	SMA
M14A	6000	14000	DC	2000	SMA
M67C	9000	15000	DC	2500	SMA
MY83H	2	18000	30	5000	Versapac
MY83HC	2	18000	30	5000	SMA
M83	1000	18000	30	5000	Minpac
M83C	1000	18000	30	5000	SMA
MY88HC	1000	18000	1000	8000	SMA
M89C	1000	18000	1000	8000	SMA
M85	2000	18000	DC	1000	Minpac
M85C	2000	18000	DC	1000	SMA
MY85	2000	18000	DC	1000	Versapac
MY85C	2000	18000	DC	1000	SMA
M93C	2000	18000	30	4000	SMA
MY93	2000	18000	30	4000	Versapac
MY93C	2000	18000	30	4000	SMA
MY82	2000	18000	30	5000	Versapac
MY82C	2000	18000	30	5000	SMA
MZ9310	2000	18000	30	5000	Versapac
MZ9310C	2000	18000	30	5000	SMA
MZ9313	2000	18000	30	5000	Versapac
MZ9313C	2000	18000	30	5000	SMA
MZ8810C	2000	18000	1000	8000	SMA
MZ8813	2000	18000	1000	8000	Versapac
M88C	2000	18000	1000	8000	SMA
MY88	2000	18000	1000	8000	Versapac

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Mixers (continued)

Part Number	Min Freq RF/RO (MHz)	Max Freq RF/RO (MHz)	Min Freq IF (MHz)	Max Freq IF (MHz)	Package
MY88C	2000	18000	1000	8000	SMA
M50A	2000	18000	2000	18000	Minpac
M50AC	2000	18000	2000	18000	SMA
M88H	2000	18000	2000	8000	Minpac
M88HC	2000	18000	2000	8000	SMA
MY89	2000	18000	2000	8000	Versapac
MY89C	2000	18000	2000	8000	SMA
M86C	3500	18000	DC	3000	SMA
M80C	4000	18000	DC	3000	SMA
M79C	5000	18000	DC	3000	SMA
M79H	5000	18000	DC	3000	Minpac
M79HC	5000	18000	DC	3000	SMA
MZ7407	6000	18000	DC	3000	Versapac
MZ7407C	6000	18000	DC	3000	SMA
MZ7410	6000	18000	DC	3000	Versapac
MZ7410C	6000	18000	DC	3000	SMA
MZ7420	6000	18000	DC	3000	Versapac
MZ7420C	6000	18000	DC	3000	SMA
M74	7000	18000	DC	3000	Minpac
M74C	7000	18000	DC	3000	SMA
M87C	500	19000	30	5000	SMA
MY87	500	19000	30	5000	Versapac
MY87C	500	19000	30	5000	SMA
M52C	2000	24000	100	5000	SMA
MY52	2000	24000	100	5000	Versapac
MY52C	2000	24000	100	5000	SMA
M51C	2000	24000	1000	15000	SMA
MY51	2000	24000	1000	15000	Versapac
MY51C	2000	24000	1000	15000	SMA
MZ5010	2000	26000	1	15000	Versapac
MZ5010C	2000	26000	1	15000	SMA
M53C	2000	26000	100	6000	SMA
MY50A	2000	26000	1000	12000	Versapac
MY50AC	2000	26000	1000	12000	SMA
M50C	2000	26000	1000	15000	SMA
MY50	2000	26000	1000	15000	Versapac
MY50C	2000	26000	1000	15000	SMA

Power Dividers

Part Number	Min Freq (MHz)	Max Freq (MHz)	Channels (#)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)	Max Input Power (dBm)	Package
M3H-50-PIN	1	100	3	0.2	1	30	30	TO-5
DS-310-PIN	DC	300	4	0.2	4	25	30	FP-5
M3V-50-PIN	50	300	3	0.2	2	25	30	TO-5
DS-113-PIN	DC	400	2	0.2	1	25	30	FP-2
DSS-113-PIN	DC	400	2	0.2	1	25	30	SF-1
DS-318-PIN	5	500	2	0.2	1	18	30	RH-1
DS-109-PIN	10	500	2	0.2	1	25	30	FP-2
DS-319-PIN	10	500	2	0.2	1	25	30	TO-8
DSS-333-PIN	10	500	2	0.2	2	25	30	SF-1

Note: Part numbers are RoHS compliant.
Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
All specifications are subject to change.

Power Dividers (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Channels (#)	Amplitude Balance (dB)	Phase Balance (°)	Isolation (dB)	Max Input Power (dBm)	Package
DS-112-PIN	10	500	3	0.2	2	25	30	TO-5
DS-328-PIN	3	700	3	0.3	3	20	30	TO-8
DSS-327-PIN	5	1000	2	0.2	3	20	30	FP-2
DSS-333-PIN	5	1000	2	0.2	3	20	30	FP-2
DS-323-PIN	25	1000	3	0.4	4	24	30	FP-3
DS-324-PIN	25	1000	4	0.3	6	20	30	FP-5
DS-331-PIN	750	1500	2	0.2	6	10	30	TO-8
DS-313-PIN	10	2000	2	0.3	4	23	24	FP-2
DSS-313-PIN	10	2000	2	0.3	4	23	24	SF-1

Varactor Tuning Diodes

Part Number	Total Capacitance (pF)	Gamma	Quality Factor @ 50 MHz, Min	Breakdown Voltage (V)	Package
MA46600-134	0.3	0.5	8000	30	ODS-134; Die
MA46603-134	0.6	0.5	6500	30	ODS-134; Die
MA46H070-1056	0.6	0.75	4500	20	ODS-1056
MA46H071-1056	1	0.75	4500	20	ODS-1056
MA46416-134	1.8	1.5	2500	18	ODS-134; Die
MA46H072-1056	3	0.75	3000	20	ODS-105
MA46H073-1056	5	0.75	2200	20	ODS-1056

Multiplier Step Recovery Diodes

Part Number	Total Capacitance Min (pF)	Total Capacitance Max (pF)	Reverse Voltage (V)	Lifetime (Typ vs Min) (ns)	Tt (Typ vs Max) (ps)	Package
MMDB45-B11	0.11	0.2	25	8	40	B11
MMDB35-B11	0.13	0.2	16	4	35	B11
MMDB30-B11	0.15	0.25	14	4	30	B11
MSD700	0.2	0.4	15	8	60	Various/Die
MSD710	0.2	0.4	20	11	70	Various/Die
MSD720	0.2	0.4	30	17	100	Various/Die
MMD837-C11	0.2	0.4	20	5	70	Die
MMD840-C11	0.2	0.4	15	7	70	Die
MMD840-H27	0.32	0.52	15	7	70	H27
MMD837-H27	0.32	0.52	20	5	70	H27
MMD840-T86	0.38	0.58	15	7	70	T86
MMD837-T86	0.38	0.58	20	5	70	T86
MSD701	0.4	0.6	15	8	60	Various/Die
MSD711	0.4	0.6	20	11	70	Various/Die
MSD731	0.4	0.6	40	21	150	Various/Die
MMD835-C11	0.3	0.7	15	10	70	Die
MMD0840-A15	0.6	0.75	15	20	75	A15
MMD0151-A15	0.7	0.8	15	15	100	A15
MMD832-C11	0.4	0.8	20	10	80	Die
MSD722	0.6	0.8	30	17	100	Various/Die
MMD835-H20	0.42	0.92	15	10	70	H20
MMD835-T86	0.48	0.98	15	10	70	T86
MMD832-H20	0.58	0.98	20	10	60	H20
MMD832-T86	0.58	0.98	20	10	60	T86
MSD703	0.8	1	15	8	60	Various/Die
MSD723	0.8	1	30	17	100	Various/Die
MSD733	0.8	1	40	21	150	Various/Die

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Multiplier Step Recovery Diodes (continued)

Part Number	Total Capacitance Min (pF)	Total Capacitance Max (pF)	Reverse Voltage (V)	Lifetime (Typ vs Min) (ns)	Tt (Typ vs Max) (ps)	Package
MMD830-T86	0.68	1.18	25	10	80	T86
MMD830-H20	0.68	1.18	25	15	80	H20
MSD724	1	1.4	30	17	100	Various/Die
MMD820-C12	1	1.7	40	30	100	Die
MMD820-H20	1.18	1.88	40	30	100	H20
MMD820-T86	1.18	1.88	40	30	100	T86
MMD810-T86	1.68	2.68	50	40	250	T86
MSD726	2	3	30	17	100	Various/Die
MSD736	2	3	40	21	150	Various/Die
MMD0815-A15	3.15	4.15	50	135	320	A15

