

## MACOM 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 millimeter-wave 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 best-in-class 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  $\Omega$  and 75  $\Omega$  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  $\Omega$  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 capability
- > 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 (dBc)	Bias Current/ Voltage (mA)/(V)	Package
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-008818	50	1100	2	3.2	3.4	-60	-63	120 / 5	2 mm PDFN-8
MAAM-008819	50	1100	3	2.6	3.8	-60	-63	120 / 5	2 mm PDFN-8
MAAM-008820	50	1100	4	3	3.8	-62	-70	120 / 5	3 mm PQFN-12
MAAM-008821	50	1100	5	3.5	3.8	-60	-70	120 / 5	3 mm PQFN-12
MAAM-008822	50	1100	3	4.5	4	-60	-63	120 / 5	2 mm PDFN-8
MAAM-008970	950	2150	2	4.8	5	—	—	60 / 5	3 mm PQFN-12
MAAM-007805	50	1100	2	8.5	4	-60	-75	100 / 5	3 mm PQFN-12
MAAM-009451	50	1100	3	3	3.5	-55	-67	90 / 3	2 mm PDFN-8
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-009779	50	1100	5	1.5	3.9	-60	-65	110 / 5	3 mm PQFN-12
MAAM-009811	50	1100	2	2.4	4.5	-55	-65	90 / 3	2 mm PDFN-8
MAAM-009879	50	1100	2	3.5	3.8	-60	-65	100 / 5	3 mm PQFN-12
MAAM-010237	50	1100	8	1.9	4.4	-50	-65	190 / 5	4 mm PQFN-24
MAAM-010263	50	1100	6	2	4.8	-55	-65	190 / 5	4 mm PQFN-24

## Amplifier Gain Block

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Output P1dB (dBm)	OIP3 (dBm)	Bias Current (mA)	Package
MAAM02350	Wideband Amplifier	200	3000	17	14	24	65	Die
MAAM28000	Wideband Amplifier	2000	8000	17	14	24	60	Die
XB1007-BD	Buffer Amplifier	4000	11000	23.5	20	30	130	Die
XB1008-BD	Buffer Amplifier	10000	21000	18	20	30	130	Die
XB1004-BD	Buffer Amplifier	16000	30000	21	19	29	100	Die
XB1006-BD	Buffer Amplifier	18000	38000	21	15	25	25	Die
XB1005-BD	Buffer Amplifier	35000	45000	23	16	26	50	Die
MAAM-008198-00A162	Cascadable, Hi Eff	10	1200	13	6	18	15	TO-8
MAAMSS0045	Hi Dyn Rge	1400	2000	14	16	29	45	SOIC-8EP
MAAM02350-A2	Wideband Amplifier	200	3000	18	14	24	65	CR-3
MAAM-009286	Driver Amplifier	250	4000	15.5	27	42	155	SOT-89
MAAM-009560	Driver Amplifier	250	4000	15	29	42	225	SOT-89
XF1001-SC	Packaged HFET	0	6000	15.5	30	46.5	300	SOT-89
MAAM28000-A1	Wideband Amplifier	2000	8000	17	14	24	70	CR-3
MAAM28000-A1G	Wideband Amplifier	2000	8000	17	14	24	70	CR-10
XB1007-QT	Buffer Amplifier	4000	11000	23	19	31	100	3 mm PQFN-16
CMM0511-QT	Driver Amplifier	5000	14000	20	11	22	90	3 mm PQFN-16
MAAM-011101	Wideband Amplifier	4000	20000	16	19	30	45	1.5 x 1.2 mm TDFN-6
XB1008-QT	Buffer Amplifier	10000	21000	17	18	32	100	3 mm PQFN-16
MAAM-011132	Driver Amplifier	17700	23600	23	21	33	180	4 mm PQFN-16
MAAM-011112	Buffer Amplifier	20000	37000	24	18	30	335	3 mm PQFN-16
MAAM-011109	Wideband Amplifier	100	40000	13	18	22	170	5 mm LGA-9
XB1014-QT	Buffer Amplifier	37000	40000	21	20	30.5	63	3 mm PQFN-16
MAAM-010513	Driver Amplifier	40500	43500	23	23	32	400	5 mm LGA-12

## Power Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
MAAM26100	GaAs MMIC Power Amplifier	2000	6500	19	39	Die
XPI035-BD	Linear Power Amplifier	5900	9500	26	39	Die
MAAP-011199	Power Amplifier	8000	10000	12	—	Die
MAAM71100	Power, GaAs MMIC	7000	11000	18	38	Die
MAAP-015030	13 W Power Amplifier	8500	11750	25	—	Die
XPI013-BD	Power Amplifier	17000	26000	20	—	Die
MAAP-011139-DIE	4 W Power Amplifier	29000	31000	24	42	Die
MAAP-015036	Power Amplifier	8500	10500	17	-	Die
MAAP-011140-DIE	6 W Ka-band Power Amplifier	28000	30000	25	46	Die
MAAP-015016-DIE	4 W Ka-band Power Amplifier	32000	38000	18	—	Die
XPI018-BD	Power Amplifier	37000	42000	26	34	Die
MAAP-011232	Power Amplifier	100	3000	23	40	3 mm PQFN-16
MAAP-010168	10 W Power Amplifier	500	3000	24	—	Ceramic Flanged-10
MAAP-010171	8 W Power Amplifier	2500	3500	27.3	—	5 mm PQFN-20
MAAP-011027	8 W Power Amplifier	5200	5900	20	—	5 mm PQFN-20
MAAM26100-B1	Power Amplifier	2000	6000	19	39	CR-2
MAAM26100-P1	Power Amplifier	2000	6000	20	40	CR-15
MAAP-010169	10 W Power Amplifier	2000	6000	18	—	Ceramic Flanged-10
XPI039-QJ	2.5 W Power Amplifier	5600	7100	17	48	6 mm QFN-24
MAAP-011161	4 W Power Amplifier	7100	7900	22	46.5	7 mm SMT
MAAP-011193	4 W Power Amplifier	7700	8500	20	46.5	7 mm SMT
XPI035-QH	0.5 W Power Amplifier	5900	9500	26	39	4 mm PQFN-24
MAAP-008924	1.2 W Power Amplifier	10000	13300	21	42	5 mm PQFN-20
MAAP-010150	10-15.35 GHz Power Amplifier	10000	15350	27	42	7 mm QFN-48
MAAP-011202	2.5 W Power Amplifier	12700	15400	30	41	5 mm QFN-24
MAAP-010517	3 W Power Amplifier	14400	15400	24.5	41	5 mm PQFN-24
XPI042-QT	0.5 W Power Amplifier	12000	16000	21	38	3 mm PQFN-16
XPI043-QH	1.5 W Power Amplifier	12000	16000	21.5	41	4 mm PQFN-24
MAAP-011145	2 W Power Amplifier	17650	19750	26	43	7 mm Cavity
MAAP-011139	4 W Power Amplifier	28500	31000	23	36	5 mm AQFN-32
MAAP-011170	Power Amplifier	37000	40000	27	38	7mm 16-lead SMD
XPI031-QK	38 GHz Power Amplifier	37000	40000	25	35.5	7 mm LGA-28
XPI080-QU	38 GHz Power Amplifier	37000	40000	25	38	7 mm LGA-16
MAAP-010512	42 GHz Power Amplifier	40500	43500	22	38.4	7 mm LGA-16

## Linear Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
MAAP-015035	12 W Power Amplifier	8500	11500	36	—	Die
MAAP-015024	8 W Power Amplifier	14500	17500	21	27	Die
XPI019-BD	Power Amplifier	17000	24000	18	36	Die
XPI027-BD	Power Amplifier	27000	31000	21	43	Die
XPI026-BD	Power Amplifier	27000	32000	21	40	Die
XPI003-BD	Power Amplifier	27000	35000	15	34	Die
XPI017-BD	Power Amplifier	30000	36000	16	33	Die
MAAP-011106	Power Amplifier	71000	86000	20	30	Die
MAAM-011167	Medium Power Amplifier	71000	86000	18	27	Die

## Linear Amplifiers (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
MAAM-011117	Broadband, Low Distortion	50	2700	16	35	2 mm PDFN-8
MAAP-011022	7 W Pulsed High Power Amplifier	2700	3000	23	—	6 mm PQFN-28
XPI044-QL	Power Amplifier Module	4000	5900	18.5	47	7 mm SMD-28
XPI050-QJ	2.5 W Power Amplifier	7100	8500	15.5	47	6 mm QFN-24
MAAP-011198	2 W Ka-band Power Amplifier	29000	31000	24.5	37	5 mm QFN-32
MAAM-011139	Driver Amplifier	27500	33400	21	32	4 mm QFN-24
MAAP-010516	4 W Power Amplifier	32000	38000	18	—	5 mm PQFN-24

## 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
MAAM37000	3500	7000	17	1.8	24	14	4	75	Die
MAAM71200	7500	12000	16.5	2.3	22	12	4	40	Die
XL1002-BD	20000	36000	23	2.6	16	4	5	85	Die
XL1010-BD	20000	38000	17	3	—	—	4	45	Die
XL1000-BD	20000	40000	20	2	16	9	3	35	Die
MAIA-011022	40	400	2	0.85	36	22	3	70	5 mm HQFN-32
MAAL-008624	400	500	21	0.9	28	17	5	60	SOIC-8
MAAL-008091	800	1000	15	1.2	30	17	5	60	SOIC-8
MAAL-011136	45	1218	20	1.2	32	17.5	5	50	SOT-89 Plastic Pkg
MAALSS0042	1500	1600	27	1.2	13	1	5	20	SOIC-8
MAAL-010705	500	1600	19	0.5	32	19	4	60	2 mm PDFN-8
MAALSS0048	1400	2000	17	1.6	13	1	3	7	SOT-26
MAAL-007304	500	3000	25.5	0.7	19	7	3	12	SOT-26
MAAL-009120	70	3000	11	1.4	35	18	3	80	SOT-363
MAAL-010200	70	3000	11	1.4	36	17	3	77	SOT-89
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	19.5	0.9	31.5	18	3	60	SOT-363
MAAL-010706	1400	4000	17.5	0.6	34.5	19	4	60	2 mm PDFN-8
MAAL-011078	700	6000	23	0.35	33	17.5	3	50	2 mm PDFN-8
MAAM37000-AIG	3500	7000	17	2.2	25	14	4	75	Ceramic Gull Wing-8
MAAM37000-A1	3500	7000	17	2.2	25	14	4	75	Ceramic-8
XL1007-QT	3500	8000	12	2	25	8	3	40	3 mm QFN-16
MAAM71200-H1	7500	12000	15.5	2.7	21	11	4	40	Leadless Ceramic
MAAL-010528	8000	12000	20.2	1.6	26	14	4	60	3 mm PQFN
MAAL-011130	2000	18000	19	1.4	21	16	3	80	2 mm PQFN-8
MAAL-011129	18000	31500	23	2.5	25	16	3	80	2 mm PQFN-8
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

## Variable Gain Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Bias Current/Voltage (mA/V)	Package
MAAM-011122	Differential CATV Variable Gain Amplifier	5	300	37.5	42	280/8	7 mm PQFN-48
MAAM-010399	Differential Variable Gain Amplifier	50	1100	28	48	900/6	5 x 7 mm PQFN-40
MAAM-009320	Variable Gain Amplifier with Analog Control	400	2700	25.5	42	231/3.5	4 mm PQFN-24
MAAM-011100	Ultra Small Broadband Variable Gain Amplifier	500	20000	12	25	70/+5-.5	1.5 x 1.2 mm TDFN-6

## 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-011184	CATV Return Path Single-Ended Amplifier	5	300	21	43	95	5	2.5	MSOP 8-EP
MAAM-011185	CATV Return Path Differential Amplifier	5	300	21.2	43	290	5	3.1	3 mm PQFN-16
MAAM-011156	Amplifier, CATV Return Path Differential	5	300	19	44	210	8	7	3 mm PQFN-16
MAAM-011168	Differential CATV Variable Gain	5	300	40	44	290	8	2.6	7 mm PQFN-48
MAAM-011186	Differential CATV Variable Gain Amplifier	5	300	39	42	280	8	3	7 mm PQFN-48
MAAMSS0044	Low Noise, Low Distortion Amplifier	50	1000	12.2	42	225	5	3.3	4 mm PQFN-20
MAAM-010144	Push Pull CATV Amplifier	50	1000	20.5	43	325	8	4.2	TSSOP-16
MAAMSS0067	Low Noise, Low Distortion Amplifier	50	1000	12.2	32	190	5	3.3	4 mm PQFN-20
MAAM-009100	Broadband CATV Amplifier	50	1000	14.3	34	105	5	3	SOT-89
MAAM-009455	CATV Push Pull Amplifier	50	1000	20.5	43	325	8	4.2	4 mm PQFN-20
MAAM-007724	Low Noise, Low Distortion Amplifier	50	1005	12.2	32	190	5	3.3	4 mm PQFN-20
MAAM-010373	Broadband CATV Amplifier	50	1100	22	40	148	8	1.66	SOT-89
MAAM-009633	Broadband CATV Amplifier	50	1200	17	37	120	8	1.9	SOT-89
MAAMSS0060	Low Noise, Low Distortion Amplifier	50	1200	17	37	120	8	1.8	SOT-89
MAAMSS0041	Low Noise, Low Distortion Amplifier	50	1200	15	36	100	8	2.7	SOT-89
MAAMSS0042	Low Noise, Low Distortion Amplifier	50	1200	15	38	110	5	3	SOT-89
MAAM-010355	CATV Power Doubler Push Pull Amplifier	45	1200	23.5	46	440	24	4.5	TSSOP-16
MAAM-011169	CATV 75 $\Omega$ Push Pull Amplifier	45	1200	25	54	480	12	4.4	5x7 mm PQFN40
MAAM-011177	Push Pull CATV Amplifier	45	1200	26	43	265	24	4.0	TSSOP-16
MAAM-011191	CATV Power Doubler Push Pull Amplifier	45	1200	26	46	440	24	4.5	TSSOP-16
MAAM-011182	75 $\Omega$ , 8 V RF Amplifier	45	1218	18	38	130	8	2.7	2 mm PDFN-8
MAAM-011240	75 $\Omega$ , Differential RF Amplifier	5	1218	17	44	290	5	1.7	SOIC-8EP
MAAM-011251	75 $\Omega$ , High Linearity, Low Noise CATV Amplifier	5	1218	15	37	100	5	1.9	SOT-89
MAAM-011258	75 $\Omega$ , High Linearity, Low Noise CATV Amplifier	5	1218	15	37	100	5	2.2	SOT-89
MAAM-011250	75 $\Omega$ , Differential RF Amplifier	5	2018	15	44	290	25	1.7	SOIC-8EP
MAAL-011119	Satellite TV Amplifier	900	2200	10.5	32	80	2.5	1.5	SOT-363
MAAL-009053	Satellite TV Amplifier	800	3000	11	35	80	3	1.4	SOT-363
MAAL-011139	Low Noise Amplifier	5	4000	21	34	85	5	1	SOT-89

## Distributed Amplifiers

Part Number	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Gain Flatness (dB)	Noise Figure (dB)	OIP3 (dBm)	Output P1dB (dBm)	Package
XD1008-BD	0	40000	15	0.8	4.5	27	22	Die
MAAM-015023-DIE	18000	40000	26	0.5	6	30	21	Die
XD1001-BD	18000	50000	17	1	5	24	15	Die
MAAM-011109	100	40000	13	18	3/5	22	18	5 mm LGA-9

## 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-007796	Low Noise FTTx Amplifier	50	1000	21	35	160	5	3.8	4 mm PQFN-20
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-010239	Low Noise FTTx Amplifier	50	1000	30	35	215	5	3.5	4 mm PQFN-20
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
CA181 ♦	Cascadable	10	250	16.5	35	Connectorized
SMA181	Cascadable	10	250	16.5	35	SMT
EA54	Cascadable, High Gain	5	250	27	16	TO-5
A75-2	Cascadable	5	250	21	19	TO-8
A181	Cascadable	10	250	16.5	35	TO-8
CA79	(non-RoHS) Cascadable	5	300	14	38	Connectorized
A79	Cascadable	5	300	14	38	TO-8
SMA79	Cascadable	5	300	14	38	SMT
A56	Cascadable, High Gain	5	400	26	27	TO-8
SMA87	Cascadable	10	400	14	33	SMT
A87	Cascadable	10	400	14	33	TO-8
CA87 ♦	Cascadable	10	400	14	33	Connectorized
EA2	Cascadable	5	400	13.5	21	TO-5
AMC-146-SMA ♦	Cascadable, High Linearity	10	500	21	35	Connectorized
AMC-151-SMA ♦	Cascadable, High Dynamic Range	5	500	12	36	Connectorized
MAAM-007502-SPA512	Cascadable, Medium Power	10	500	18	40	SMTO-8
SMRA89	Cascadable, High Gain	5	500	26.5	35	SMT
SMA74-2	Cascadable, High Efficiency	5	500	26	10	SMT
SMPA511	Cascadable, Medium Power	10	500	12.7	40	SMT
A5	Cascadable Amplifier	5	500	14.8	22	TO-8
PA511	Cascadable, Medium Power	10	500	12.7	40	TO-8
EA54-2	Cascadable, High Gain	5	500	29.5	20	TO-5
A57	Cascadable	10	500	14.7	28	TO-8
SMA57	Cascadable	10	500	14.7	28	SMT
SMA513	Cascadable	10	500	20	30	SMT
A55	Cascadable	10	500	14.7	24	TO-8
RA89-1	Cascadable, High Gain	10	500	30	36	TO-8B
A74-2	Cascadable, High Efficiency	5	500	26	10	TO-8
SMRA89-1	Cascadable, High Gain	10	500	30	36	SMT
A72	Cascadable, High Efficiency	5	500	15	26	TO-8
SMA72	Cascadable, High Efficiency	5	500	15	26	SMT
A77	Cascadable	5	500	16.5	30	TO-8
PA512	Cascadable, Medium Power	10	500	18	40	TO-8
CRA89-1 ♦	Cascadable, High Gain	10	500	30	36	Connectorized
A88	Cascadable	5	500	18.7	30	TO-8
SMA77	Cascadable	5	500	16.5	30	SMT
SMA88	Cascadable	5	500	18.7	30	SMT
RA89	Cascadable, High Gain	5	500	26.5	35	TO-8B
CRA89 ♦	Cascadable, High Gain	5	500	26.5	35	Connectorized
SMA54	Cascadable	5	500	15.5	21	SMT
CA77 ♦	Cascadable	5	500	16.5	30	Connectorized
MAAM-007502-CPA512 ♦	Cascadable, Medium Power	10	500	18	40	Connectorized
A54	Cascadable	5	500	15.5	21	TO-8
MAAM-008200-000A83	Cascadable, High Efficiency	10	500	30	10	TO-8
A513	Cascadable	10	500	20	30	TO-8
A5-5	Cascadable	5	500	15.5	21	TO-8
A5-6	Cascadable	6	600	15.5	21	TO-8
SMA77-1	Cascadable	5	600	16	30	SMT
A77-1	Cascadable	5	600	16	30	TO-8

Note: Part numbers are RoHS compliant ♦ indicates non-RoHS compliant  
 Detailed specifications can be found quickly on our website at [macom.com](http://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
SMA5-6	Cascadable	6	600	16	21	SMT
CA77-1 ♦	Cascadable	5	600	16	30	Connectorized
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
SMA89	Cascadable	100	800	22	30	SMT
A89	Cascadable	50	800	22	30	TO-8
A11-2	Cascadable	5	1000	16	10	TO-8
AMC-145-SMA ♦	Cascadable	10	1000	10.7	32	Connectorized
AMC-184-SMA ♦	Cascadable	5	1000	20	20	Connectorized
CA17 ♦	Cascadable	10	1000	12	27	Connectorized
CA1021 ♦	Cascadable, High Gain	10	1000	26	26	Connectorized
CRA69 ♦	Cascadable, High Gain	10	1000	25	34	Connectorized
CRA66 ♦	Cascadable, High Gain	10	1000	37	30	Connectorized
CA66-1	Cascadable, High Gain	10	1000	27.5	28	Connectorized
SMA1021	Cascadable, High Gain	10	1000	26	26	SMT
RA66	Cascadable, High Gain	10	1000	37	30	TO-8B
SMRA69	Cascadable, High Gain	10	1000	25	34	SMT
SMA17	Cascadable	10	1000	12	27	SMT
A17	Cascadable Amplifier	10	1000	12	27	TO-8
A66-1	Cascadable, High Gain	10	1000	27.5	28	TO-8
SMA66-1	Cascadable, High Gain	10	1000	27.5	28	SMT
RA69	Cascadable, High Gain	10	1000	25	34	TO-8B
A19-1	Cascadable Amplifier	10	1000	11.5	35	TO-8
SMA19-1	Cascadable	10	1000	11.5	35	SMT
CA19-1 ♦	Cascadable	10	1000	11.5	35	Connectorized
AMC-180-SMA ♦	Cascadable	5	1000	9.7	28	Connectorized
AMC-155-SMA ♦	Cascadable, High Dynamic Range	300	1000	12.3	30	Connectorized
SMRA66	Cascadable, High Gain	10	1000	37	30	SMT
A1021	Cascadable, High Gain	10	1000	26	26	TO-8
CA66 ♦	Cascadable	10	1200	23.5	28	Connectorized
CA64 ♦	Cascadable, High Gain	10	1200	26	20	Connectorized
SMA66	Cascadable	10	1200	23.5	28	SMT
SMA64	Cascadable, High Gain	10	1200	26	20	SMT
A64	Cascadable, High Gain	10	1200	26	20	TO-8
A66	Cascadable	10	1200	23.5	28	TO-8
SMA28	Cascadable	10	1500	11	29	SMT
CA26 ♦	Cascadable	10	1500	20.5	27	Connectorized
CA24 ♦	Cascadable	5	1500	20	21	Connectorized
SMA29-1	Cascadable	10	1500	9	32	SMT
A26	Cascadable Amplifier	10	1500	20.5	27	TO-8
A29-1	Cascadable	10	1500	9	32	TO-8
A28	Cascadable	10	1500	11	29	TO-8
A25	Cascadable Amplifier	5	1500	10	21	TO-8
A24	Cascadable	5	1500	20	21	TO-8
SMA26	Cascadable	10	1500	20.5	27	SMT
SMA24	Cascadable	5	1500	20	21	SMT
A27	Cascadable	5	1500	8.5	28	TO-8
CA28 ♦	Cascadable	10	1500	11	29	Connectorized

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## Hybrid Amplifiers: Gain Blocks (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	OIP3 (dBm)	Package
SMA27	Cascadable	5	1500	8.5	28	SMT
CA29-1 ♦	Cascadable	10	1500	9	32	Connectorized
CRA36 ♦	Cascadable, High Gain	100	2000	24	22	Connectorized
SMA36	Cascadable	100	2000	16.5	23	SMT
SMPA2010	Cascadable, Medium Power	200	2000	10	33	SMT
A38	Cascadable	10	2000	9.5	30	TO-8
CA38 ♦	Cascadable	10	2000	9.5	30	Connectorized
SMA39	Cascadable	10	2000	7.5	34	SMT
RA36	Cascadable, High Gain	100	2000	24	22	TO-8
SMA35	Cascadable	10	2000	10	21	SMT
A39	Cascadable	10	2000	7.5	34	TO-8
SMA38	Cascadable	10	2000	9.5	30	SMT
A34	Cascadable	100	2000	16	18	TO-8
A36	Cascadable	100	2000	16.5	23	TO-8
SMA37	Cascadable	10	2000	10	28	SMT
SMRA36	Cascadable, High Gain	100	2000	24	22	SMT
A37	Cascadable	10	2000	10	28	TO-8
SMA34	Cascadable	100	2000	16	18	SMT
A35	Cascadable	10	2000	10	21	TO-8
CA35 ♦	Cascadable	10	2000	10	21	Connectorized
CA36-1 ♦	Cascadable	100	2300	16.2	23	Connectorized
A36-1	Cascadable	100	2300	16.2	23	TO-8
SMA36-1	Cascadable	100	2300	16.2	23	SMT
A33-1	Cascadable	2	2400	9	19	TO-8
SMA33-1	Cascadable	2	2400	9	19	SMT
A35-1	Cascadable	2	2400	9	23	TO-8
CA33-1 ♦	Cascadable	2	2400	9	19	Connectorized
SMA35-1	Cascadable	2	2400	9	23	SMT
CA3010 ♦	Cascadable	0	2500	9.5	35	Connectorized
MAAM-007947-CA3602 ♦	Cascadable	100	2600	15	30	Connectorized
A36-2	Cascadable	100	2600	15	30	TO-8
SMA36-2	Cascadable	100	2600	15	30	SMT
SMPA38-2	Cascadable, Medium Power	200	2600	8.5	33	SMT
PA38-2	Cascadable, Medium Power	200	2600	8.5	33	TO-8
SMA43	Cascadable	100	3200	11.5	21	SMT
A43	Cascadable	100	3200	11.5	21	TO-8
CPA48 ♦	Cascadable, Medium Power	1000	4000	16	34	Connectorized
RA46	Cascadable, High Gain	1000	4000	25.5	30	TO-8B
SMPA48	Cascadable, Medium Power	1000	4000	16	34	SMT
PA48	Cascadable, Medium Power	1000	4000	16	34	TO-8B
SMRA46	Cascadable, High Gain	1000	4000	25.5	30	SMT
SMRA62	Cascadable, High Gain	2000	6000	16	28	SMT
RA62	Cascadable, High Gain	2000	6000	16	28	TO-8B
AM42-0040	Power, VSAT MMIC	5900	6400	30	42	R380/CR15
AM42-0039	Power, C-Band VSAT	5900	7100	33	45	CR15
AM42-0007	Power, GaAs MMIC	14000	14500	22	41	R380/CR15
AM42-0002	Power, VSAT MMIC	14000	14500	22	39	R380 / CR15

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## Hybrid Amplifiers: Low Noise Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
AMC-162-SMA ◆	Cascadable, Low Noise, Hi Dyn Rge	10	100	12.5	1.5	30	Connectorized
AMS-162-PIN ◆	Cascadable, High Dynamic Range	10	100	12.5	1.5	30	TO-8
AM-162-PIN ◆	Cascadable, High Dynamic Range	10	100	12.5	1.1	32	TO-8
A101	Cascadable, High Linearity	5	100	17	3	36	TO-8
SMA101	Cascadable, High Linearity	5	100	17	3	36	SMT
MAAM-007844-OCA801 ◆	Cascadable	10	200	27.3	2	28	Connectorized
SMA80-1	Cascadable	10	200	27.3	2	28	SMT
A80-1	Cascadable	10	200	27.3	2	28	TO-8
A71	Cascadable Amplifier	5	200	18	2.1	10	TO-8
SMA70-1	Cascadable, High Dynamic Range	10	250	8	1.8	28	SMT
CA83-1 ◆	Cascadable	10	250	35.5	2.5	9	Connectorized
A82-1	Cascadable	20	250	19	2.8	26	TO-8
SMA70	Cascadable, High Dynamic Range	10	250	8	1.6	24	SMT
SMA82-1	Cascadable	20	250	19	2.8	26	SMT
CA82 ◆	Cascadable	20	250	25	2.8	31	Connectorized
A70-1	Cascadable, High Dynamic Range	10	250	8	1.8	28	TO-8
CA231 ◆	Cascadable, High Gain	10	250	26	1.7	22	Connectorized
SMA82	Cascadable	20	250	25	2.8	31	SMT
SMA81-1	Cascadable	20	250	25	2.5	27	SMT
SMA81	Cascadable	20	250	24.5	2.6	28	Ceramic SMTO-8
A231	Cascadable, High Gain	10	250	26	1.7	22	TO-8
A70	Cascadable, High Dynamic Range	10	250	8	1.6	24	TO-8
A81-1	Cascadable	20	250	25	2.5	27	TO-8
A70-3	Cascadable, High Dynamic Range	20	250	8	2.8	40	TO-8
SMA83-1	Cascadable	10	250	35.5	2.5	9	SMT
A82	Cascadable	20	250	25	2.8	31	TO-8
SMA231	Cascadable, High Gain	10	250	26	1.7	22	SMT
A81	Cascadable	20	250	25.5	3	28	TO-8
CA70-2 ◆	Cascadable, High Dynamic Range	10	250	8	2.2	38	Connectorized
A74-1	Cascadable, High Gain	5	250	31	4.5	21	TO-8
A70-2	Cascadable, High Dynamic Range	10	250	8	2.2	38	TO-8
AMC-119-SMA ◆	Cascadable, High Linearity	30	250	8	2.5	35	Connectorized
A83-1	Cascadable	10	250	35.5	2.5	9	TO-8
CA78 ◆	Cascadable	5	300	14	3.5	35	Connectorized
SMA87-2	Cascadable	10	300	16	2.9	24	SMT
A78	Cascadable	5	300	14	3.5	35	TO-8
A87-2	Cascadable	10	300	16	2.9	24	TO-8
SMA78	Cascadable	5	300	14	3.5	35	SMT
SMA70-2	Cascadable, High Dynamic Range	10	300	8	2.2	38	Ceramic SMTO-8
SMA70-3	Cascadable, High Dynamic Range	15	300	8	2.8	40	Ceramic SMTO-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
CA87-1 ◆	Cascadable	10	400	16	3.4	31	Connectorized
SMA411	Cascadable	10	400	15.8	3	24	SMT
SMA87-1	Cascadable	10	400	16	3.4	31	SMT
A87-1	Cascadable	10	400	16	3.4	31	TO-8
MAAM-008199-000A51	Cascadable	10	400	15	2.7	10	TO-8
A411	Cascadable	10	400	15.8	3	24	TO-8
CA511 ◆	Cascadable	10	500	17	3.4	33	Connectorized
MAAM-007272-SMA514	Cascadable, High Gain	5	500	28	4	32	SMTO-8
MAAM-007272-OCA515 ◆	Cascadable, High Gain	5	500	27.5	3.5	33	Connectorized
CA74 ◆	Cascadable, High Gain	5	500	30	3	20	Connectorized

## Hybrid Amplifiers: Low Noise Amplifiers (continued)

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dB)	Noise Figure (mA)	OIP3 (dBm)	Package
AMC-147-SMA ