



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

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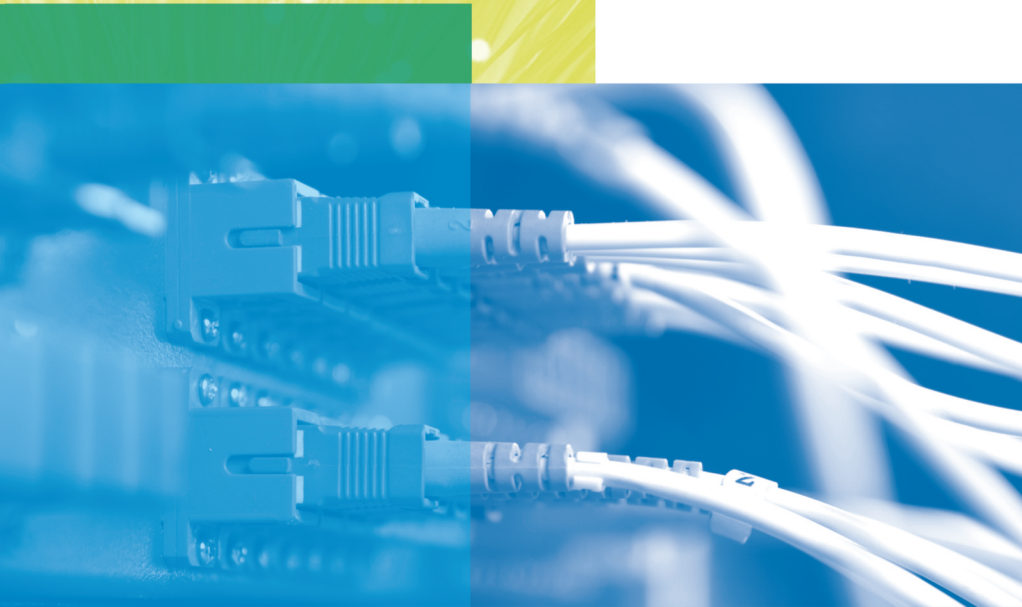
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2013 Product Selection Guide

MACOMTM



M/A-COM Technology Solutions Inc.'s (MACOM) **2013 Product Selection Guide** features our complete range of RF and microwave products. Inside, you will find detailed product specifications and block diagrams designed to help engineers quickly evaluate and select the right products to differentiate their designs.

We have more than sixty years of hands-on experience designing and building analog semiconductor technology across the RF, microwave and millimeter wave spectrum. Our team works with you, engineer-to-engineer, to identify solutions and inspire success in markets from Aerospace to Automotive, Infrastructure to Industrial, and Military to Medical.

Additional product information can be found on our website at [macomtech.com](http://www.macomtech.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: <http://www.macomtech.com/Content/contactus>

MACOM's broad portfolio of products, combined with our global organization of expert engineers, can help you solve the world's most demanding wireless and wireline application challenges.

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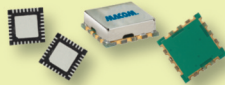
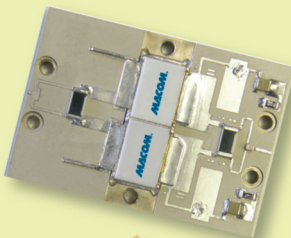
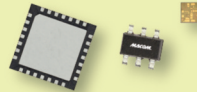
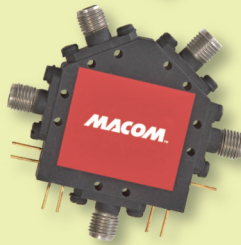
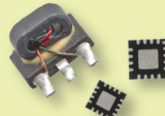
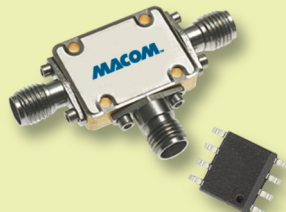
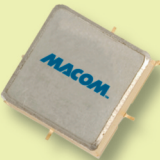
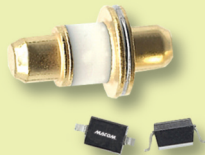
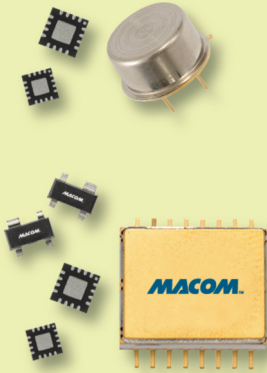
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About MACOM



Partners in RF and Microwave

MACOM (macomtech.com) is a leading supplier of high-performance semiconductors, active and passive components, and subassemblies for use in radio frequency (RF), microwave, and millimeter wave applications. Our broad portfolio of more than 3,000 products can help accelerate your growth in markets including CATV, wireless infrastructure, optical communications, aerospace and defense, automotive, industrial, medical, and mobile devices. We are proud of our more than sixty years of hands-on experience designing and building analog semiconductor technology across the RF, microwave, and millimeter wave spectrum.

Headquartered in Lowell, Massachusetts, MACOM is certified to the ISO 9001 international quality standard and the ISO 14001 environmental management standard. MACOM has design centers and sales offices throughout North America, Europe, Asia, and Australia.

RF and Microwave Capabilities

MACOM offers end-to-end customer solutions and support, from proprietary process technologies to high-quality customer service. We can produce and process semiconductor materials, design and manufacture complex devices, and combine these devices into multi-function 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:

- Si, GaAs, AlGaAs, InGaAs, InP, GaN, SiGe, and RF CMOS IC products
- Unique processes: HMIC™, GMIC™ and AlGaAs™
- In-house design, fabrication, assembly, and screening capabilities
- Multiple design and sales locations to provide global coverage
- Wide spectrum coverage from RF to millimeter wave frequencies
- One of the broadest selections of standard and custom products in the industry

Commercial, Industrial and Military Products

This guide features our catalog 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 dependable team of product managers and engineers is available to support all product and management needs, and offers 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 hosts design, Si and GaAs fabrication, and other operational facilities in a number of geographies. We operate ISO 9001 facilities in Lowell, Massachusetts; Long Beach and Santa Clara, California; Cork, Ireland; Belfast, Northern Ireland; and Sydney, Australia.

How to Purchase

Sales Representatives and Distribution Partners

Most of the standard products listed in this selection guide are available directly from your local MACOM sales office or nearest sales representative.

Visit our website at <http://www.macomtech.com/Content/contactus> for a list of our industry-leading distributors.

eCommerce

Our products are also available for purchase online. To purchase, simply browse our products and click the "buy" button to add products to your cart.

For inquiries about your e-Commerce order contact our customer service team:

Online: <https://www.macomtech.com/forms/customerservicerequest>

Phone: 1.978.656.2222

For general e-Commerce inquiries, contact: ecommerce@macomtech.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 [macomtech.com](http://www.macomtech.com) for more information.

Point-to-Point and Infrastructure



MACOM 42 GHz SmartSet Chipset

High reliability and cost-effective solution

- MACOM offers a complete solution for 42 GHz point-to-point radio applications
- Systems-driven approach to integration, coupled with innovative IC and package design capabilities, enable OEM customers to achieve faster time-to-market with optimal performance
- Offered in convenient surface mount packages, facilitating the use of common high-volume assembly lines in lower-cost manufacturing operations.

Point-to-Point Backhaul Evolution

High performance for increasing capacity needs

MACOM understands that ever-increasing bandwidth demands, from mobile device usage, require more advanced backhaul systems to meet increasing capacity needs. We also realize that microwave point-to-point (PtP) systems provide an ideal choice for backhaul, particularly where optical fiber is cost prohibitive in areas such as dense urban environments. Our chipset offers a high performance solution for the 40.5-43.5 GHz band which will open up additional spectrum for voice, video, and data transmission over cellular backhaul systems.

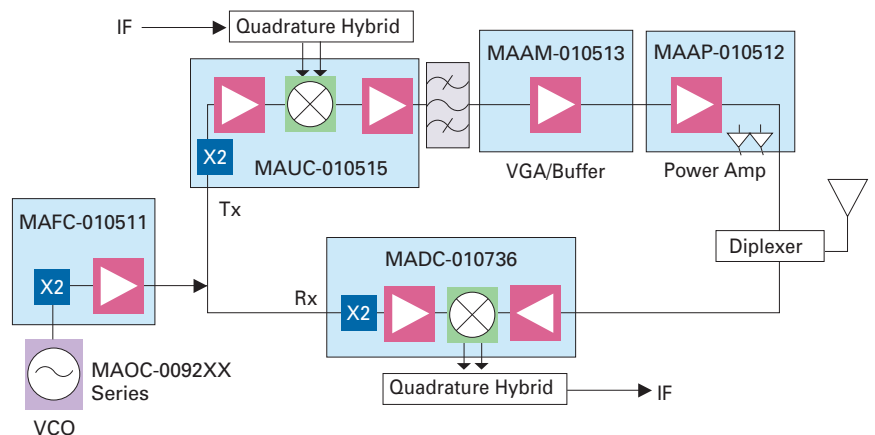
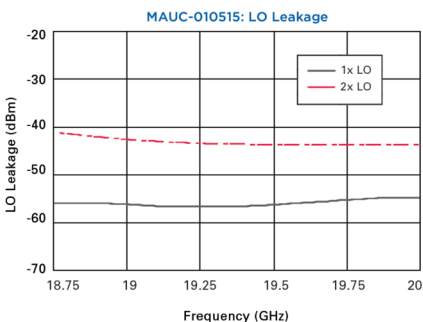
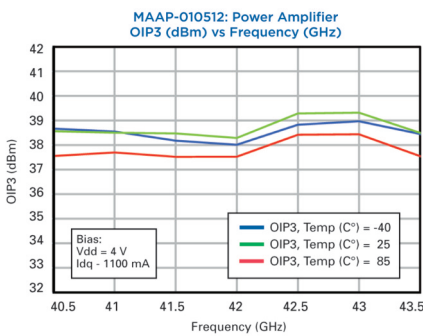
MACOM Infrastructure Products

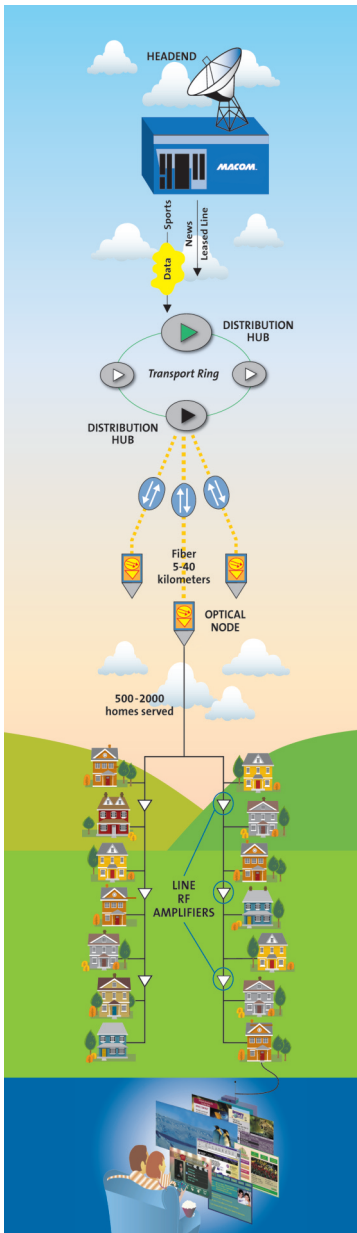
Supporting 3G and 4G base station infrastructure applications

MACOM offers a wide variety of products to support the demanding requirements of today's 3G and 4G base station infrastructure applications. Our portfolio includes low noise amplifiers, driver amplifiers, gain blocks, high power switches, digital and analog attenuators, high isolation switches, transformers and discrete diodes.

Our products deliver leading edge solutions to today's challenging wireless communications systems. We supply both standard products and custom solutions that set the industry standard for high performance and reliability.

For more information, including advanced data sheets, please contact your MACOM sales office or visit macomtech.com





Delivering comprehensive solutions for demanding CATV and broadband applications

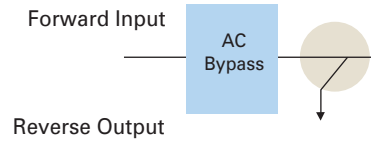
MACOM offers an extensive range of components and modules for MoCA®, DOCSIS® and EdgeQAM as well as FTTx system nodes and interconnect applications. We make components for the “RF side” of the fiberoptic cable network.

- EdgeQAM-DOCSIS variable gain amplifiers
- FTTx RF amplifiers
- Low noise amplifiers and gain blocks
- Ultra-low noise, high linearity active splitters
- MoCA triplex, duplex and bandpass filters
- High isolation, low-loss multi-way switches
- Digital step attenuators
- Multi-function ICs
- Transformers, couplers and power dividers

From head end to client side, applications include:

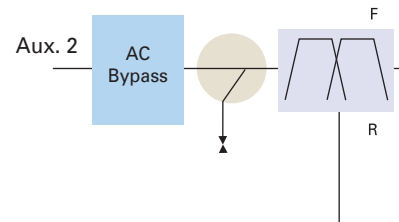
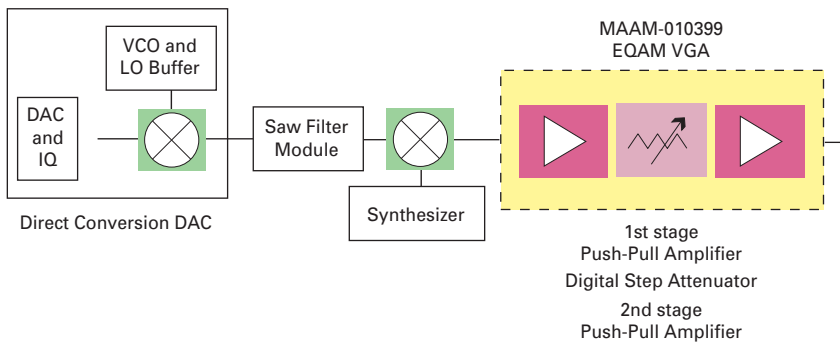
- EdgeQAM distribution equipment
- Hybrid fiber coax (HFC) nodes
- Line extenders and drop amplifiers
- FTTx passive optical nodes
- Optical Network Terminals (ONT)
- Customer premises equipment and cable modems
- Interdiction and telephony systems
- MoCA, home gateway and Ethernet-to-Coax Bridges (ECB)

CATV and Broadband

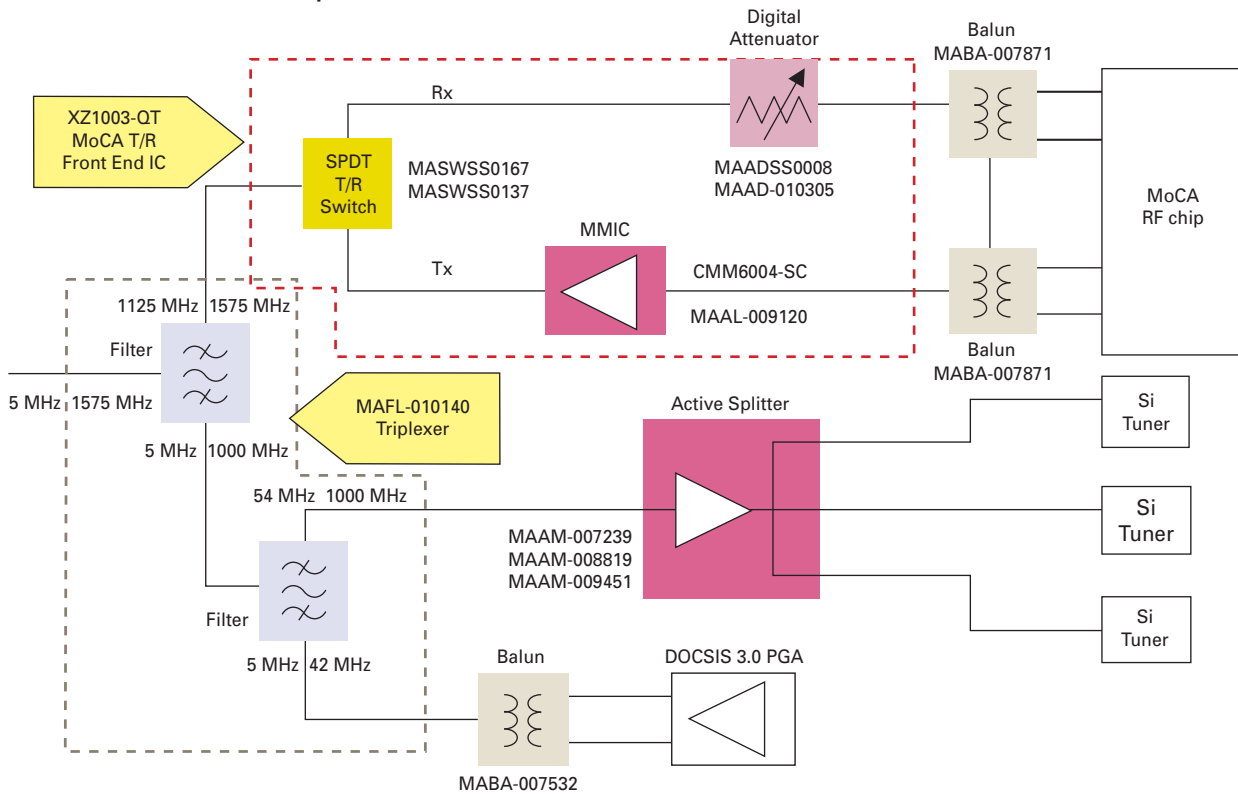


Baluns:
 MABACT0051 (Forward)
 MABACT0055 (Forward)
 MABACT0036 (Reverse)
 MABACT0045 (Reverse)

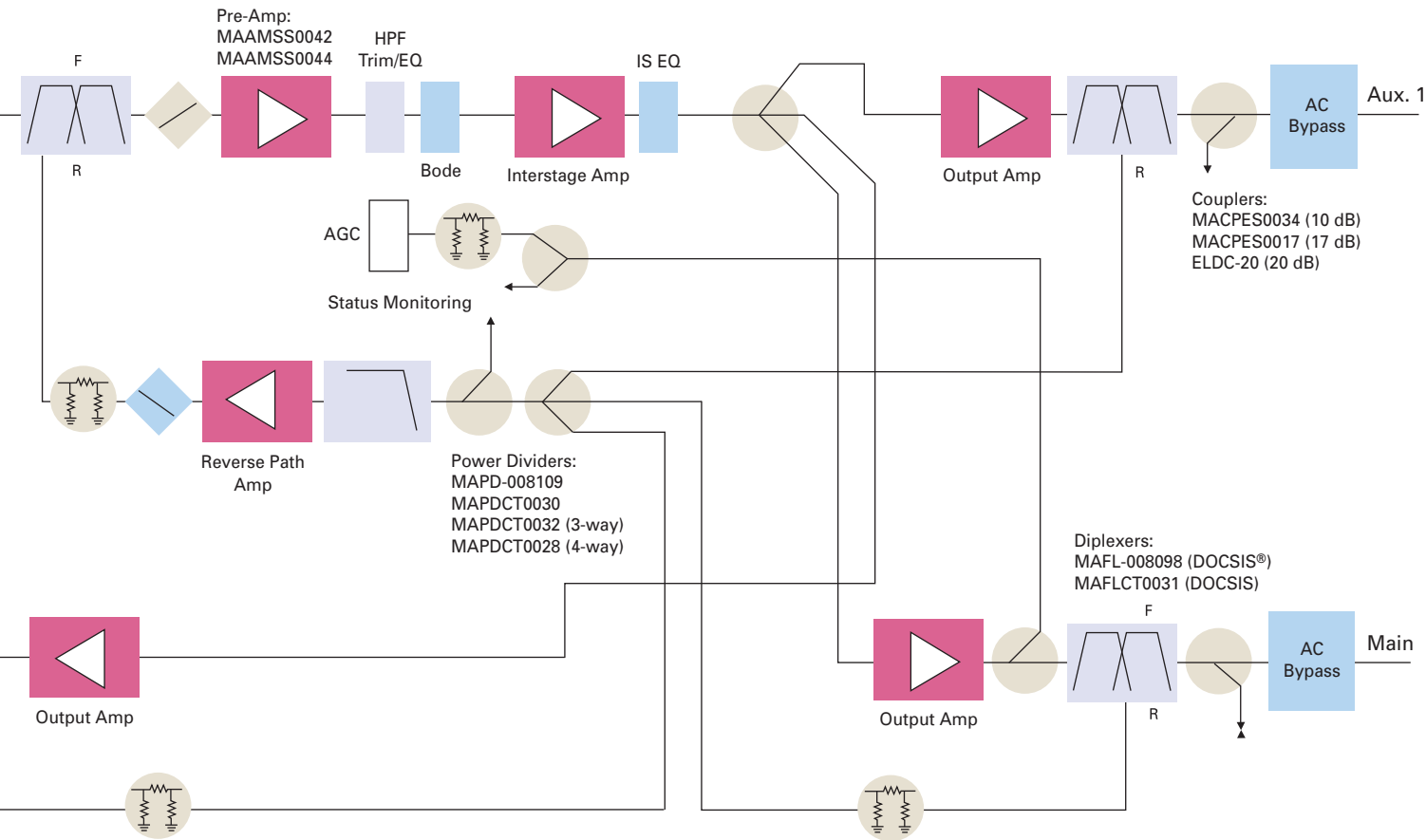
Head End Modules – Modulator Output



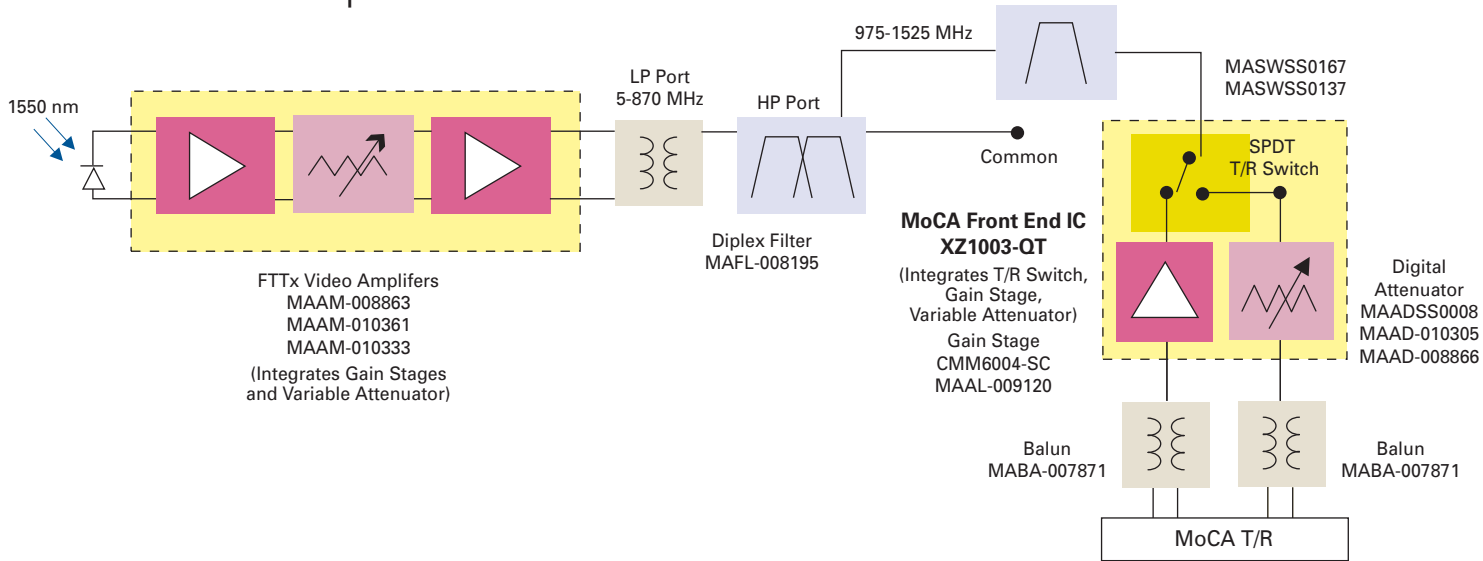
MoCA-Enabled Set-Top Box Front End



Typical Line Amplifier Architecture



FTTx Video Amplifier with MoCA



Optoelectronics



MACOM offers the industry's largest portfolio of modulator drivers and transimpedance amplifiers for line and client side 10G, 40G and 100G optical communications systems. Our products leverage GaAs pHEMT and InP technologies to achieve market leading performance with minimum size. Our experienced design team works in close collaboration with leading customers to develop products which offer the optimum tradeoff between performance, power, size and cost. The explosion in data communications due to smartphone proliferation, video on demand, cloud computing, and other data-centric applications has forced telecommunication companies to migrate their core fiber optic networks from 10 Gbps to both 40 Gbps and 100 Gbps to increase capacity without the expense of laying additional fiber. This transition is enabled using complex modulation schemes to increase bandwidth efficiency and reduce the cost per bit. The analog electronics that interface the digital domain to the optical domain are a key building block in these systems.

MACOM Modulator Driver Amplifiers

The modulator driver amplifier line includes Electro-absorption (EA) modulator drivers for low cost, short range, datacom applications, as well as high voltage Mach Zehnder (MZ) drivers for metro and long haul telecoms systems.

Some key features of the MACOM modulator drivers include:

- Optional differential inputs for reduced cross-talk and improved noise immunity
- Optional differential outputs for use with InP MZ modulators
- Single- and multi-channel solutions
- Low power dissipation
- Choice of die, surface mount packages and GPPO solutions

MACOM Transimpedance Amplifiers (TIA)

Our Optoelectronics product line also includes a wide range of transimpedance amplifiers (TIA) for 10G, 40G and 100G fiber optic receivers. The family includes linear TIAs for coherent receivers and limiting TIAs for non-coherent receivers. These parts feature market leading gain and power dissipation. They are available in die form for integration with photo-detectors in an optical sub-assembly.

The key features of the MACOM TIA family are:

- Linear and limiting TIAs for line and client side 10G, 40G and 100G systems
- High transimpedance gain — up to 6 k Ω
- Low power dissipation — <0.4 W
- Optional closed loop gain control
- Integrated DC offset cancellation

MACOM Limiting Amplifiers

Our Optoelectronics product family includes limiting amplifiers for non-coherent 40G receivers. Limiting amplifiers are used to further amplify the output of a transimpedance amplifier prior to the digital SERDES (Serializer-Deserializer). The limiting amplifier is required to maintain a constant output voltage over a wide range of input voltages with minimal distortion.

Key features of the MACOM limiting amplifiers are:

- Differential inputs and outputs
- Wide input voltage range
- Crossing control
- Built-in closed loop AGC
- QFN style surface mount package





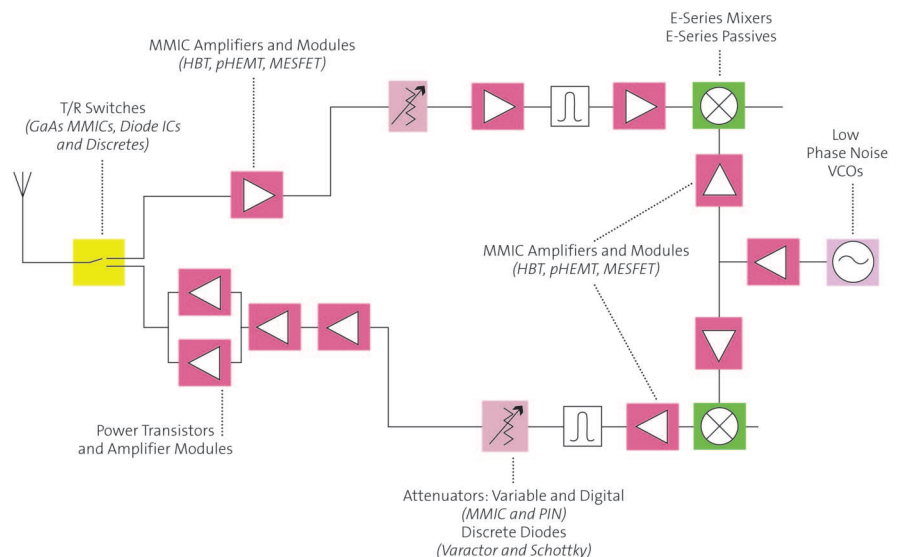
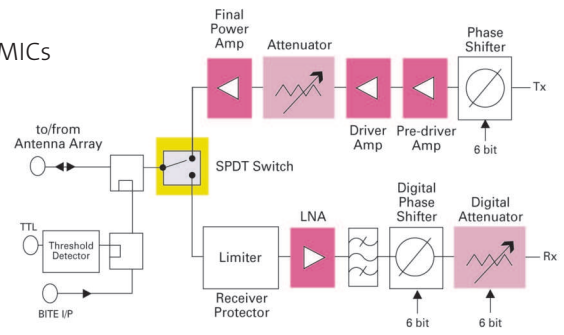
Integrated Modules and Discrete Components for Radar and EW Applications

Aerospace and defense applications require a diverse suite of RF components that support a broad range of system architectures. From military communications to radar and sensing to electronic warfare, today's battlefield systems require high performance and the utmost in reliability and affordability to provide our warfighters with the tools they deserve. MACOM has supported the demanding needs of aerospace and defense for more than 60 years. Our engineers understand and deliver the performance that keeps our warfighters safe. MACOM offers a broad range of products and technical capabilities that meet today's aerospace and defense requirements to support systems with both standard and custom solutions.

MACOM uses high volume, dual use processes to create aerospace and defense applications:

- Si, GaAs and AlGaAs diodes
- GaAs MESFET and pHEMT-based MMICs
- Hybrid components—both both passive and active
- Hermetic and printed circuit board-based modules and assemblies

Our extensive design experience, coupled with our assembly and automated test capability, makes MACOM uniquely qualified to address the most demanding aerospace and defense specifications.



Amplifiers



MACOM amplifiers are used extensively in commercial and military electronics applications. We produce low noise amplifiers (LNA), power amplifiers (PA), driver amplifiers and wideband amplifiers ranging from 50 MHz to 77 GHz. Our products are your ideal choice for voice, data and point-to-point applications, for the consumer and military markets.

- Cordless and mobile phones
- Infrastructure cellular base stations for
 - GSM
 - CDMA
 - PHS
 - UMTS
- Satellite radios
- Mobile GPS radios
- VSAT
- CATV and broadband
- WLAN cards and access points
- Aerospace and defense products
- Bluetooth
- RFID



Broadband Amplifiers

Frequency (MHz)	Part Number	Gain (dB)	NF (dB)	Output P1dB (dBm)	Output IP3 (dBm)	Voltage (Volts)	Current (mA)	Package
Die Products								
0 - 6000	CGB7001-BD-000V	20.5	3.3	14.2	28	5	35	Die
0 - 6000	CGB7003-BD-000V	20.7	2.9	16.6	31.5	5	50	Die
0 - 6000	CGB7004-BD-000V	16.5	3.6	17	32	5	62	Die
0 - 6000	CGB7005-BD-000V	21	3.2	17.6	32.5	5	63	Die
0 - 6000	CGB7006-BD-000V	15.2	4.1	18	33.5	8	64	Die
0 - 6000	CGB7007-BD-000V	19	4.5	18.8	34	8	67	Die
0 - 6000	CGB7008-BD-000V	21.2	3.2	18.8	33.5	8	64	Die
0 - 6000	CGB7009-BD-000V	16.8	3.9	19.2	35.3	8	73	Die
0 - 6000	CGB7010-BD-000V	21.5	3.2	20	35.5	8	75	Die
0 - 6000	CGB7011-BD-000V	21.7	3.4	21	36	8	82	Die
0 - 6000	CGB7012-BD-000V	15.7	4.3	20.3	36	8	86	Die
0 - 8000	CGB7014-BD-000V	24.5	3.5	20.3	36	8	80	Die
0 - 6000	CGB7015-BD-000V	23	4	21.1	37	8	92	Die
0 - 6000	CGB7016-BD-000V	22.4	3.8	18.4	34	5	78	Die
0 - 8000	CGB7017-BD-000V	23.1	3.3	18.2	33.8	5	70	Die
200 - 3000	MAAM02350	17	3.7	14	24	6	65	Die
2000 - 9000	CMM-9-BD-000V	14.5	5.5	17	27	6	80	Die
2000 - 18000	CMM1100-BD-000V	17	3.5	16	33	5	100	Die
2000 - 18000	CMM4000-BD-000V	8.5	4.5	19	29	5	115	Die
2000 - 22000	CMM0014-BD-000V	11	5	24	36	8	300	Die
2000 - 22000	CMM0015-BD-000V	10	6.5	28	35	12	350	Die
2000 - 22000	CMM0016-BD-000V	9	7	29	37	11.5	690	Die
Packaged Products								
0 - 6000	CGB7001-SC-0G0T	20.5	3.3	14.2	28	5	35	SOT-89
0 - 6000	CGB7003-SC-0G0T	20.7	2.9	16.6	31.5	5	50	SOT-89
0 - 6000	CGB7004-SC-0G0T	16.5	3.6	17	32	5	62	SOT-89
0 - 6000	CGB7005-SC-0G0T	21	3.2	17.6	32.5	5	63	SOT-89
0 - 6000	CGB7006-SC-0G0T	15.2	4.1	18	33.5	8	64	SOT-89
0 - 6000	CGB7007-SC-0G0T	19	4.5	18.8	34	8	67	SOT-89
0 - 6000	CGB7008-SC-0G0T	21.2	3.2	18.8	33.5	8	64	SOT-89
0 - 6000	CGB7009-SC-0G0T	16.8	3.9	19.2	35.3	8	73	SOT-89
0 - 6000	CGB7010-SC-0G0T	21.5	3.2	20	35.5	8	75	SOT-89
0 - 6000	CGB7011-SC-0G0T	21.7	3.4	21	36	8	82	SOT-89
0 - 6000	CGB7012-SC-0G0T	15.7	4.3	20.3	36	8	86	SOT-89
0 - 8000	CGB7014-SC-0G0T	24.5	3.5	20.3	36	8	80	SOT-89
0 - 6000	CGB7015-SC-0G0T	23	4	21.1	37	8	92	SOT-89
0 - 6000	CGB7016-SC-0G0T	22.4	3.8	18.4	34	5	78	SOT-89
0 - 8000	CGB7017-SC-0G0T	23.1	3.3	18.2	33.8	5	70	SOT-89
2 - 2400	A33-1	9	4	6	19	15	19	TO-8, SMT, SMA
2 - 2400	A35-1	9	4.2	9.5	23	15	26	TO-8, SMT, SMA
100 - 2600	A36-2	15	7	14	30	15	63	TO-8, SMT, SMA
20 - 2700	MAAM-007501-SA2002	11.5	2.5	27	40	9	165	TO-8, SMT, SMA
200 - 3000	MAAM02350-A2	18	4	14	24	6	65	CR-3
100 - 3200	A43	11.5	7	8.5	21	15	45	TO-8, SMT, SMA
4000 - 20000	MAAM-011101	12	4	18	30	12	45	1.5 x 1.2 mm TDFN-12

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

Blue listings indicate standard stock items widely available from our franchised distribution partners.

Detailed specifications for our standard parts can be found quickly on our website at macomtech.com by typing the part number into the search box.

All specifications are subject to change.

CATV Amplifiers and Active Splitters

Frequency (MHz)	Part Number	Description	Gain (dB)	N.F. (dB)	Output P1dB	CTB (dBm)	CSO (dBm)	Channel Loading (dBmV/Ch)	Bias (V)	Current (mA)	Package
Amplifiers											
35 - 350	PAW1027 ♦	50 ohm hybrid	38.5	3.7	—	-59	-59	46/60	24	300	SOT115J
35 - 500	PAW1027-1 ♦	50 ohm hybrid	38	4.5	—	-59	-59	46/60	24	300	SOT115J
45 - 1000	MAAM-009634	Push-Pull Line Amp	24	4	26	-70	-70	44/79	24	265	TSSOP-16
45 - 1200	MAAM-010355	Pwr Doubler Line Amp	23	4	30.8	-73	-76	59/79	24	465	TSSOP-16
50 - 3000	CMM6004-SC	High Dynamic Range	14.5	2.1	23.5	—	—	—	3 - 5	150	SOT-89
50 - 1005	MAAM-007724	LNA	12.2	3.3	24	-78	-78	13/135	5	190	4 mm PQFN-20
50 - 1000	MAAM-007796	LNA	21	3.8	20	-70	-70	20/132	5	160	4 mm PQFN-20
50 - 1000	MAAM-007807	LNA	9	3.8	18	-75	-65	15/132	5	60	SOT-89
50 - 1000	MAAM-009100	LNA	13.8	3	18	63	63	30/132	5	105	SOT-89
50 - 1000	MAAM-009633	LNA	17	1.9	23	-75	-60	30/132	8	120	SOT-89
50 - 1000	MAAMSS0041	LNA	14.8	2.7	23	-80	-70	23/132	5/8	100	SOT-89
50 - 1000	MAAMSS0042	LNA	15	3	21	-70	-70	30/132	5	110	SOT-89
50 - 1000	MAAMSS0044	LNA	12.5	3.7	24	75	85	34/79	5	225	4 mm PQFN-20
50 - 1000	MAAMSS0060	LNA	17	1.8	23	-75	-60	30/132	5/8	120	SOT-89
50 - 1000	MAAM-009455	Gain Block	20.5	5.5	26	-70	-70	39/77	8	325	4 mm PQFN-20
50 - 1000	MAAM-010144	Gain Block	20.5	5.5	26	-70	-70	39/78	8	325	TSSOP-16
50 - 1000	MAAM-010373	LNA	22	2.2	25	-74	-62	33/80	8	148	SOT-89
50 - 1100	MAAM-010399	VGA	28	5	28	-78	-78	39/77	6	800	5x7 mm PQFN-40
50 - 2700	MAAM-011117	LNA	16	2.7	19.5	-75	-65	15/79	5	85	2 mm PDFN-8
100 - 3500	MAAL-010704	LNA	16	0.8	18	—	—	—	3/5	100	SOT-363

Frequency (MHz)	Part Number	Description	Gain (dB)	Noise Figure (dB)	Output P1dB (dBm)	OIP2 (dBm)	OIP3 (dBm)	64 QAM MER Pwr (dBmV)	Bias (V)	Current (mA)	Package
Reverse Path Amplifiers											
5 - 300	MAAM-011122	Docsis 3.1	39	3	27	70	42	35/72	8	280	7 mm PQFN-48

Frequency (MHz)	Part Number	Description	Gain (dB)	N.F. (dB)	Output P1dB	CTB (dBm)	CSO (dBm)	Channel Loading (dBmV/Ch)	Bias (V)	Current (mA)	Package
Active Splitter Modules											
50 - 1100	MAAM-007239	3 splits	6	4.5	17	-77	-65	15/132	5	125	3 mm PQFN-16
50 - 1100	MAAM-007805	2 splits	8.5	4	17	-75	-60	15/132	5	100	3 mm PQFN-12
50 - 1100	MAAM-008818	2 splits	3.6	2.6	9	-63	-60	15/132	5	120	2 mm PDFN-8
50 - 1100	MAAM-008819	3 splits	2.5	3.8	8.5	-63	-60	15/132	5	120	2 mm PDFN-8
50 - 1100	MAAM-008820	4 splits	3	3.8	10	-63	-60	15/132	5	120	3 mm PQFN-12
50 - 1100	MAAM-008821	5 splits	3.5	3.8	9	-70	-60	15/132	5	120	3 mm PQFN-12
50 - 1100	MAAM-008822	3 splits	1/3	4.5	7.5/11	-63	-60	23.5/135	5	120	2 mm PDFN-8

Default-On Active Splitters											
Frequency (MHz)	Part Number	Description	Gain (dB)	N.F. (dB)	Output P1dB	CTB (dBm)	CSO (dBm)	Channel Loading (dBmV/Ch)	Bias (V)	Current (mA)	Package
50 - 1100	MAAM-009879	2 splits	3	4.5	6	-70	-60	15/132	5	100	3 mm PQFN-12
50 - 1100	MAAM-009450	3 splits	3	3.8	7	-65	-65	15/132	5	100	3 mm PQFN-12
50 - 1100	MAAM-009778	4 splits	2.5	4.5	6	-65	-60	15/132	5	100	3 mm PQFN-12
50 - 1100	MAAM-009779	5 splits	1.5	4.5	6	-65	-60	15/132	5	100	3 mm PQFN-12
50 - 1100	MAAM-010263	6 splits	3	4.5	6	-65	-60	15/132	5	140	4 mm PQFN-24
50 - 1100	MAAM-010237	8 splits	3	4.5	25	-65	-60	15/135	5	140	4 mm PQFN-24
50 - 1100	MAAM-009451	3 splits	2.5	4.5	—	-70	-68	15/135	3.3	90	2 mm PDFN-8
50 - 1100	MAAM-009452	4 splits	2.5	3.8	5	-65	-65	15/132	3.3	120	3 mm PQFN-12
50 - 1100	MAAM-009811	2 splits	2.5	4	—	-70	-68	15/135	3.3	90	2 mm PDFN-8
950 - 2150	MAAM-008970	2 splits	4.8	5	7	-60	-68	15/135	3 - 5	60	3 mm PDFN-12

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

Blue listings indicate standard stock items widely available from our franchised distribution partners.

Detailed specifications for our standard parts can be found quickly on our website at macomtech.com by typing the part number into the search box.

CATV Amplifiers and Active Splitters (continued)

Frequency (MHz)	Part Number	Description	Gain (dB)	EIN (PA/rHz)	Gain Range (dB)	CTB (dBm)	CSO (dBm)	Channel Loading (dBmV/Ch)	Bias (V)	Current (mA)	Package
FTTx Amplifiers											
50 - 1000	MAAM-008863	FTTx VGA	35	4.8	25	-61	-62	20/79	5	220	4 mm PQFN-2
50 - 1000	MAAM-010333	FTTx VGA	34	3.2	27	-68	-65	24/79	5	224	4 mm PQFN-24

CATV MoCA Front End ICs

Frequency (MHz)	Part Number	TxP1dB (dBm)	Tx Gain (dB)	TxOIP3 (dBm)	Rx Gain (dB)	Icc (mA)	Vd (Volts)	Package
775 - 1525	XZ1003-QT	21.5	16/13/10	36	-0.7/-15.8	200	3.3 - 5	3 mm QFN-16
475 - 0625	XZ1004-QT	21.5	17/14	34.5	-0.8/-15.3	200	3.3 - 5	3 mm QFN-16

Driver Amplifiers

Frequency (MHz)	Part Number	Gain (dB)	NF (dB)	Output P1dB (dBm)	Output IP3 (dBm)	Voltage (Volts)	Current (mA)	Package
250 - 2500	MAAM-009286	15.5	3.5	27	42	5	160	SOT-89
250 - 2500	MAAM-009560	15.5	3.5	28.5	42	5	230	SOT-89
0 - 2800	CGB8001-SC-0G0T	15.5	3.9	27	—	5	100	SOT-89
250 - 3000	MAAM-009563	19.5	6	31	47	5	510	SOT-89
40500 - 43500	MAAM-010513	23	—	23	32	4	400	4 mm laminate

Low Noise Amplifiers

Frequency (MHz)	Part Number	Gain (dB)	NF (dB)	Output P1dB (dBm)	Output IP3 (dBm)	Voltage (Volts)	Current (mA)	Package
Die Products								
1200 - 1750	MAAM12000	26	1.25	14	24	5	80	Die
20000 - 40000	XL1000-BD	20	3	—	—	3/5	35/50	Die
Packaged Products								
10 - 100	AM-162-PIN	12.5	1.5	15	30	15	11	TO-8-1
10 - 100	AMS-162-PIN	12.5	1.5	15	30	15	11	SF-1
5 - 200	A71	18	2.1	-2.5	10	15	9	TO-8, SMT, SMA
10 - 200	A80-1	27.3	2	16	28	15	30	TO-8, SMT, SMA
10 - 250	A231	26	1.7	10	22	5	16	TO-8, SMT, SMA
10 - 250	A70	8	1.6	8	24	15	10	TO-8, SMT, SMA
10 - 250	A70-1	8	1.8	14	28	15	15	TO-8, SMT, SMA
10 - 250	A70-2	8	2.2	19	38	15	25	TO-8, SMT, SMA
5 - 500	A1	16	2.4	-1	11	15	9	TO-8, SMT, SMA
10 - 500	A531	31.7	2	2.5	14	5	17	TO-8, SMT, SMA
5 - 500	A75	21	2.1	9	21	15	24	TO-8, SMT, SMA
10 - 500	A75-3	20.5	1.7	3	16	15	14	TO-8, SMT, SMA
20 - 500	A80	29	2.3	14.3	27	15	45	TO-8, SMT, SMA
400 - 500	MAAL-008624	21	0.9	—	28	5	60	SOIC-8
800 - 1000	MAAL-008091	15	1.2	16.5	30	5	60	SOIC-8
5 - 1200	SMA21-1	15.5	2.4	-1	11	15	10	TO-8, SMT, SMA

(continued on page 14)

Low Noise Amplifiers (continued)

Frequency (MHz)	Part Number	Gain (dB)	NF (dB)	Output P1dB (dBm)	Output IP3 (dBm)	Voltage (Volts)	Current (mA)	Package
100 - 1200	A1212	14	1.8	19	29	5	70	TO-8, SMT, SMA
500 - 1600	MAAL-010705	21	0.5	18.5	32	4	60	2 mm PDFN-8
1550 - 1600	MAALSS0042	27	1.15	1	13	5	20	SOIC-8
1500 - 1600	MAALSS0044	21	1.55	6	19	5	8	SOIC-8
1200 - 1750	MAAMI2000-A1	26	1.35	14	24	5	80	CR-3, CR-10
100 - 2000	A32	13	2.1	22	32	15	92	TO-8, SMT, SMA
1800 - 2000	PA2001 ♦	21	2	30.3	46.5	12	345	Flange Mount Carrier
1400 - 2000	MAALSS0048	18	1.6	1	13	3	6.5	SOT-26
1700 - 2000	MAAL-007673	20	1.65	7	19	5	8	SOIC-8
1700 - 2000	MAAM12031 ♦	20	1.65	7	19	5	8	SOIC-8
1400 - 2000	MAAMSS0045	14	1.4	16	29	5	45	SOIC-8
500 - 3000	MAAL-007304	25.5	.7	7	19	3	11.5	SOT-26
70 - 3000	MAAL-010200	11	1.4	18	36	3	77	SOT-89
70 - 3000	MAAL-009120	11	1.4	18	35	3	80	SC-70
100 - 3500	MAAL-010704	14	0.84	19.1	34.5	3	60	SC-70
1000 - 4000	A4011	15.5	2	18.3	29	5	65	TO-8, SMT, SMA
1400 - 4000	MAAL-010706	17.5	0.6	19.1	34.5	4	60	2 mm DFN
5150 - 5850	MAMF-010614	12	2.2	-3	5	3	10	2 mm STQFN-12
2000 - 6000	A6011	14.8	1.5	18	30	5	58	TO-8, SMT, SMA
3500 - 8000	XL1007-QT	12	2	13	25	3	44	3 mm QFN-16
8000 - 12000	MAAL-010528	20	1.6	14	26	4	60	3 mm QFN-16
20000 - 38000	XL1010-QT	17	3	—	—	4	45	3 mm QFN-16

Power Amplifiers

Frequency (MHz)	Part Number	Gain (dB)	NF (dB)	Output P1dB (dBm)	Output IP3 (dBm)	Voltage (Volts)	Current (mA)	Package
Die Products								
27 - 32	XPI026-BD	21	—	33 (Psat)	40	5.5	900	Die
27 - 31	XPI027-BD	21	—	35.5 (Psat)	43	5.5	2000	Die
35 - 43	XPI005-BD	26	—	24 (Psat)	—	4.5	500	Die
Packaged Products								
5 - 100	A101	17	3	23	36	12	105	TO-8, SMT, SMA
35 - 350	PAW1027 ♦	38.5	3.7	31	43	24	300	SOT115J
10 - 500	PA511	12.7	4.6	24.8	40	15	118	TO-8, SMT, SMA
10 - 500	PA512	18	5.2	27.5	40	15	200	TO-8, SMT, SMA
35 - 500	PAW1027-1	38	4.2	31	43	24	300	SOT115J
10 - 1000	SMRA69	25	4.5	23	34	15	130	TO-8B, SMT, SMA
1435 - 1525	AM42-0054	26	—	—	—	—	—	R380
1600	XP9003-MB	38	—	43	—	9	2900	40 x 36 mm
1710 - 1910	AM40-0023	11	0.9	-13	—	—	—	CR-5
1800 - 2000	PA2003 ♦	21	2.5	33.5	49	12	495	Flange Mount Carrier
1800 - 2000	AM55-0004	24	—	24	—	—	—	SSOP-28
200 - 2000	PA2010	10	5	25.5	33	15	179	TO-8, SMT, SMA
200 - 2000	PA38	10	4	23	34	15	150	TO-8, SMT, SMA
1800 - 2000	PA2001 ♦	21	2	30.3	46.5	12	345	Flange Mount Carrier
2200 - 2400	AM42-0055	29	—	—	—	—	—	R380
2400 - 2500	MAAPSS0075	29.5	—	26.5	52	3.3	185	3 mm PQFN-12
2400 - 2500	MAAP-008516	30	—	23	—	3.3	80	2.5 x 2 mm PQFN-14
200 - 2600	PA38-2	8.5	4.5	23.5	33	15	150	TO-8, SMT, SMA
20 - 2700	MAAM-007501-SA2002	11.5	2.5	27	40	9	165	TO-8, SMT, SMA
500 - 3000	MAAP-010168	24	—	41 (Psat)	—	10	3500	Flange Mount Carrier

Power Amplifiers (continued)

Frequency (MHz)	Part Number	Gain (dB)	NF (dB)	Output P1dB (dBm)	Output IP3 (dBm)	Voltage (Volts)	Current (mA)	Package
3100 - 3500	MAAP-010171	27	—	39 (Psat)	—	9	1000	5 mm QFN-20
1000 - 4000	PA48	16	5.5	24	34	15	225	TO-8B, SMT, SMA
2000 - 6000	MAAP-010169	18	—	41 (Psat)	—	10	3500	Flange Mount Carrier
5600 - 7100	XP1039-QJ	17	—	33	48	7	1350	6 mm QFN-24
7100 - 8500	XP1050-QJ	15.5	—	33	47	7	1350	6 mm QFN-24
5900 - 9500	XP1035-QH	26	—	29	39	6	500	4 mm QFN-24
10000 - 13000	MAAP-008924	21	7	31	42	6	1000	5 mm QFN-20
12700 - 13300	MAAP-010516	26	7	34	42	6	1200	5 mm QFN-24
14000 - 14500	AM42-0002	22	—	29.5	39	9	800	CR-15
14000 - 14500	AM42-0007	22	—	32	41	9	1000	CR-15
14400 - 15400	MAAP-010517	24	7	34.5	42	6	1200	5 mm QFN-24
14400 - 15401	MAAP-010518	21	7	33.5	40	6	1200	5 mm QFN-24
12000 - 16000	XP1042-QT	21	—	25	38	5	500	3 mm QFN-16
12000 - 16000	XP1043-QH	21.5	—	30	41	7	700	4 mm QFN-24
37000 - 40000	XP1080-QU	25	—	27	38	4	1000	7 mm SMD-28
37000 - 40000	XP1031-QK	25	—	25	35.5	4	600	7 mm SMD-28
40500 - 43500	MAAP-010512	22	—	27	38	4	1117	7 mm laminate

General

Frequency (MHz)	Part Number	Gain (dB)	NF (dB)	Output P1dB (dBm)	Output IP3 (dBm)	Voltage (Volts)	Current (mA)	Package
Die Products								
4000 - 11000	XB1007-BD	23	4.5	20	30	4	100	Die
10000 - 21000	XB1008-BD	18	5.5	20	30	4	100	Die
16000 - 30000	XB1004-BD	20/21	2.2/3.2	14/19	324/29	4/6	90/180	Die
35000 - 45000	XB1005-BD	19/23	2.7/3.7	13/16	23/26	3.5/4.5	50/154	Die
Packaged Products								
5 - 100	A101	17	3	23	36	12	105	TO-8, SMT, SMA
10 - 100	AM-162-PIN	12.5	1.5	15	30	15	11	TO-8-1, CONN
10 - 100	AMS-162-PIN	12.5	1.5	15	30	15	11	SF-1
15 - 100	AM05-0005	15	5	23	37	—	—	LGA-1
15 - 100	AM05-0006	10.6	5	23	40	—	—	LGA-1
5 - 200	A71	18	2.1	-2.5	10	15	9	TO-8, SMT, SMA
10 - 200	A80-1	27.3	2	16	28	15	30	TO-8, SMT, SMA
5 - 250	A74-1	31	4.5	8.5	21	15	40	TO-8, SMT, SMA
5 - 250	A75-2	21	4.2	8	19	15	24	TO-8, SMT, SMA
5 - 250	EA54	27	3.8	5	16	5	30	TO-5
10 - 250	A83-1	35.5	2.5	-1.5	9	15	31	TO-8, SMT, SMA
10 - 250	A181	16.5	3.8	22	35	15	95	TO-8, SMT, SMA
10 - 250	A231	26	1.7	10	22	5	16	TO-8, SMT, SMA
10 - 250	A70	8	1.6	8	24	15	10	TO-8, SMT, SMA
10 - 250	A70-1	8	1.8	14	28	15	15	TO-8, SMT, SMA
10 - 250	A70-2	8	2.2	19	38	15	25	TO-8, SMT, SMA
20 - 250	A70-3	8	2.8	21	40	15	37	TO-8, SMT, SMA
20 - 250	A81	25.5	3	17	28	15	35	TO-8, SMT, SMA
20 - 250	A81-1	25	2.5	13.5	27	15	25	TO-8, SMT, SMA
20 - 250	A82	25	2.8	20	31	15	50	TO-8, SMT, SMA

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

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All specifications are subject to change.

General Amplifiers (continued)

Frequency (MHz)	Part Number	Gain (dB)	NF (dB)	Output P1dB (dBm)	Output IP3 (dBm)	Voltage (Volts)	Current (mA)	Package
20 - 250	A82-1	19	2.8	15	26	15	50	TO-8, SMT, SMA
30 - 250	AM-119-PIN	8	2.5	21	35	15	50	TO-8-1, CONN
5 - 300	A78	14	3.5	19.5	35	15	65	TO-8, SMT, SMA
5 - 300	A79	14	4	22	38	15	88	TO-8, SMT, SMA
510 - 300	A87-2	16	2.9	11	24	5	15	TO-8, SMT, SMA
35 - 350	PAW1027 ♦	38.5	3.7	31	43	24	300	SOT115J
5 - 400	A56	26	5.5	13.5	27	15	69	TO-8, SMT, SMA
5 - 400	EA1	14	4.3	-4.5	13	15	10	TO-5
5 - 400	EA2	13.5	5.7	9	21	15	27	TO-5
10 - 400	A411	15.8	3	10	24	5	16	TO-8, SMT, SMA
10 - 400	A87	14	3.8	17.5	33	15	33	TO-8, SMT, SMA
10 - 400	A87-1	16	3.4	17	31	15	30	TO-8, SMT, SMA
10 - 400	MAAM-008199-000A51	15	2.7	-3.5	10	15	7	TO-8, SMT, SMA
5 - 500	A5	14.8	4.5	8.5	22	15	25	TO-8, SMT, SMA
5 - 500	A514	28	4	19	32	15	96	TO-8, SMT, SMA
5 - 500	A515	27.5	3.5	22	33	15	127	TO-8, SMT, SMA
5 - 500	A54	15.5	4	9	21	15	34	TO-8, SMT, SMA
5 - 500	A5-5	15.5	4	9	21	15	24	TO-8, SMT, SMA
5 - 500	A58	11.5	4	19	34	15	65	TO-8, SMT, SMA
5 - 500	A59	11.5	4.3	22	36	15	88	TO-8, SMT, SMA
5 - 500	A72	15	3.3	12.5	26	15	30	TO-8, SMT, SMA
5 - 500	A73	32	3.5	1.5	15	15	20	TO-8, SMT, SMA
5 - 500	A74	30	3	8.5	20	15	40	TO-8, SMT, SMA
5 - 500	A74-2	26	3.8	-1	10	5	13	TO-8, SMT, SMA
5 - 500	A76	28	3	14.7	28	15	62	TO-8, SMT, SMA
5 - 500	A76-1	27.5	3	12.7	26	5	47	TO-8, SMT, SMA
5 - 500	A77	16.5	4.5	16.5	30	15	50	TO-8, SMT, SMA
5 - 500	A88	18.7	6.5	20.5	30	15	79	TO-8, SMT, SMA
5 - 500	AM-123-PIN	10	5.5	18	30	15	62	FP-9, CONN
5 - 500	AM-131-PIN	10	5	19	35	15	65	TO-8-1
5 - 500	AM-143-PIN	15.8	2.5	6	20	15	13	TO-8-1, CONN
5 - 500	AM-147-PIN	17	3.4	20	32	15	52	TO-8-1, CONN
5 - 500	AM-151-PIN	12	4.3	22	36	15	88	TO-8-1, CONN
5 - 500	EA53-2	19	3.6	11	24	15	33	TO-5
5 - 500	EA54-2	29.5	4.5	9.5	20	15	55	TO-5
5 - 500	A1	16	2.4	-1	11	15	9	TO-8, SMT, SMA
5 - 500	A75	21	2.1	9	21	15	24	TO-8, SMT, SMA
5 - 500	RA89	26.5	3.7	21.5	35	15	130	TO-8B, SMT, SMA
5 - 500	MAAM-009503-AM147A	17	3.5	21	35	15	52	TO-8-1
10 - 500	A180	16.5	3.4	18	33	15	63	TO-8, SMT, SMA
10 - 500	A511	17	3.4	20	32	15	52	TO-8, SMT, SMA
10 - 500	A513	20	5.5	18	30	12	120	TO-8, SMT, SMA
10 - 500	A53	15	3	3.5	16	15	12	TO-8, SMT, SMA
10 - 500	A55	14.7	5	11	24	15	30	TO-8, SMT, SMA
10 - 500	A57	14.7	4.8	14	28	15	44	TO-8, SMT, SMA
10 - 500	AM-146-PIN	21	4.5	22	35	15	130	FP-9, CONN
10 - 500	MAAM-008200-000A83	30	3	-1	10	5	13	TO-8, SMT, SMA
10 - 500	A531	31.7	2	2.5	14	5	17	TO-8, SMT, SMA
10 - 500	A75-3	20.5	1.7	3	16	15	14	TO-8, SMT, SMA
10 - 500	PA511	12.7	4.6	24.8	40	15	118	TO-8, SMT, SMA
10 - 500	PA512	18	5.2	27.5	40	15	200	TO-8, SMT, SMA

General Amplifiers (continued)

Frequency (MHz)	Part Number	Gain (dB)	NF (dB)	Output P1dB (dBm)	Output IP3 (dBm)	Voltage (Volts)	Current (mA)	Package
10 - 500	RA89-1	30	3.2	21.5	36	15	130	TO-8B, SMT, SMA
20 - 500	A81-2	24.5	3	15	28	15	29	TO-8, SMT, SMA
20 - 500	A81-3	17	4	8	20	15	29	TO-8, SMT, SMA
20 - 500	A80	29	2.3	14.3	27	15	45	TO-8, SMT, SMA
20 - 500	SMA80	29	2.3	14.3	27	15	45	TO-8, SMT, SMA
35 - 500	PAW1027-1	38	4.2	31	43	24	300	SOT115J
5 - 600	A77-1	16	5	16.5	30	15	50	TO-8, SMT, SMA
6 - 600	A5-6	16	4.5	8.5	21	15	24	TO-8, SMT, SMA
10 - 600	A67-1	15	3.7	17	30	15	36	TO-8, SMT, SMA
10 - 600	CA67-1	15	3.7	17	30	15	36	TO-8, SMT, SMA
100 - 600	AM-160-PIN	28.2	2.5	19	30	15	70	FP-9
100 - 600	AM-191-PIN	23.5	3	22	32	15	77	FP-2
5 - 700	A611	15	3.2	12.5	24	5	31	TO-8, SMT, SMA
10 - 700	A59-1	10.5	6	22	36	15	88	TO-8, SMT, SMA
10 - 800	A67	14	4	16	30	15	32	TO-8, SMT, SMA
100 - 800	A89	22	4.5	17.5	30	15	42	TO-8, SMT, SMA
5 - 1000	A11	14.7	3.1	-2	10	15	9	TO-8, SMT, SMA
5 - 1000	A11-2	16	2.5	-1	10	15	9	TO-8, SMT, SMA
5 - 1000	A63	16	3	4	15	15	14	TO-8, SMT, SMA
5 - 1000	AM-176-PIN	13.2	4	13	27	15	38	TO-8-1
5 - 1000	AM-182-PIN	28.2	3.5	10	20	15	44	TO-8-1
10 - 1000	A1021	26	3.8	14.5	26	5	60	TO-8, SMT, SMA
10 - 1000	A1031	28.5	2.7	10	22	5	36	TO-8, SMT, SMA
10 - 1000	A12	16	2.8	8	22	15	22	TO-8, SMT, SMA
10 - 1000	A17	12	6	15.3	27	15	44	TO-8, SMT, SMA
10 - 1000	A18-1	14.7	3.8	16	30	15	44	TO-8, SMT, SMA
0 - 1000	A19-1	11.5	5.5	22.5	35	15	90	TO-8, SMT, SMA
10 - 1000	A66-1	27.5	2.9	15	28	15	66	TO-8, SMT, SMA
10 - 1000	A66-3	26	3	3	13	5	16	TO-8, SMT, SMA
10 - 1000	AM-145-PIN	10.7	3	18	32	15	50	TO-8-1, CONN
10 - 1000	AM-177-PIN	12	6.5	22	35	15	105	TO-8-1
10 - 1000	AM-183-PIN	28.5	4	14	23	15	72	TO-8-1, CONN
10 - 1000	RA66	37	3.5	15.5	30	15	81	TO-8B, SMT, SMA
10 - 1000	RA69	25	4.5	23	34	15	130	TO-8B, SMT, SMA
5 - 1200	A21-1	15.5	2.4	-1	11	15	10	TO-8, SMT, SMA
10 - 1200	A1211	14	2.8	6	20	5	15.5	TO-8, SMT, SMA
10 - 1200	A64	26	3.4	8	20	15	35	TO-8, SMT, SMA
10 - 1200	A66	23.5	4	15	28	15	64	TO-8, SMT, SMA
10 - 1200	MAAM-008198-00A162	13	3.5	6	18	5	15	TO-8, SMT, SMA
100 - 1200	A1212	14	1.8	19	29	5	70	TO-8, SMT, SMA
2 - 1500	A25-1	13.5	3	9	22	15	25	TO-8, SMT, SMA
5 - 1500	A24	20	4.2	8	21	15	34	TO-8, SMT, SMA
5 - 1500	A25	10	6	9	21	15	24	TO-8, SMT, SMA
10 - 1500	A26	20.5	5	16	27	15	64	TO-8, SMT, SMA
10 - 1500	A27	8.5	7.5	15.5	28	15	50	TO-8, SMT, SMA
10 - 1500	A28	11	6	15	29	15	45	TO-8, SMT, SMA
10 - 1500	A28-2	14	3.5	10.5	24	5	27	TO-8, SMT, SMA

(continued on page 18)

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

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General Amplifiers (continued)

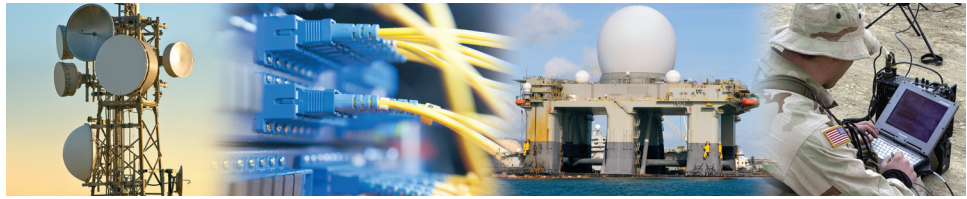
Frequency (MHz)	Part Number	Gain (dB)	NF (dB)	Output P1dB (dBm)	Output IP3 (dBm)	Voltage (Volts)	Current (mA)	Package
10 - 1500	A29-1	9	5.5	22	32	15	90	TO-8, SMT, SMA
300 - 1800	AM-153-PIN	12.4	2.5	7.5	17	15	13	TO-8-1
300 - 1800	AM-155-PIN	12.3	3.5	20	30	15	50	TO-8-1, CONN
10 - 2000	A31-1	11.5	3.5	-2	9	15	9	TO-8, SMT, SMA
10 - 2000	A33	9.5	4.5	3	15	15	14	TO-8, SMT, SMA
10 - 2000	A35	10	5	9	21	15	24	TO-8, SMT, SMA
10 - 2000	A37	10	6.8	15	28	15	47	TO-8, SMT, SMA
10 - 2000	A38	9.5	6.5	19	30	15	65	TO-8, SMT, SMA
10 - 2000	A39	7.5	8.5	22	34	15	90	TO-8, SMT, SMA
10 - 2000	AM-180-PIN	9.7	6	14.5	2.8	15	45	TO-8-1, CONN
10 - 2000	AM-184-PIN	20	5	11	21	15	52	TO-8-1, CONN
100 - 2000	A32-1	11.5	2.5	15.5	25	5	44	TO-8, SMT, SMA
100 - 2000	A34	16	5.5	7	18	15	35	TO-8, SMT, SMA
100 - 2000	A36	16.5	5.5	12	23	15	63	TO-8, SMT, SMA
100 - 2000	A32	13	2.1	22	32	15	92	TO-8, SMT, SMA
100 - 2000	RA36	24	5.5	13	22	15	76	TO-8B, SMT, SMA
200 - 2000	PA2010	10	5	25.5	33	15	179	TO-8, SMT, SMA
200 - 2000	PA38	10	4	23	34	15	150	TO-8, SMT, SMA
1800 - 2000	PA2003 ♦	21	2.5	33.5	49	12	495	Flange Mount Carrier
1800 - 2000	PA2001 ♦	21	2	30.3	46.5	12	345	Flange Mount Carrier
100 - 2300	A36-1	16.2	6	12	23	15	63	TO-8, SMT, SMA
2 - 2400	A33-1	9	4	6	19	15	19	TO-8, SMT, SMA
2 - 2400	A35-1	9	4.2	9.5	23	15	26	TO-8, SMT, SMA
0.01 - 2500	A3010	9.5	4.5	19	35	12	160	TO-8, SMA
100 - 2600	A36-2	15	7	14	30	15	63	TO-8, SMT, SMA
200 - 2600	PA38-2	8.5	4.5	23.5	33	15	150	TO-8, SMT, SMA
20 - 2700	MAAM-007501-SA2002	11.5	2.5	27	40	9	165	TO-8, SMT, SMA
1000 - 4000	A4012	18	3.5	15.5	26	5	65	TO-8, SMT, SMA
1000 - 4000	A45	17.5	4	19.5	29	15	120	TO-8, SMT, SMA
1000 - 4000	A45-1	17.5	4	13	26	5	65	TO-8, SMT, SMA
1000 - 4000	A4011	15.5	2	18.3	29	5	65	TO-8, SMT, SMA
1000 - 4000	PA48	16	5.5	24	34	15	225	TO-8B, SMT, SMA
1000 - 4000	RA46	25.5	4.5	19	30	12	175	TO-8B, SMT, SMA
2000 - 6000	A61	7.5	3.2	12.5	25	5	35	TO-8, SMT, SMA
2000 - 6000	A6011	14.8	1.5	18	30	5	58	TO-8, SMT, SMA
2000 - 6000	RA62	16	4	13	28	15	65	TO-8B, SMT, SMA
2000 - 6000	RA63-1	22	5.5	16	32	5	120	TO-8B, SMT, SMA
4000 - 11000	XB1007-QT	23	4.5	20	31	4	100	3 mm QFN-16
10000 - 21000	XB1008-QT	17	4.5	19	32	4	100	3 mm QFN-16
37000 - 40000	XB1014-QT	20	6	20	30	4	250	3 mm QFN-16

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

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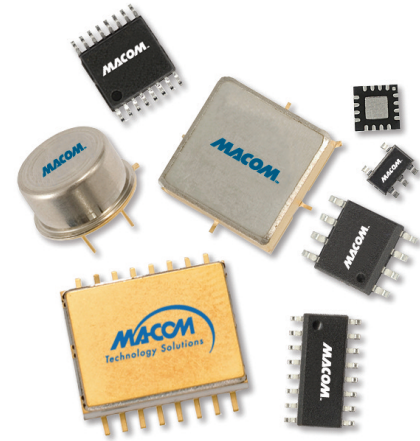
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MACOM attenuators are used in various applications for automotive and wireless markets, including 75 ohm versions for CATV. We offer serial and parallel logic controlled digital attenuators and voltage variable analog attenuators (VVAs) that range from DC to 6 GHz.

- Cellular infrastructure
- Handset gain control
- Radar systems
- Satellite radios
- Test equipment



Voltage Variable Attenuators

Frequency (MHz)	Part Number	Insertion Loss (dB)	Attenuator Range (dB)	Input IP3 (dBm)	Voltage (Volts)	Current (mA)	Package
0 - 2000	MAAV-007941	3.2	12	36	-4	0.02	SOIC-8
0 - 2000	MAAVSS0005	3.2	12	36	-4	0.02	SOT-143
0 - 2000	MAAVSS0004	7.2	35	36	-4	0.02	SOIC-14
0 - 2000	MAAVSS0006	3.6	25	36	-3	0.025	SOT-25
5 - 2000	G1*	2.5	25	—	+15	15	TO-8, SMT, SMA
5 - 2000	G2	2.6	23	—	+5	15	TO-8, SMT, SMA
5 - 3000	MA4P7455-1225T	1	30	43	—	—	SOT-25
5 - 3000	MADP-007167-12250T	2.8	25	50	—	—	SOT-25
50 - 1000	MAAV-007088-000100	2.8	42	34	—	—	SOW-16
100 - 2000	G30**	2.5	35	—	+15	10	TO-8, SMT, SMA
500 - 2000	MAAVSS0008	2.8	39	28	+5	0.3	SOIC-8
500 - 2000	MAAV-008022	2.7	40	28	+3	0.05	SOIC-8
500 - 3000	MAAVSS0007	2.5	40	32	+5	0.05	SOIC-8
500 - 4000	G40	2.5	25	—	+15	12	TO-8, SMT, SMA
600 - 1200	MA4VAT904-1061T	1	24	49	—	—	SOIC-8
600 - 1200	MA4VAT907-1061T	1	24	49	—	—	SOIC-8
600 - 2000	MA4VAT900-1277T	1	24	40	—	—	3 mm PQFN
800 - 1000	MAAV-007089-000100	4.2	35	35	—	30	SOW-16
800 - 1000	MAAV-007092-000100	3.6	38	40	—	30	CSP-8
1200 - 2500	MA4VAT2000-1277T	1.2	25	21	—	—	3 mm PQFN
1500 - 2500	MA4VAT2004-1061T	1.4	24	49	—	—	SOIC-8
1500 - 2500	MA4VAT2007-1061T	1.4	24	52	—	—	SOIC-8
1700 - 2000	MAAV-007090-000100	3.5	35	31	—	—	SOW-16
1700 - 2200	MAAV-007091-000100	2.9	33	31	—	30	CSP-8
1800 - 2500	MAAVSS0001	2.4	42	32	+2.25	0.05	SOT-25
5000 - 45000	MAAT-010521	2	40	30	-2	—	3 mm QFN-16

*LG1 Linearizer is compatible with the G1 Attenuator. Yields linear attenuation (dB) for linear control voltage. Available in TO-8, SMT, SMA

**LG30 Linearizer is compatible with the G30 Attenuator. Yields linear attenuation (dB) for linear control voltage. Available in TO-8, SMT, SMA

Digital Attenuators

Frequency (MHz)	Part Number	Insertion Loss (dB)	Step Size (dB)	Attenuator Range (dB)	Input IP3 (dBm)	Package
Packaged Products						
0 - 2000	MAATSS0015	1.5	1	15	50	SOIC-16
0 - 2000	MAADSS0009	1.6	2	30	50	SOIC-16
0 - 2000	AT-232	2.5	2	30	50	CR-6
0 - 2000	MAATSS0020	1.9	1	31	50	SSOP-20
0 - 2000	MAATSS0018	0.3	10	10	50	SOT-25
0 - 2000	MAADSS0008	0.3	15	15	50	SOT-25
0 - 2000	MAATSS0021	1.5	0.5	15.5	45	SOIC-16
0 - 2000	AT-357 ♦	6.5	1	31	47	C-46
0 - 2000	AT15-0001	7.3	1	31	40	Ceramic
0 - 3000	AT-213	2.5	1	15	50	CR-11

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

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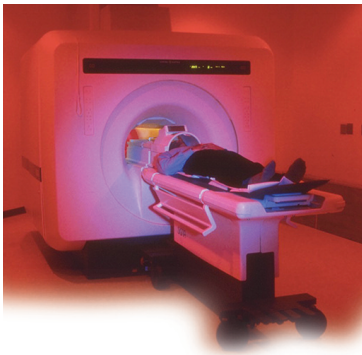
Digital Attenuators (continued)

Frequency (MHz)	Part Number	Insertion Loss (dB)	Step Size (dB)	Attenuator Range (dB)	Input IP3 (dBm)	Package
Packaged Products						
20 - 2000	AT-358 ♦	2.7	10	10	35	TO-8-2
400 - 2500	MAATSS00017	1.9	0.5	15.5	46	QSOP-16 (SSOP-16)
500 - 2000	MAATSS0016	2.2	2	30	47	TSSOP-16
500 - 2500	MAATSS0022	1.75	0.5	15.5	46	MSOP-10
500 - 4000	MAATSS0019	1.6	1	15	47	TSSOP-16
500 - 4000	MAADSS0016	1.4	—	31	42	3 mm PQFN-16
2000 - 6000	MAADSS0012	0.75	—	21	42	2 mm PDFN-8
2000 - 6000	MAADSS0018	2.0	—	15.5	42	3 mm PQFN-16
2000 - 6000	MAADSS0019	1.3	—	15	42	3 mm PQFN-16
Attenuators with Drivers						
0 - 2000	AT-106	4.6	1	50	46	CR-13
0 - 2000	AT-107	4	0.5	31.5	48	CR-13
0 - 2000	AT-233	2.8	2	30	50	CR-12
0 - 2000	AT-263	3	1	31	48	CR-12
0 - 2000	AT-273	1.9	16	32	48	CR-11
0 - 2000	AT-283	2.9	0.5	15.5	47	CR-12
0 - 2000	AT20-0106	4.6	1	50	46	CR-13
0 - 2000	AT20-0107	3.8	0.5	31.5	48	CR-13
0 - 2000	AT20-0263	3	1	31	48	CR-12
0 - 2000	AT20-0273	1.9	16	32	48	CR-11
0 - 2000	MAAD-007086-000100	4.7	1	50	48	SOW-24
0 - 2000	MAATCC0005	4.2	0.5	31.5	48	SOW-24
0 - 2000	MAATCC0007	3.2	1	31	48	SOW-16
0 - 2000	MAAD-007084-000100	3	0.5	15.5	48	SOW-16
0 - 2400	MAAD-007082-000100	6	1	50	48	CSP-1
0 - 2400	MAAD-007080-000100	6	1	50	48	CSP-1
0 - 2500	MAATCC0012	2.7	2	30	48	CSP-1
0 - 2500	MAAD-007079-000100	2.7	2	30	48	CSP-1
0 - 3000	MAAD-007085-000100	2.8	1	15	50	SOW-16
0 - 3000	MAATCC0006	3.1	2	30	50	SO-16
0 - 3000	MAATCC0008	1.7	1	15	50	SO-16
0 - 3000	MAATCC0010	4	1	31	48	CSP-1
0 - 3000	MAATCC0012	3.1	2	30	50	SO-16
0 - 3000	MAAD-007078-000100	3.8	1	31	48	CSP-1
0 - 3500	MAAD-007081-000100	3.2	0.5	15.5	48	CSP-1
0 - 3500	MAATCC0014	3.2	0.5	15.5	48	CSP-1
0 - 4000	MAATCC0009	5.1	0.5	31.5	48	CSP-1
0 - 4000	MAADCC0006	2.5	1	15	48	CSP-1
0 - 4000	MAATCC0011	5.1	0.5	31.5	48	CSP-1
0 - 4000	MAAD-007077-000100	2.5	1	15	48	CSP-1
700 - 6000	MAAD-000523	1.6	0.5	31.5	50	4 mm PQFN-24

CATV Digital Attenuators

Frequency (MHz)	Part Number	Insertion Loss (dB)	Step Size (dB)	Attenuator Range (dB)	Input IP3 (dBm)	Package
50 - 1000	MAAD-008866	1.4	0.5	0 - 31.5	40	4 mm PQFN-24
50 - 1100	MAAD-010305	0.3	15	0 - 15	50	SOT-25

Diodes



RF and Microwave Diodes: PIN, Schottky, and Varactor Devices

MACOM produces one of the widest variety of PIN, Schottky, and varactor diodes in the industry for microwave circuit applications from 1 MHz to 80 GHz. Diodes are manufactured in die form, plastic, ceramic, and metal packaging.

- Broadband and high power switch circuits: silicon and GaAs PIN switch diodes
- Analog attenuator circuits: silicon PIN attenuator diodes
- High power limiter circuits: silicon PIN limiter diodes
- Detector and mixer circuits: GaAs and silicon Schottky diodes
- Multiplier circuits: GaAs and silicon Schottky diodes
- Filter and VCO circuits: GaAs and silicon varactor diodes

Limiter Diodes

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

Multiplier Diodes

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

Mixer and Detector Diodes

- Surmount™ chipscale style diodes for surface mount high performance applications
- GaAs flip chip and GaAs beam lead series for surface mount millimeter wave frequency applications
- Plastic series for cost effective, surface mount applications
- Ceramic series for microwave frequency surface mount applications

Switch and Attenuator PIN Diodes

- CERMACHIP® series for microwave frequency applications
- Plastic series for cost effective, surface mount applications
- * AlGaAs series for low loss, high isolation millimeter wave frequency applications
- GaAs and silicon flip chip series for surface mount millimeter wave applications
- Surmount chipscale style diodes for surface mount high performance applications
- HIPAX series for high average power surface mount UHF applications
- Kilovolt series for high peak voltage HF and VHF applications
- HIPAX non-magnetic series for high average power MRI HF and VHF applications

Tuning 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



Limiter

Part Number Series	Junction Capacitance (pf)	Max. Peak Power (W) at 1_S P.W. 0.1% Duty	Carrier Lifetime (ns)	Voltage Rating (V)	Input P1dB (dBm)	Package
Die and Packaged Products						
MA4L011 Series	0.13 - 0.24	80	10	15-35	7	Die, Ceramic
MA4L021 Series	0.14 - 0.24	90	10	20-35	8	Die, Ceramic
MA4L022 Series	0.13 - 0.23	90	10	20-35	8	Die, Ceramic
MA4L031 Series	0.14 - 0.21	125	15	30-50	10	Die, Ceramic
MA4L032 Series	0.13 - 0.2	125	15	30-50	11	Die, Ceramic
MA4L062 Series	0.07 - 0.15	200	40	50-75	15	Die, Ceramic
MA4L101 Series	0.15 Max	250	90	100 Min	20	Die, Ceramic
MA4L401 Series	0.3 Max	1000	800	250 Min	30	Die, Ceramic

Multiplier

Part Number/ Part Number Series	Total Capacitance at Vr=6V (pf)	Min. Breakdown Voltage (Vb)	Carrier Lifetime (ns)	Typical Transition Time (ns)	Package
Plastic Packaged Products					
MA144769, MAVR-044769 Series	0.8 - 1.2	30	50	150	SOT-23
MAVR-044767 Series	3 - 4.5	30	500	600	SOT-23

Mixing and Detector

Part Number	Junction Capacitance (pf)	Tss (dBm)	Frequency (MHz)	Package
Flip Chip & Beam Lead Products — GaAs				
MA4E1317	0.045	-55	0 - 60000	Flip Chip
MADS-001317-1500	0.045	-55	0 - 60000	Flip Chip with Solder Bumps
MA4E1318	0.045	-55	0 - 60000	Flip Chip
MA4E1319-1	0.045	-55	0 - 60000	Flip Chip
MA4E1319-2	0.045	-55	0 - 60000	Flip Chip
MA4E2160	0.045	-56	1 - 80000	Flip Chip
MA4E2037	0.045	-55	0 - 60000	Beam Lead
MA4E2039	0.045	-55	0 - 60000	Beam Lead
MA4E2040	0.045	-55	0 - 60000	Beam Lead

(continued on page 24)

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