PIN Switch and Attenuator Diodes

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	TI (ns)	Breakdown Voltage Min (V)	Package
MMP7078	0.1	100	—	1	0.5	2500	400	Various/Die
MA4P504-30	1	500	7.5	0.4	0.6	1000	500	ODS-30
MA4P504-186	1	500	7.5	0.4	0.6	1000	500	ODS-186
MA4P504-255	1	500	7.5	0.4	0.6	1000	500	ODS-255
MA4P505-255	1	500	10.7	0.55	0.5	2000	500	ODS-255
MA4P506-30	1	500	13.6	0.95	0.3	3000	500	ODS-30
MA4P506-31	1	500	13.6	0.95	0.3	3000	500	ODS-31
MADP-000015-000030	1	500	15	0.55	0.4	2000	500	ODS-30
MA4P604-255	1	500	15	0.6	1	3000	1000	ODS-255
MA4P606-30	1	500	15	0.8	0.7	4000	1000	ODS-30
MA4P606-36	1	500	20	0.99	0.7	4000	1000	ODS-36
MA4P607-296	1	500	25	2.35	0.4	5000	1000	ODS-296
MA47047-54	1	1000	0.3	0.3	1.5	1000	200	ODS-54
MA47266-146	1	1000	0.5	1.5	0.6	4000	200	ODS-146
MA4P606-4	1	1000	1	0.7	0.7	4000	1000	ODS-4
MA4P606-131	1	1000	15	0.6	0.7	4000	1000	ODS-131; Die
MADP-000488-13740W	100	1500	15	0.16	1.6	4000	900	ODS-1374; Die
MADP-000135-01340W	100	1500	50	0.15	1.2	440	200	ODS-134; Die
MPN3001	—	2000	—	0.25	1	—	200	A15
MA4P404-30	5	2000	7.5	0.4	0.6	1000	250	ODS-30
MADP-042505-130600	50	2000	1.3	0.6	0.8	210	80	ODS-1306; Die
MADP-042508-130600	50	2000	1.3	0.6	0.9	310	100	ODS-1306; Die
MADP-000165-01340W	100	2000	50	0.06	2.5	200	200	ODS-134; Die
MA4P604-30	1	2500	15	0.5	1	3000	1000	ODS-30
MADP-000506-014400	1	4000	10	0.7	0.3	100	500	ODS-144
MA4P506-131	1	4000	13.6	0.7	0.3	3000	500	ODS-131; Die
MA4P505-36	1	4000	15	0.55	0.5	2000	500	ODS-36
MA4P303-186	20	4000	0.3	0.35	1.5	200	200	ODS-186
MA4P303-120	20	4000	5	0.35	1.5	200	200	ODS-120
MA4P203-1056	30	4000	0.3	0.35	1.5	100	100	ODS-1056
MA4P203-30	30	4000	5	0.35	1.5	100	100	ODS-30
MA4P202-120	50	4000	0.3	0.25	2.5	60	100	ODS-120
MADP-042405-130600	50	4000	1.3	0.27	0.8	210	80	ODS-1306; Die
MMP7092	1	6000	—	0.2	0.6	1000	500	Various/Die
MMP7024	1	6000	—	0.25	0.5	60	70	Various/Die
MPN7420	1	6000	2.5	0.06	1	1000	400	C12

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

PIN Switch and Attenuator Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	TI (ns)	Breakdown Voltage Min (V)	Package
MPN7453A	1	6000	3	0.1	0.7	700	300	C22
MPN7453B	1	6000	3	0.15	0.6	2500	400	C22
MPN7453C	1	6000	3	0.18	0.4	1000	300	C22
MADP-017025-1314	1	6000	5	0.23	1	2300	1335	ODS-1314; Die
MADP-017015-1314	1	6000	5	0.32	0.7	1300	115	ODS-1314; Die
MPN7380	1	6000	10	0.4	0.3	2500	800	C38
MPN7360	1	6000	10	0.8	0.2	2500	600	C37
MPN7370	1	6000	10	2	0.2	5000	700	C39
MA4P505-131	1	6000	10.7	0.35	0.5	2000	500	ODS-131; Die
MADP-030025-1314	1	6000	11.5	0.5	0.7	2800	135	ODS-1314; Die
MADP-030015-13140P	1	6000	11.5	0.78	0.5	1600	115	ODS-1314; Die
MPN7320-H20	5	6000	1	0.2	3	120	150	H20
MPN7345	5	6000	4	0.3	0.3	500	300	C40
MPN7315-H20	10	6000	1	0.26	1.2	180	150	H20
MPN7312A-H20	20	6000	1	0.26	1.2	150	120	H20
MPN7312B-H20	20	6000	1	0.36	0.8	250	120	H20
MADP-042305-130600	50	6000	1	0.14	1.3	180	80	ODS-1306; Die
MADP-042308-130600	50	6000	1	0.14	1.3	280	100	ODS-1306; Die
MPN7306-H20	100	6000	1	0.26	1.2	50	70	H20
MPN7302-H20	500	6000	1	0.26	1.2	8	20	H20
MMP7023	1	8000	—	0.2	0.7	60	70	Various/Die
MA47222	1	8000	3.8	0.4	1.6	160	150	ODS-144
MA47223	1	8000	7.5	0.4	0.6	1000	500	ODS-144
MA4P504-144	1	8000	7.5	0.4	0.6	1000	500	ODS-144
MA4P604-131	1	8000	15	0.3	1	3000	1000	ODS-131; Die
MNP0012A-T54P	5	8000	0.25	0.36	0.6	650	350	T54p
MNP0012A-T55P	5	8000	0.25	0.31	0.6	650	350	T55p
MNP0012A-T89P	5	8000	0.25	0.43	0.6	650	350	T89p
MNP0012A	5	8000	1	0.18	0.6	650	350	C22p
MA47416-132	DC	10000	5	0.15	6	2000	200	ODS-132; Die
MMP7022	1	10000	—	0.15	0.9	60	70	Various/Die
MNP0014-T55P	1	10000	0.1	0.25	0.8	750	450	T55p
MNP0014-T54P	1	10000	0.1	0.32	0.8	750	450	T54p
MNP0014-T89P	1	10000	0.1	0.37	0.8	750	450	T89p
MNP0014	1	10000	1.5	0.12	1.3	750	500	C22p
MA47418-134	5	10000	6	0.15	3	1000	200	ODS-134; Die
MA4P504-132	1	10000	7.5	0.2	0.6	1000	500	ODS-132; Die
MA4P404-132	5	10000	7.5	0.2	0.7	600	250	ODS-132; Die
MNP0012-T55P	5	12000	0.25	0.21	3.5	350	300	T55p
MNP0012-T54P	5	12000	0.25	0.28	3.5	350	300	T54p
MNP0012-T89P	5	12000	0.25	0.33	3.5	350	300	T89p
MPN7320	5	12000	1	0.02	3	120	150	C01
MNP0012	5	12000	1	0.08	3.5	350	300	C12p
MNP0010-T55P	10	12000	0.25	0.21	2	300	150	T55p
MNP0010-T54P	10	12000	0.25	0.28	2	300	150	T54p
MNP0010-T89P	10	12000	0.25	0.33	2	300	150	T89p
MPN7312B	20	12000	1	0.18	0.8	250	120	C12
MNP0008-T55P	100	12000	0.25	0.21	2	150	100	T55p
MNP0008-T54P	100	12000	0.25	0.28	2	150	100	T54p

Note: Part numbers are RoHS compliant.

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All specifications are subject to change.

PIN Switch and Attenuator Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	CW Power Dissipation (W)	Total Capacitance (pF)	Resistance (Ω)	TI (ns)	Breakdown Voltage Min (V)	Package
MNP0008-T89P	100	12000	0.25	0.33	2	150	100	T89p
MPN7306	100	12000	1	0.08	1.2	50	70	C12
MMP7011	200	12000	—	0.15	0.8	10	25	Various/Die
MPN7302	500	12000	1	0.08	1.2	8	20	C11
MMP7021	1	14000	—	0.1	1	60	70	Various/Die
MADP-042905-130600	50	16000	0.8	0.06	3.1	140	80	ODS-1306; Die
MADP-042908-130600	50	16000	0.8	0.06	3.1	230	100	ODS-1306; Die
MMP7025	1	18000	—	0.03	1.9	100	100	Various/Die
MMP7020	1	18000	—	0.05	1.2	60	70	Various/Die
MA4P203-134	30	18000	5	0.15	1.5	100	100	ODS-134; Die
MA4P303-134	20	18000	5	0.15	1.5	200	200	ODS-134; Die
MADP-000402-12530P	50	18000	1	0.04	4.5	200	70	ODS-1253; Die
MA4SP5402	50	18000	1	0.04	5	200	100	ODS-1253; Die
MADP-000402-12530G	50	18000	1	0.04	5	200	1000	ODS-1253; Die
MADP-064908-131000	50	18000	1	0.05	5	200	100	ODS-1310; Die
MA4P7493-134	50	18000	2.5	0.05	1.8	80	150	ODS-134; Die
MA4PBL027	100	18000	0.2	0.03	4	150	90	Beam Lead; Die
MA4P161-134	100	18000	2.3	0.1	1.5	150	100	ODS-134; Die
MMPN080045	2000	20000	—	—	—	—	200	C50
MA4SP5302	1	26000	0.8	0.4	1.3	460	100	SURMOUNT; Die
MA4SP5502	1	26000	35	0.14	2.4	2800	275	ODS-1270
MA4SP5552	50	26000	1	0.06	1.7	2500	200	ODS-1270
MMPN080150	2000	35000	—	—	—	—	200	C51
MA4AGBLP912	100	40000	0.1	0.02	4	5	50	Beam Lead; Die
MA4GP022	100	40000	0.3	0.15	1	20	50	ODS-277
MA4GP030	100	40000	0.3	0.06	2	25	100	ODS-277
MMSPN050-C53	1000	40000	40	—	0.6	4000	200	C53
MMSPN050-C54	1000	40000	40	—	0.6	4000	200	C54

PIN Limiter Diodes

Part Number	Incident Power, Max (W)	Thermal Resistance	Junction Capacitance (pF)	Resistance (Ω)	Lifetime (ns)	Vb (V)	Package
MADL-04L401-0113W0	—	25	0.3	1.2	800	—	ODS-134; Die
MLP7140	50	100	0.12	2	7	30 – 40	Various/Die
MLP7100	50	100	0.2	1.5	5	20 – 45	Various/Die
MLP7130	50	120	0.12	2	5	15 – 30	Various/Die
MA4L011-134	80	175	0.18	2.1	10	—	ODS-134; Die
MADL-000011-13880G	80	175	0.18	2.1	10	—	ODS-13880G; Die
MA4L011-186	80	175	0.33	2.1	10	—	ODS-186
MA4L011-30	80	175	0.36	2.1	10	—	ODS-30
MA4L011-31	80	175	0.36	2.1	10	—	ODS-31
MA4L011-1056	80	175	0.38	2.1	10	—	ODS-1056
MA4L011-32	80	175	0.48	2.1	10	—	ODS-32
MA4L022-134	90	175	0.19	2	10	—	ODS-134; Die
MA4L021-134	90	175	0.2	2.1	10	—	ODS-134; Die
MADL-011021-14210G	90	175	0.2	2.1	10	—	ODS-1056
MA4L022-120	90	175	0.32	2	10	—	ODS-120
MA4L021-120	90	175	0.33	2.1	10	—	ODS-120
MA4L022-186 S	90	175	0.34	2	10	—	ODS-186
MA4L022-30 S	90	175	0.37	2	10	—	ODS-30

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PIN Limiter Diodes (continued)

Part Number	Incident Power, Max (W)	Thermal Resistance	Junction Capacitance (pF)	Resistance (Ω)	Lifetime (ns)	Vb (V)	Package
MA4L021-31	90	175	0.38	2.1	10	—	ODS-31
MADL-000021-003000	90	175	0.38	21	10	—	ODS-30
MA4L022-1056	90	175	0.39	2	10	—	ODS-1056
MA4L021-1056	90	175	0.4	2.1	10	—	ODS-1056
MA4L022-32	90	175	0.49	2	10	—	ODS-32
MLP7102	100	55	0.7	1	10	20 – 45	Various/Die
MLP7141	100	70	0.2	1.5	7	30 – 60	Various/Die
MLP7131	100	80	0.2	1.5	5	15 – 30	Various/Die
MLP7101	100	80	0.5	1.2	10	20 – 45	Various/Die
MA4L032-134	125	150	0.2	2.5	15	—	ODS-134; Die
MA4L031-134	125	150	0.21	2	20	—	ODS-134; Die
MADL-000031-13880G	125	150	0.21	2.1	20	—	ODS-1388
MADL-000032-003000	125	150	0.21	2.1	20	—	ODS-3000
MADL-011010-01340W	125	150	0.24	1.5	15	—	ODS-134
MA4L032-186	125	150	0.35	2.5	15	—	ODS-186
MA4L031-186	125	150	0.36	2	20	—	ODS-186
MA4L032-31	125	150	0.38	2.5	15	—	ODS-31
MA4L031-31	125	150	0.39	2	20	—	ODS-31
MA4L032-1056	125	150	0.4	2.5	15	—	ODS-1056
MA4L031-1056	125	150	0.41	2	20	—	ODS-1056
MA4L032-32	125	150	0.5	2.5	15	—	ODS-32
MLP7110	200	80	0.2	1.5	10	45 – 75	Various/Die
MA4L062-134	200	150	0.15	2.5	10	—	ODS-134; Die
MADL-000062-13880G	200	150	0.15	2.5	10	—	ODS-13880G; Die
MADL-011011-01340W	200	150	0.17	2.3	10	—	ODS-134
MADL-000062-105600	200	150	0.35	2.5	10	—	ODS-1056
MA4L101-134	250	30	0.15	2	90	—	ODS-134; Die
MADL-000101-13880G	250	30	0.15	2	90	—	ODS-13880G; Die
MA4L101-186	250	30	0.3	2	90	—	ODS-186
MA4L101-30	250	30	0.33	2	90	—	ODS-30
MLP7111	400	60	0.5	1.2	15	45 – 75	Various/Die
MADL-000301-01340W	500	30	0.2	1.5	200	—	ODS-134; Die
MADL-000301-13870G	500	30	0.2	1.5	200	—	ODS-1370
MA4L301-31	500	30	0.38	1.5	200	—	ODS-31
MA4L301-1056	500	30	0.4	1.5	200	—	ODS-1056
MADL-011052-14280W	500	36	0.19	2	222	—	ODS-134; Die
MLP7112 S	795	40	0.7	1	20	45 – 75	Various/Die
MA4L401-134	1000	25	0.3	1.2	800	—	ODS-134; Die
MADL-000401-13870G	1000	25	0.3	1.2	800	—	ODS-13870G; Die
MA4L401-120	1000	25	0.43	1.2	800	—	ODS-32
MA4L401-30	1000	25	0.48	1.2	800	—	ODS-30
MA4L401-31	1000	25	0.48	1.2	800	—	ODS-31
MA4L401-1056	1000	25	0.5	1.2	800	—	ODS-1056
MLP7120	1000	40	0.2	1.5	50	120 – 180	Various/Die
MLP7121	2000	20	0.6	1	50	120 – 180	Various/Die
MLP7122	4000	15	0.8	0.5	100	120 – 180	Various/Die

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Schottky Mixer and Detector Diodes

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	Vf (mV)	Vb (V)	Package
MA4E929A-119	DC	18	0.25	40	0.41	1	ODS-119
MA4E929B-119	DC	18	0.25	40	—	1	ODS-119
MA4E932A-186	DC	18	0.25	40	—	1	ODS-186
MA4E932B-186	DC	18	0.25	40	—	1	ODS-186
MGR703	DC	1000	1	—	0.41	20	Various/Die
MGR700	DC	1000	1.2	—	0.34	8	Various/Die
MGR705	DC	1000	1.2	—	0.41	70	Various/Die
MNM207	DC	2600	0.14	20	0.425	4	Various/Die
MNM201	DC	2600	0.2	20	0.4	3	Various/Die
MNM212	DC	2600	0.21	20	0.475	5	Various/Die
MA40261	DC	3000	0.32	0.32	0.41	70	ODS-186
MA4E2811	DC	3000	1.2	—	0.41	15	ODS-56
MA4E2812-54	DC	3000	1.2	—	0.55	20	ODS-57
1N5711	DC	3000	1.2	2	-1.45	70	ODS-54
MSS20-054-C15	DC	8000	0.2	80	—	0.8	C15P
MSS20-055-C15	DC	8000	0.2	80	—	0.8	C15P
MZB600-32	DC	8000	0.2	3500	0.3	3	CS32
MZB604-B11	DC	8000	0.2	5000	0.3	4	B11
MSS20-054-H27	DC	8000	0.35	80	—	0.8	H27
MSS20-055-H27	DC	8000	0.35	80	—	0.8	H27
MSS20-054-T86	DC	8000	0.41	80	—	0.8	T86p
MSS20-055-T86	DC	8000	0.41	80	—	0.8	T86p
MA4E931Z2-1261A	DC	10000	—	—	0.15	3	Die
MA40205-119	DC	10000	—	—	0.32	3	ODS-119
MA40201-119	DC	10000	0.32	—	—	—	ODS-119
MA40264	DC	10000	0.32	—	0.15	3	ODS-186
MSS20-050-C15	DC	12000	0.15	80	—	0.8	C15P
MSS20-051-C15	DC	12000	0.15	80	—	0.8	C15P
MSS39-152-B10B	DC	12000	0.18	—	0.38	3.5	B10Bp
MSS39-048-P55	DC	12000	0.3	—	0.4	5	P55p
MSS20-047-T86	DC	12000	0.31	80	—	0.8	T86p
MSS20-050-H27	DC	12000	0.3	80	—	0.8	H27
MSS20-051-H27	DC	12000	0.3	80	—	0.8	H27
MSS20-054-0805-2	DC	12000	0.3	80	—	0.8	0805-2
MSS39-048-P86	DC	12000	0.32	—	0.4	5	P86p
MSS39-148-H20	DC	12000	0.33	—	0.38	3.5	H20
MSS20-050-T86	DC	12000	0.36	80	—	0.8	T86p
MSS20-051-T86	DC	12000	0.36	80	—	0.8	T86p
MA40215-120	DC	16000	0.32	—	0.39	5	ODS-1200
MAD5-011030-14280W	DC	16000	0.33	6.5	100	3.5	Die
MSS39-045-C15	DC	18000	0.1	—	0.4	5	C15p
MSS30-142-B10B	DC	18000	0.1	22	0.29	2	B10B
MSS30-242-B20	DC	18000	0.1	22	0.29	2	B20
MSS30-442-B42	DC	18000	0.1	22	0.29	2	B42
MSS30-442-H40	DC	18000	0.1	22	0.29	2	H40
MSS30-442-B41	DC	18000	0.1	22	0.4	4	B41
MSS40-141-B10B	DC	18000	0.1	22	0.42	3	B10B
MSS20-046-C15	DC	18000	0.1	80	—	0.8	C15P
MSS20-047-C15	DC	18000	0.1	80	—	0.8	C15P

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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	Vf (mV)	Vb (V)	Package
MSS39-148-B10B	DC	18000	0.12	—	0.38	3.5	B10Bp
MSS40-045-C15	DC	18000	0.12	15	0.42	3	C15
MSS30-046-C15	DC	18000	0.12	18	0.29	2	C15
MSS50-146-B10B	DC	18000	0.12	18	0.5	4	B10B
MSS30-PCB46-B48	DC	18000	0.12	20	0.3	2	B48
MSS40-PCB46-B48	DC	18000	0.12	20	0.47	3	B48
MSS40-244-B20	DC	18000	0.12	22	0.44	3	B20
MSS40-CR46-B49	DC	18000	0.125	22	0.47	3	B49
MSS30-B46-B45	DC	18000	0.125	25	0.3	2	B45
MSS50-B46-B45	DC	18000	0.13	20	0.5	4	B45
MSS30-PCR46-B47	DC	18000	0.13	22	0.3	2	B47
MSS40-PCR46-B47	DC	18000	0.13	22	0.47	3	B47
MSS40-B46-B45	DC	18000	0.13	25	0.47	3	B45
MSS30-148-B10B	DC	18000	0.15	15	0.27	2	B10B
MSS30-248-B20	DC	18000	0.15	15	0.27	2	B20
MSS30-448-B41	DC	18000	0.15	15	0.4	2	B41
MSS30-448-B42	DC	18000	0.15	15	0.3	2	B42
MSS40-048-C15	DC	18000	0.15	15	0.42	3	C15
MSS40-148-B10B	DC	18000	0.15	17	0.4	3	B10B
MSS40-448-B42	DC	18000	0.15	17	0.4	3	B42
MSS40-248-B20	DC	18000	0.15	17	0.44	3	B20
MSS30-050-C15	DC	18000	0.18	15	0.27	2	C15
MSS39-144-H27	DC	18000	0.24	—	0.38	3.5	H27
MSS39-146-H27	DC	18000	0.25	—	0.38	3.5	H27
MSS30-154-B10B	DC	18000	0.25	12	0.25	2	B10B
MSS30-454-B40	DC	18000	0.25	12	0.3	2	B40
MSS50-448-B40	DC	18000	0.25	14	0.5	4	B40
MSS30-B53-B45	DC	18000	0.25	15	0.3	2	B45
MSS30-CR53-B49	DC	18000	0.25	15	0.3	2	B49
MSS30-PCR53-B47	DC	18000	0.25	15	0.29	2	B47
MSS40-B53-B45	DC	18000	0.25	15	0.43	3	B45
MSS50-B53-B45	DC	18000	0.25	15	0.5	4	B45
MSS50-CR53-B49	DC	18000	0.25	15	0.5	4	B49
MSS50-PCR53-B48	DC	18000	0.25	15	0.5	4	B47
MSS20-046-H27	DC	18000	0.25	80	—	0.8	H27
MSS20-047-H27	DC	18000	0.25	80	—	0.8	H27
MSS39-045-P86	DC	18000	0.27	—	0.4	5	P86p
MSS40-045-P55	DC	18000	0.28	15	0.42	3	P55
MSS50-046-P55	DC	18000	0.28	20	—	4	P55
MSS40-045-P86	DC	18000	0.3	15	0.42	3	P86
MSS30-346-B21	DC	18000	0.3	16	0.27	2	B21
MSS40-455-B40	DC	18000	0.3	17	0.38	3	B40
MSS30-046-P55	DC	18000	0.3	18	0.29	2	P55
MSS40-141-H20	DC	18000	0.3	18	0.42	3	H20
MSS30-142-H20	DC	18000	0.31	22	0.29	2	H20
MSS30-242-H30	DC	18000	0.31	22	0.29	2	H30
MSS40-455-H40	DC	18000	0.32	14	0.38	3	H40
MSS40-048-P86	DC	18000	0.33	15	0.4	3	P86
MSS30-046-P86	DC	18000	0.33	18	0.29	2	P86

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Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	Vf (mV)	Vb (V)	Package
MSS30-CR46-H40	DC	18000	0.33	22	0.3	2	H40
MSS50-146-H20	DC	18000	0.34	18	0.5	4	H20
MSS30-050-P55	DC	18000	0.35	15	0.27	2	P55
MSS30-448-H40	DC	18000	0.35	15	0.3	2	H40
MSS40-CR46-H40	DC	18000	0.35	15	—	3	H40
MSS50-B46-H40	DC	18000	0.35	20	—	4	H40
MSS30-B46-H40	DC	18000	0.35	25	0.3	2	H40
MSS39-152-H20	DC	18000	0.36	—	0.38	3.5	H20
MSS50-448-E45	DC	18000	0.36	10	0.5	4	E45
MSS30-148-H20	DC	18000	0.36	15	0.27	2	H20
MSS30-248-H30	DC	18000	0.36	15	0.27	2	H30
MSS40-448-H40	DC	18000	0.36	15	0.4	3	H40
MSS50-B53-E45	DC	18000	0.36	15	0.5	4	E45
MSS40-155-0402	DC	18000	0.38	14	0.38	3	0402
MSS30-050-P86	DC	18000	0.38	15	0.27	2	P86
MSS30-154-H20	DC	18000	0.46	12	0.25	2	H20
MSS30-254-H30	DC	18000	0.46	12	0.25	2	H30
MSS30-454-H40	DC	18000	0.46	12	0.3	2	H40
MSS30-B53-H40	DC	18000	0.46	15	0.3	2	H40
MSS50-CR53-H40	DC	18000	0.46	15	0.5	4	H40
MSS50-448-H40	DC	18000	0.48	10	0.5	4	H40
MSS50-B53-H40	DC	18000	0.48	15	—	4	H40
MSS30-346-H20	DC	18000	0.5	16	0.29	2	H20
MSS40-155-H20	DC	18000	0.51	14	0.38	3	H20
MSS39-146-B10B	DC	26000	0.1	—	0.38	3.5	B10Bp
MA4E2513L-1289	DC	26000	0.12	10	-0.7	3	ODS-1289
MA4E2501L-1290	DC	26000	0.12	10	0.33	5	ODS-1290
MA4E2502H-1246	DC	26000	0.12	11	0.65	3	ODS-1246
MA4E2502M-1246	DC	26000	0.12	12	-1.58	3	ODS-1246
MA4E2514M-1116	DC	26000	0.12	12	0.47	3	ODS-1116
MA4E2502L-1246	DC	26000	0.12	16	0.33	3	ODS-1246
MA4E2514L-1116	DC	26000	0.12	16	0.33	3	ODS-1116
MA4E2532M-1113	DC	26000	0.16	10	0.47	5	ODS-1113
MA4E2508H-1112	DC	26000	0.24	6	0.7	5	ODS-1112
MA4E2508M-1112	DC	26000	0.24	12	0.42	5	ODS-1112
MA4E2508L-1112	DC	26000	16	0.24	-1.7	5	ODS-1112
MSS39-144-B10B	DC	40000	0.08	—	—	3.5	B10Bp
MSS25-141-B10D	DC	40000	0.08	65	0.28	3	B10D
MSS20-140-B10D	DC	40000	0.08	80	—	0.8	B10D
MSS20-141-B10D	DC	40000	0.08	80	—	0.8	B10D
MSS25-143-B10D	DC	40000	0.1	60	0.26	3	B10D
MSS25-047-C15c	DC	40000	0.1	65	0.26	3	C15c
MSS20-142-0402	DC	40000	0.1	80	—	0.8	0402
MSS20-142-B10D	DC	40000	0.1	80	—	0.8	B10D
MSS20-143-B10D	DC	40000	0.1	80	—	0.8	B10D
MSS25-049-C15c	DC	40000	0.12	52	—	3	C15c
MSS25-145-B10D	DC	40000	0.12	52	0.22	3	B10D
MSS20-145-B10D	DC	40000	0.12	80	—	0.8	B10D
MSS20-146-B10D	DC	40000	0.12	80	—	0.8	B10D

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Schottky Mixer and Detector Diodes (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Total Capacitance (pF)	Dynamic Resistance (Ω)	Vf (mV)	Vb (V)	Package
MGS912	DC	60000	0.03	28	2.9	20	B89
MGS906	DC	60000	0.04	14	1.5	10	B90
MGS907	DC	60000	0.04	14	1.5	10	B85
MGS908	DC	60000	0.04	14	—	10	B86
MA4E2037	DC	60000	0.05	4	—	4.5	Beam Lead
MA4E2039	DC	60000	0.05	4	—	4.5	Beam Lead
MA4E2040	DC	60000	0.05	4	0.8	4.5	Beam Lead
MGS904	DC	60000	0.06	7	0.75	5	B85
MGS901	DC	60000	0.06	7	0.75	5	Beam Lead
MGS903	DC	60000	0.06	7	0.75	5	Beam Lead
MGS905	DC	60000	0.06	7	0.75	5	B86
MGS907A	DC	60000	0.06	12	1.5	10	B85
MGS904A	DC	60000	0.08	5	0.75	5	B85
MGS902	DC	60000	0.1	7	0.75	5	Beam Lead
MGS910	DC	60000	0.1	21	2.1	15	B87
MGS909	DC	60000	0.1	21	2.1	15	B90

THz Schottky Barrier Diodes

Part Number	Total Capacitance (ff)	Cutoff Frequency (THz)	Resistance (Ω)	Configuration (mV)
MADZ-011001	40	1.27	3.4	Single
MADZ-011002	49	1	3.5	Single
MADZ-011003	49	1	3.5	Anti-Parallel
MADZ-011004	49	1	3.5	Reverse Tee
MADZ-011005	49	1	3.5	Unconnected Anti-Parallel Pair

Switches

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	IIP3 (dBm)	Package
SPST						
MASW-001150-1316	45	2500	0.3	65	40	Die
MA4SW110	50	26500	0.6	48	40	HMIC; Die
MA4AGSW1	50	50000	0.2	43	40	Die
MA4AGSW1A	50	50000	1.2	48	40	Die
SPDT						
SW-313-PIN	50	3000	0.8	52	46	CR-2
SW-228-PIN	DC	4000	0.7	42	46	CR-2
SW-226-PIN	DC	4000	1	48	46	CR-2
MASW-010647	8000	10500	0.8	37	60	Die
MASW-011021	6000	14000	0.7	34	60	SURMOUNT; Die
MASW-002102-13580	2	18000	1.8	55	40	Die
MASW-011108-DIE	6000	18000	0.6	44	—	Die
MASW-002103-1363	50	20000	0.8	38	40	SURMOUNT; Die
MASW-011052	2000	26000	0.8	50	43	Die
MA4SW210B-1	2000	26000	1.2	48	40	Die
MASW-002100-1191	50	26500	0.3	65	40	Die
MA4SW210	50	26500	0.6	52	40	HMIC; Die
MASW-011144-DIE	20000	40000	65	30	—	Die
MASW-010646	26000	40000	0.6	39	60	Die
MASW-011036	26000	40000	0.7	40	60	Die
MA4AGSW2	50	50000	0.6	46	—	Die

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Switches (continued)

Part Number	Min Freq (MHz)	Max Freq (MHz)	Insertion Loss (dB)	Isolation (dB)	IIP3 (dBm)	Package
MASW-011240	100	67000	1.6	39	52	2.25 mm; 12-lead; SMT
MASW-011241	100	67000	2.2	42	52	3 mm; 20-lead; SMT
MASW-011111-DIE	80000	100000	0.8	25	—	Die
SP3T						
MASW-003102-13590	2000	18000	0.8	50	40	Die
MASW-011053	2000	18000	0.8	50	48	Die
MASW-003103-1364	50	20000	0.8	40	40	Die
MA4SW310B-1	2000	26000	1.2	47	40	Die
MASW-003100-1192	50	26500	0.3	65	40	Die
MA4SW310	50	26500	0.8	48	40	Die
MA4AGSW3	50	50000	0.6	48	40	Die
MASW-011029	75000	100000	1.3	33	—	Die
SP4T						
MASW-004102-12760	2	18000	1.5	50	40	Die
MA4SW410B-1	2000	18000	0.8	48	40	Die
MASW-004103-1365	50	20000	0.8	50	63	SURMOUNT; Die
MASW-004240-13170	10	24000	2.5	50	—	Die
MASW-004100-1193	50	26500	0.3	65	40	Die
MA4SW410	50	26500	0.7	48	40	Die
MASW-011087	27000	30000	0.85	50	55	Die
MA4AGSW4	50	50000	0.8	42	40	Die
SP5T						
MASW-010351	10	4000	1.4	57	50	4 mm; PQFN-24
MA4SW510B-1	2000	18000	0.9	40	40	Die
MASW-005102-13600	2000	18000	0.9	40	40	Die
MA4SW510	50	26500	0.9	38	40	Die
MASW-005100-1194	50	26500	0.9	38	40	Die
MASW-006102-13610	50	26500	0.3	65	40	Die
MA4AGSW5	50	50000	1.1	47	40	Die
SP6T						
MA4SW610B-1	2000	18000	1.3	45	40	Die
MASW-006102-13610	50	26500	1.3	45	40	Die
SP8T						
MA4AGSW8-1	50	50000	1.5	37	40	Die

Phase Detectors

Part Number	SRD VBR Min (V)	SRD CJ Typ (pF)	SRD TL Typ (ns)	SRD TT Max (ps)	Cap CT Typ (pF)	SD CJ Typ (pF)	SD VF Typ (mV)	SD RD Typ (Ω)	FMW Typ (GHz)	Package
MSPD2018-H50	15	0.35	5	55	0.6	0.1	430	16	22	H50
MSPD1012-H50	15	0.5	10	70	2.5	0.18	270	9	12	H50
MSPD1000-H50	15	1	35	95	20	0.4	270	7	0.5	H50

MNS Chip Capacitors

Part Number	Capacitance (pF)	Standoff Voltage (V)	Chip Style	Package
MA4M3010	10	200	350	Die
MA4M2020	20	200	132	Die
MA4M3030	30	200	352	Die
MA4M1050	50	100	132	Die
MA4M3050	50	200	354	Die
MA4M3100	100	50	358	Die

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

MNS Chip Capacitors (continued)

Part Number	Capacitance (pF)	Standoff Voltage (V)	Chip Style	Package
MA4M1100	100	100	199	Die
MA4M3150	150	50	359	Die

High Q MNOS Series Chip Capacitors: 9000 Series VB >50 V & 9100 Series VB >100 V

Part Number	Capacitance (pF)	Working Voltage (V)	Chip Size + .002"	Package
910R1 thru 911R9	0.1 – 1.9	100	0.010" x 0.010" x 0.005"	Die
912R0 thru 919R9	2 – 9.9	100	0.015" x 0.015" x 0.005"	Die
902R0 thru 9010R	2 – 10	50	0.010" x 0.010" x 0.005"	Die
9110R thru 9129R	10 – 29	100	0.020" x 0.020" x 0.006"	Die
9011R thru 9029R	11 – 29	50	0.015" x 0.015" x 0.005"	Die
9030R thru 9049R	30 – 49	50	0.020" x 0.020" x 0.006"	Die
9130R thru 9149R	30 – 49	100	0.030" x 0.030" x 0.006"	Die
9050R thru 9099R	50 – 99	50	0.030" x 0.030" x 0.006"	Die
9150R thru 9199R	50 – 99	100	0.040" x 0.040" x 0.008"	Die
0100 thru 0199R	100 – 199	50	0.040" x 0.040" x 0.008"	Die
91100 thru 91199	100 – 199	100	0.050" x 0.050" x 0.008"	Die
91200 thru 91399	200 – 399	100	0.070" x 0.070" x 0.008"	Die
90200 thru 90399R	200 – 399	50	0.050" x 0.050" x 0.008"	Die
90400 thru 90600R	400 – 600	50	0.070" x 0.070" x 0.008"	Die

Beam Lead Capacitors: 9000 Series VB >50 V

Part Number	Capacitance Range (pF)	Package
90R1 thru 90R9	0.1 – 0.9	14-1
90R5 thru 901R0	0.5 – 1	14-2
901R0 thru 901R5	1 – 1.5	14-1
901R0 thru 902R2	1 – 2.2	14-2
902R2 thru 904R7	2.2 – 4.7	14-2
905R6M	5.6 + 20%	14-2
906R8M	6.8 + 20%	14-2
908R2M	8.2 + 20%	14-2
9010R0M	10 + 20%	14-3
9015R0M	15 + 20%	14-3
9022R0M	22 + 20%	14-3
9033R0M	33 + 20%	14-3
9047R0M	47 + 20%	14-4
9068R0M	68 + 20%	14-4
9082R0M	82 + 20%	14-4
90100R0M	100 + 20%	14-4

DC Floating/RF Bypass Mounting Capacitors: 9100 & 9000 Series

Part Number	Capacitance Range (pF)	Chip Size A	Chip Size B	Pad Size D	Pad Size E	Customer Specified Field D
SP49	5 – 50	0.014	0.034	0.011	0.031	0.005 – 0.020
SP84	7 – 70	0.02	0.04	0.016	0.03	0.005 – 0.020
SP51	8 – 80	0.015	0.045	0.013	0.043	0.005 – 0.020
SP14	9 – 90	0.02	0.04	0.016	0.036	0.005 – 0.020
SP34	9 – 90	0.024	0.034	0.02	0.03	0.005 – 0.020
SP6	10 – 100	0.014	0.055	0.012	0.053	0.005 – 0.020
SP89	12 – 120	0.02	0.06	0.014	0.055	0.005 – 0.020
SP80	13 – 130	0.016	0.065	0.014	0.063	0.005 – 0.020

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

DC Floating/RF Bypass Mounting Capacitors: 9100 & 9000 Series (continued)

Part Number	Capacitance Range (pF)	Chip Size A	Chip Size B	Pad Size D	Pad Size E	Customer Specified Field D
SP12	14 – 140	0.02	0.055	0.018	0.053	0.005 – 0.020
SP87	15 – 150	0.013	0.12	0.009	16	0.005 – 0.020
SP81	17 – 170	0.015	0.09	0.013	0.088	0.005 – 0.020
SP22	24 – 240	0.025	0.08	0.021	0.075	0.005 – 0.020
SP88	25 – 250	0.021	0.121	0.015	0.115	0.005 – 0.020
SP48	29 – 290	0.035	0.065	0.031	0.061	0.005 – 0.020
SP64	75 – 750	0.055	0.102	0.051	0.098	0.005 – 0.020
SP120	90 – 900	0.055	0.12	0.05	0.115	0.005 – 0.020
SP7	100 – 1000	0.085	0.085	0.081	0.081	0.005 – 0.020
SP2	150 – 1500	0.11	0.11	0.1	0.1	0.005 – 0.020
SP68	175 – 1750	0.101	0.124	0.097	0.12	0.005 – 0.020
SP1	200 – 2000	0.11	0.14	0.1	0.13	0.005 – 0.020
SP5	200 – 1000	0.1	0.1	0.095	0.095	0.005 – 0.020
SP20	200 – 2000	0.12	0.14	0.11	0.13	0.005 – 0.020
SP29	200 – 2000	0.121	0.121	0.115	0.115	0.005 – 0.020
SP38	200 – 2000	0.094	0.152	0.091	0.148	0.005 – 0.020
SP39	200 – 2000	0.12	0.134	0.11	0.13	0.005 – 0.020
SP40	200 – 2000	0.107	0.134	0.103	0.13	0.005 – 0.020
SP77	300 – 3000	0.118	0.175	0.114	0.171	0.005 – 0.020
SP52	300 – 3000	0.13	0.17	0.124	0.164	0.005 – 0.020
SP104	350 – 3500	0.142	0.171	0.138	0.167	0.005 – 0.020
SP111	350 – 3500	0.143	0.18	0.138	0.167	0.005 – 0.020
SP37	350 – 3500	0.151	0.168	0.147	0.164	0.005 – 0.020
SP44	350 – 3500	0.14	0.17	0.135	0.165	0.005 – 0.020
SP55	360 – 3600	0.117	0.22	0.113	0.216	0.005 – 0.020

MNOS Series Capacitors

Part Number	Type	Range (pF)	Capacitance Range Min (pF)	Capacitance Dvw Min (V)	R Min (Ω)	TCC Typ (ppm/+°C)	Package
MBC50-0.2B14	Beam Lead	0.24	0.16	50	1000	55	B14
MBC50-1.0B14	Beam Lead	1.2	0.8	50	1000	55	B14
MBC50-1B12	Beam Lead	1.2	0.8	50	1000	55	B12
MBC50-1.5B14	Beam Lead	1.8	1.2	50	1000	55	B14
MBC50-2B12	Beam Lead	2.4	1.6	50	1000	55	B12
MBC50-2.0B14	Beam Lead	2.4	1.6	50	1000	55	B14
MBC50-3B12	Beam Lead	3.6	2.4	50	1000	55	B12
MBC50-4B12	Beam Lead	4.8	3.2	50	1000	55	B12
MBC50-6B12	Beam Lead	7.2	4.8	50	1000	55	B12
MBC50-8B12	Beam Lead	9.6	6.4	50	1000	55	B12
MBC50-10B12	Beam Lead	12	8	50	1000	55	B12
MBC50-15B12	Beam Lead	18	12	50	1000	55	B12
MBC50-20B12	Beam Lead	24	16	50	1000	55	B12
MBC50-33B13	Beam Lead	39.6	26.4	50	1000	55	B13
MBC50-47B13	Beam Lead	56.4	37.6	50	1000	55	B13
MBC50-68B13	Beam Lead	81.6	54.4	50	1000	55	B13
MBC50-82B13	Beam Lead	96	65.6	50	1000	55	B13
MBC50-100B13	Beam Lead	120	80	50	1000	55	B13
MC2DXXX010-010	Chips	5	0.1	50	1000	55	Die
MC2SXXX010-010	Chips	8	0.25	50	1000	55	Die
MC2SXXX011-011	Chips	12	1	50	1000	55	B12

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

MNOS Series Capacitors (continued)

Part Number	Type	Range (pF)	Capacitance Range Min (pF)	Capacitance Dvw Min (V)	R Min (Ω)	TCC Typ (ppm/+°C)	Package
MC2DXXX015-015	Chips	15	1.5	50	1000	55	Die
MC2RXXX010-015	Chips	20	2	50	1000	55	Die
MC2SXXX015-015	Chips	30	3	50	1000	55	Die
MC2SXXX016-016	Chips	35	3	50	1000	55	Die
MC2RXXX015-020	Chips	42	5	50	1000	55	Die
MC2DXXX020-020	Chips	50	5	50	1000	55	Die
MC2SXXX020-020	Chips	55	5	50	1000	55	Die
MC2SXXX022-022	Chips	60	5	50	1000	55	Die
MC2RXXX015-032	Chips	62	5	50	1000	55	Die
MC2SXXX025-025	Chips	100	10	50	1000	55	Die
MC2SXXX030-030	Chips	120	10	50	1000	55	Die
MC2RXXX022-042	Chips	120	15	50	1000	55	Die
MC2SXXX035-035	Chips	150	15	50	1000	55	Die
MC2SXXX040-040	Chips	200	20	50	1000	55	Die
MC2SXXX050-050	Chips	250	25	50	1000	55	Die
MC2SXXX055-055	Chips	300	25	50	1000	55	Die
MC2SXXX060-060	Chips	375	35	50	1000	55	Die
MC2SXXX070-070	Chips	550	50	50	1000	55	Die
MC2SXXX080-080	Chips	700	70	50	1000	55	Die
MC2RXXX097-107	Chips	999	100	50	1000	55	Die
MC2RXXX099-138	Chips	999	100	50	1000	55	Die
MC2SXXX100-100	Chips	999	100	50	1000	55	Die
MC2RXXX127-145	Chips	1800	200	50	1000	55	Die
MC2RXXX142-160	Chips	2200	200	50	1000	55	Die
MC2B0.8020-020	Binary Chip	1.8	1.2	50	1000	55	C20
MC2B002020-020	Binary Chip	4.5	3	50	1000	55	C20
MC2B004020-020	Binary Chip	9.6	6.4	50	1000	55	C20
MC2B008020-020	Binary Chip	18	12	50	1000	55	C20
MC2B016020-020	Binary Chip	36	24	50	1000	55	C20

NLTL GaAs Comb Generators

Part Number	Power Min (dBm)	Power Max (dBm)	Output Harmonics 1	Output Harmonics 2	Output Harmonics 3	Package
MLPNC-7100S1-SMA800	18 @ 75 MHz	24 @ 250 MHz	-15 @ 1 GHz	-18 @ 2 GHz	-24 @ 4 GHz	SMA800
MLPNC-7100-SMA850	18 @ 100 MHz	24 @ 400 MHz	-8 @ 4 GHz	-18 @ 12 GHz	-35 @ 20 GHz	SMA850
MLPNC-7102-SMA800	19 @ 300 MHz	24 @ 700 MHz	-8 @ 4 GHz	-16 @ 12 GHz	-20 @ 20 GHz	SMA800
MLPNC-7102S1-SMA800	18 @ 300 MHz	24 @ 700 MHz	-10 @ 4 GHz	-15 @ 8 GHz	-22 @ 12 GHz	SMA800
MLPNC-7103-SMA800	19 @ 600 MHz	24 @ 1500 MHz	-5 @ 6 GHz	-15 @ 18 GHz	-20 @ 30 GHz	SMA800
MLPNC-7103S1-SMA800	18 @ 600 MHz	24 @ 1500 MHz	-10 @ 4 GHz	-8 @ 8 GHz	-20 @ 15 GHz	SMA800

True Time Delay ICs

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Bit Count	Min Delay (ns)	Full Delay (ns)	Insertion Loss (dB)	CTRL Interface	Package
CGY2393SUH	6 – 18 GHz	6000	18000	5	10	310	6	0/+4	Die
CGY2394SUH	6 – 18 GHz	6000	18000	1	330	330	6	0/+4	Die

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

LINEAR MODULE SUBSYSTEMS SPACE PRODUCTS

Space-Qualified Linearizers, SSPAs and Related Hardware for the LEO, MEO and GEO Space Industries

MACOM's high reliability linearization technology reduces amplifier distortion and allows an amplifier to operate at reduced OPBO thus operating at higher

efficiency for a given level of linearity. MACOM provides Space Qualified Products for all downlink frequencies including UHF, Ku-, Ka-, Q-, V- and E-Bands.

Versatile Linearized Front-End Modules

Linearizers that enable high power amplifiers (HPAs) to operate efficiently at different power levels over wide bandwidths, provide system gain, and the required RF drive power to the HPA. The versatile linearizer can be temperature compensated to maintain optimum RF performance. They can be configured to correct either a TWTA or an SSPA's nonlinear transfer characteristics over multi-gigahertz and a wide dynamic range.

Linearizer Modules for UHF, L-, S-, C-, X- and Ku-Band SSPAs

Drop-in, connectorized or pin connected linearizers for GaAs or GaN SSPAs. These modules provide the correction characteristic for SSPA transfer curves over wide frequency and temperature ranges.

UHF Linearized GaAs SSPA

Highest efficiency UHF SSPA with built-in linearizer. SSPAs for power levels of 50 W to over 300 W with multiple EPC options available.

GPS Linearized GaN SSPA

Drop-in, connectorized or pin connected linearizers for Highest efficiency SSPA with built-in linearizer. Wideband option including full GPS band available. SSPAs for power levels of 35 W to >400 W. Commandable over 5 dB power range at high efficiency. Multiple EPC options available.

UHF Linearized GaN SSPA

Highest efficiency (>78%) UHF SSPA with built in linearizer. SSPAs for power levels of 50 W to over 300 W. Multiple EPC options available.



LINEARIZER PRODUCTS



Linearizers decrease non-linear distortion which allows a HPA to significantly increase its effective output power and efficiency. A linearizer must be carefully matched to cancel the distortion of a particular non-linear amplifier. This requires the linearizer to operate over a wide range of frequencies, bandwidths and power levels, in

addition to operating under various modulations, across many different applications. MACOM's linearizers can therefore reduce the initial cost of HPAs as well as ongoing operating costs related to power consumption and thermal management.

OEM Predistortion Linearizer Modules and Front Ends											
Part Number	Description	C-Band	X-Band	Ku-Band	K-Band	Ka-Band	Q-Band	V-Band	Input Gain Attenuator	O/P Power Detector	Multi-Band
S-Series	Compact Digitally Controlled Linearizer Modules for Power Amplifiers	X	X	X	X	X	X	—	X	X	—
X-Series	Predistortion Linearizer Modules for GaN Solid State Power Amplifiers	X	—	X	—	X	—	—	X	—	—
LBUC-Series	Linearizer and Block Up Converter in One Package	—	X	X	v	X	—	—	X	—	—
N-Series	Economical Solution for Multi-Band HPAs	X	X	X	—	—	—	—	—	—	X
MPM Linearizers	Custom Linearizers for Microwave Power Modules	X	X	X	X	X	X	—	—	X	—
H-Series	Compact Digitally Controlled Linearizer for V-Band Amplifiers	—	—	—	—	—	—	X	X	—	—
L-Series	Compact Analog Controlled Linearizer for V-Band Amplifiers	—	—	—	—	—	—	X	X	—	—
After Market Distortion Correction Solutions											
Part Number	Description	L/S		C		X		Ku		K (DBS)	
WAFL-Series	Provide HPAs with up to an effective 4x power increase with digital and multicarrier traffic	X		X		X		X		X	
TEQ-Series	Module Equalizers	—		X		X		X		—	
NPR & Test Equipment											
Part Number	Description	RF Bandwidth				Operating Temp					
Test Systems	Custom Distortion	DC – >20 GHz				-20 – +85 °C					
Custom Solutions											
Part Number	Description	RF Bandwidth				Operating Temp					
Modules	Custom MIC/Hybrid Linearizer Modules	DC – >20 GHz				-20 – +85 °C					
AM-Series	Airborne Linearizers & SSAs Ku-, Ka- & Q-Band	0.5 – >60 GHz				-20 – +85 °C					

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

All specifications are subject to change.

Appendix and Part Number Index

Package Selection Guide

Decibels-Volts-Watts Conversion Table

Wavelength and Frequency

Part Number Index

Plastic Leadless Packages

Package	Approx Outline Dimensions (mm)	
1 mm X1-DFN-6	1 x 1 x 0.45	
1.2 x 1.5 TDFN-6	1.2 x 1.5 x 0.75	
1.5 x 1.2 TDFN-6	1.5 x 1.2 x 0.75	
2 mm STDFN-8	2 x 2 x 0.55	
2 mm STQFN-12	2 x 2 x 0.55	
2 x 2.5 mm STQFN-14	2 x 2.5 x 0.55	
3 mm PQFN-12/16	3 x 3 x 0.9	
3 mm TQFN-12/16	3 x 3 x 0.75	
3 mm HQFN-16	3 x 3 x 1.5	
4 mm PQFN-16/20/24	4 x 4 x 0.9	
4 mm TQFN-16/20	4 x 4 x 0.75	
4 mm HQFN-8/16/20	4 x 4 x 1.5	
4 x 5 mm PQFN-28	4 x 5 x 0.9	
4 x 6 mm PQFN-32	4 x 6 x 0.9	
4 x 7 mm PQFN-36	4 x 7 x 0.9	
5 mm PQFN-20/24/28/32/40	5 x 5 x 0.9	
5 mm HQFN-32	5 x 5 x 0.9	
5 x 7 mm PQFN-40	5 x 7 x 0.9	
5 x 8 mm PQFN-52	5 x 8 x 0.9	
6 mm PQFN-28/40/48	6 x 6 x 0.9	
7 mm PQFN-13/16L/32/44	7 x 7 x 0.9	
7 mm HQFN-16/32	7 x 7 x 1.5	

Plastic Leadless Packages

Package	Approx Outline Dimensions (mm)	
SC-79	0.8 x 1.6 x 0.6	
SOD-323	1.3 x 2.5 x 1.1	
SOD-23	2.9 x 2.4 x 1	
SOD-25	2.9 x 2.8 x 1.3	
SOD-26	2.9 x 2.8 x 1.3	

Plastic Leadless Packages (continued)

Package	Approx Outline Dimensions (mm)	
SOT-89	4.5 x 4 x 1.5	
SOT-143	2.9 x 2.4 x 1	
SC70 3 (SOT-323)	2 x 2.1 x 1	
SC70 6 (SOT-363)	2 x 2.1 x 1	
SOIC8/SOIC8EP	4.9 x 6 x 1.6	
SOIC14	8.7 x 6 x 1.6	
SOIC16	9.9 x 6 x 1.6	
SOW16	10.3 x 10.3 x 2.5	
SOW24	15.4 x 10.3 x 2.5	
TSSOP-16	5 x 6.4 x 1.1	
SSOP-20	7.2 x 7.8 x 1.9	
MSOP-8	3 x 4.9 x 1	
MSOP-8EP	3 x 4.9 x 1	
MSOP-10/MSOP-10EP	3 x 4.9 x 1	
QSOP-16	4.9 x 6 x 1.6	
QSOP-24	8.7 x 6 x 1.6	
QSOP-28	9.9 x 6 x 1.6	

Ceramic

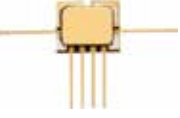
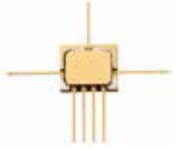
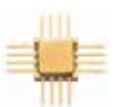
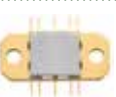
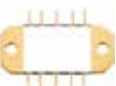
CQFN-12	3.0 x 3.0 x 1.55	
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Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

PACKAGE SELECTION GUIDE

Ceramic/Chip Diode Packages		
Package	Approx Outline Dimensions (mm)	
30 Ceramic	3.2 diameter x 5.7	
134 Die 0.	4 x 0.4 x 0.2	
186 Ceramic	11.2 x 2.5 x 1.1	
401 Axial Lead	2.3 diameter x 55	
1027 Ceramic	8 diameter x 6.9	
1056 Ceramic	1.9 x 1.9 x 1	
1072 Ceramic	2.4 x 2.4 x 3.4	
1073 Ceramic	12.3 diameter x 10	
1038 Ceramic	8 diameter x 17	
1080 Ceramic	8 diameter x 22.2	
1082 Ceramic	8 diameter x 19.8	
1088 Ceramic	2.4 x 1.3 x 1	
1246 SURMOUNT	1.2 x 0.5 x 0.2	

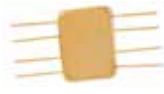
Metal/Ceramic Packages		
Package	Approx Outline Dimensions (mm)	
CR2-6	18.3 x 11.3 x 1.3	
CR2	18.3 x 17.1 x 1.3	
CR3	16.2 x 4.6 x 1.6	
CR4	12.4 x 12.4 x 1.6	
CR5	8.9 x 8.0 x 1.6	
CR6	11.4 x 8.9 x 1.6	
CR12	11.4 x 11.4 x 2.0	
CR13	16.5 x 11.4 x 2.0	
CR15	17.8 x 11.4 x 2	
CR16	9.8 x 8.3 x 1.5	
1000017733	23.5 x 13.8 x 2	

Note: Part numbers are RoHS compliant.
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 All specifications are subject to change.

Metal/Ceramic Packages (continued)

Package	Approx Outline Dimensions (mm)	
MOD2	20.3 x 15 x 6.6	
MOD3	20.3 x 15 x 4.8	
SMA-AMP	23.4 x 27.9 x 13.3	
SMA-MXR	22.9 x 22.9 x 14	
SMT-01	11.4 x 11.4 x 4.3	
SMT-02	10 x 13 x 4	
SMT-88	13.4 x 13.4 x 4.3	
SMT-88F	11.4 x 11.4 x 4.3	
TO-8-01	12.7 diameter x 11	
TO-8-02	12.7 diameter x 9.7	

Metal/Ceramic Packages (continued)

Package	Approx Outline Dimensions (mm)	
TO-8-03	15.2 diameter x 9.7	
CSM	12.5 x 9.4 x 4.8	
FP	13 x 9.8 x 3.6	
MOD1	14.2 x 13.2 x 4.8	

Passives Packages

Package	Approx Outline Dimensions (mm)	
SM-2	12.5 x 9.4 x 6.4	
SM-4	12.4 x 9.4 x 5.8	
SM-22	3.8 x 3.8 x 3.8	
SM-55	7.1 x 6.4 x 3.6	
SM-85	30 x 30 x 9	
SM-89	8 x 6.4 x 0.15	
SM-138	4.2 x 5.3 x 3.9	
SM-152	4.2 x 5.3 x 4.3	

Note: Part numbers are RoHS compliant.
 Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
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PACKAGE SELECTION GUIDE



Transistor Packages		
Package	Approx Outline Dimensions (mm)	
P-237 Ceramic	20 x 15 x 4	
P-238 Ceramic	34 x 19.6 x 4	
P-239 Ceramic	21 x 1 x 4	
355E-01, Style 1 Ceramic	23 x 21 x 5	
368-03, Style 2 Ceramic	38 x 50 x 9	
PH1214-M Series Ceramic	23 x 10 x 4.5	
P-8TF	20.8 x 6.4 x 3.5	
P-51H	22.9 x 10.2 x 5.5	
P-94C	22.9 x 10.2 x 5.5	

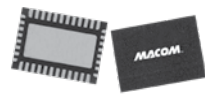
Transistor Packages (continued)		
Package	Approx Outline Dimensions (mm)	
P-94D	22.9 x 10.2 x 4.2	
P-94I	22.9 x 10.2 x 4.2	
P-154C	25.4 x 15.2 x 5.1	
Pallet	50.8 x 35.8 x 7	
GaN Packages		
Package	Approx Outline Dimensions (mm)	
	Ceramic	
AC-200B-2	13.97 x 8.13 x 3.1	
AC-200S-2	5.18 x 8.13 x 3.1	
AC-360B-2	20.32 x 10.92 x 3.86	
AC-360S-2	9.65 x 10.92 x 3.86	

Note: Part numbers are RoHS compliant.
 Detailed specifications can be found on our website at macom.com by typing the part number into the search box.
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PACKAGE SELECTION GUIDE



GaN Packages (continued)		
Package	Approx Outline Dimensions (mm)	
AC-400S-2	10.16 x 14.96 x 4.11	
AC-780B-2	34.04 x 19.43 x 3.6	
AC-780S-2	20.57 x 19.43 x 3.6	
AC-780B-4	34.04 x 19.43 x 3.36	
AC-780S-4	20.57 x 19.43 x 3.62	
AC-1230B-4	41.28 x 19.61 x 4.42	
AC-1230S-4	32.26 x 19.61 x 4.42	
Plastic		
3 x 6 mm PDFN-14	6.0 x 3.0 x 1.0	
SOICEP	4.9 x 6.1 x 1.47	

GaN Packages (continued)		
Package	Approx Outline Dimensions (mm)	
4 mm PQFN-24	4.0 x 4.0	
5 x 6 mm PDFN-8	6.0 x 5.0	
5 x 7 mm PDFN-40	4.0 x 4.0	
TO-272-2	23.62 x 11.18 x 2.59	
TO-272-4	23.62 x 14.1 x 2.59	
TO-272S-2	17.25 x 11.18 x 2.59	
TO-272S-2B	17.25 x 11.18 x 2.59	
TO-272S-4	17.25 x 11.18 x 2.59	
TO-272S-4	17.25 x 11.18 x 2.59	

Note: Part numbers are RoHS compliant.
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50-Ω System Terminated											
dBm	V	Po	dBm	V	Po	dBm	mV	Po	dBm	V	Po
53	100	200 W	—	—	—	—	—	—	—	—	—
50	70.7	100 W	0	0.225	1 mW	-49	0.8	—	-97	3.2	—
49	64	80 W	-1	0.2	0.8 mW	-50	0.71	.01 μW	-98	2.9	—
48	58	64 W	-2	0.18	0.64 mW	-51	0.64	—	-99	2.51	—
47	50	50 W	-3	0.16	0.5 mW	-52	0.57	—	-100	2.25	0.1 pW
46	44.5	40 W	-4	0.141	0.4 mW	-53	0.5	—	-101	2	—
45	40	32 W	-5	0.125	0.32 mW	-54	0.45	—	-102	1.8	—
44	32.5	25 W	-6	0.115	0.25 mW	-55	0.4	—	-103	1.6	—
43	32	20 W	-7	0.1	0.2 mW	-56	0.351	—	-104	1.41	—
42	28	16 W	-8	0.09	0.16 mW	-57	0.32	—	-105	1.27	—
41	26.2	12.5 W	-9	0.08	0.125 mW	-58	0.286	—	-106	1.18	—
40	22.5	10 W	-10	0.071	0.1 mW	-59	0.251	—	—	—	—
39	20	8 W	-11	0.064	—	-60	0.225	0.001 μW	dBm	nV	—
38	18	6.4 W	-12	0.058	—	-61	0.2	—	-107	1000	—
37	16	5 W	-13	0.05	—	-62	0.18	—	-108	900	—
36	14.1	4 W	-14	0.045	—	-63	0.16	—	-109	800	—
35	12.5	3.2 W	-15	0.04	—	-64	0.141	—	-110	710	0.01 pW
34	11.5	2.5 W	-16	0.0355	—	—	-111	640	—	—	—
33	10	2 W	—	dBm	μV	—	-112	580	—	—	—
32	9	1.6 W	dBm	mV	—	-65	128	—	-113	500	—
31	8	1.25 W	-17	31.5	—	-66	115	—	-114	450	—
30	7.1	1 W	-18	28.5	—	-67	100	—	-115	400	—
29	6.4	800 mW	-19	25.1	—	-68	90	—	-116	355	—
28	5.8	640 mW	-20	22.5	.01 mW	-69	80	—	-117	825	—
27	5	500 mW	-21	20	—	-70	71	0.1 nW	-118	285	—
26	4.45	400 mW	-22	17.9	—	-71	65	—	-119	251	—
25	4	320 mW	-23	15.9	—	-72	58	—	-120	225	0.001 pW
24	3.55	250 mW	-24	14.1	—	-73	50	—	-121	200	—
23	3.2	200 mW	-25	12.8	—	-74	45	—	-122	180	—
22	2.8	160 mW	-26	11.5	—	-75	40	—	-123	160	—
21	2.52	125 mW	-27	10	—	-76	35	—	-124	141	—
20	2.25	100 mW	-28	8.9	—	-77	32	—	-125	128	—
19	2	80 mW	-29	8	—	-78	29	—	-126	117	—
18	1.8	64 mW	-30	7.1	.001 mW	-79	25	—	-127	100	—
17	1.6	50 mW	-31	6.25	—	-80	22.5	0.01 nW	-128	90	—
16	1.41	40 mW	-32	5.8	—	-81	20	—	-129	80	0.1 fW
15	1.25	32 mW	-33	5	—	-82	18	—	-130	71	—
14	1.15	25 mW	-34	4.5	—	-83	16	—	-131	61	—
13	1	20 mW	-35	4	—	-84	11.1	—	-132	58	—
12	0.9	16 mW	-36	3.5	—	-85	12.9	—	-133	50	—
11	0.8	12.5 mW	-37	3.2	—	-86	11.5	—	-134	45	—
10	0.71	10 mW	-38	2.85	—	-87	10	—	-135	40	—
9	0.64	8 mW	-39	2.5	—	-88	9	—	-136	35	—
8	0.58	6.4 mW	-40	2.25	1 μW	-89	8	—	-137	33	—
7	0.5	5 mW	-41	2	—	-90	7.1	0.001 nW	-138	29	—
6	0.445	4 mW	-42	1.8	—	-91	6.1	—	-139	25	—
5	0.4	3.2 mW	-43	1.6	—	-92	5.75	—	-140	23	0.01 fW
4	0.355	2.5 mW	-44	1.4	—	-93	5	—	—	—	—
3	0.32	2 mW	-45	1.25	—	-94	4.5	—	—	—	—
2	0.28	1.6 mW	-46	1.18	—	-95	4	—	—	—	—
1	0.252	1.25 mW	-47	1	—	-96	3.51	—	—	—	—
—	—	—	-48	0.9	—	—	—	—	—	—	—

Note: Part numbers are RoHS compliant.
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Frequency Band Designations

Previous Frequency Designations	P	L	S		C		X		Ku	K	Ka			
Current Frequency Designations	C	D	E	F	G	H	I	J			K			
	0.5	1.0	2.0	3.0	4.0	6.0	8.0	10.0		12.4	18.0	20.0	26.5	40.0
Frequency (GHz)														

Wavelength and Frequency

For all forms of wave, the velocity, wavelength and frequency are related such that

$$\lambda F \sqrt{\epsilon_r \mu_r} = c$$

λ = wavelength in meters (m)

F = frequency in hertz (Hz)

ϵ_r = relative dielectric constant of propagation medium

c = velocity of light (300,000,000 m/s)

μ_r = relative permeability of propagation medium

The dielectric constant (ϵ) is a property of the medium in which the wave propagates. The value of ϵ is defined as 1.000 for a perfect vacuum and very nearly 1.0 for dry air (typically 1.006). In most practical applications, the value of ϵ in dry air is taken to be 1.000.

For mediums other than air or vacuum, however, the velocity of propagation is slower and the value of ϵ relative to a vacuum is higher. Teflon®, for example, can be made with dielectric constant values (ϵ) from about 2 to 11.

Frequency vs Wavelength

Frequency	Wavelength
1 MHz	300 meters (m)
10 MHz	30 m
100 MHz	3 m
300 MHz	1 m — 100 centimeters (cm)
1 GHz	30 cm
10 GHz	3 cm
100 GHz	3 millimeters (mm)
300 GHz	1 mm — 10 ⁻³ m
3 x 10 ¹⁴	1 micron — 10 ⁻⁶ m

Note: Part numbers are RoHS compliant.

Detailed specifications can be found on our website at macom.com by typing the part number into the search box.

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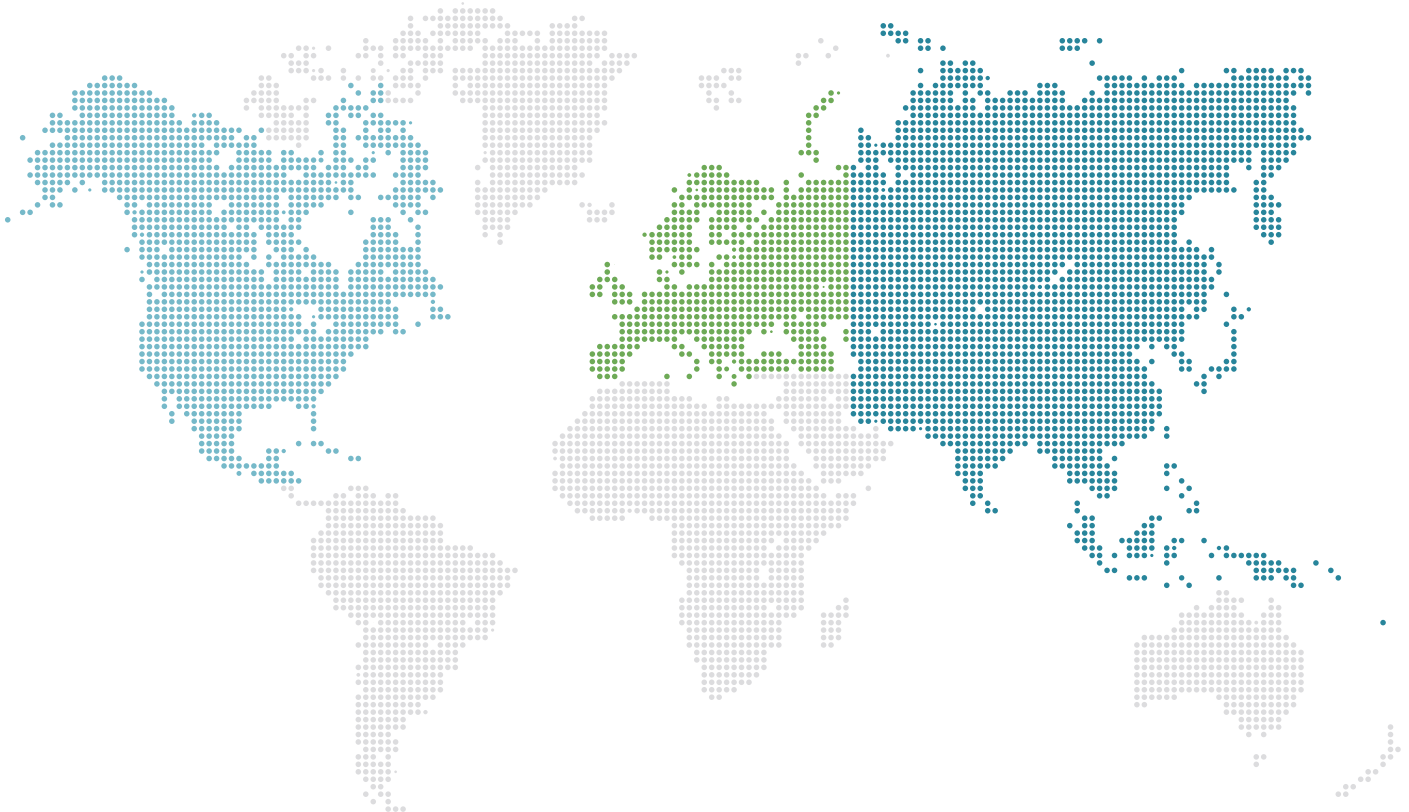
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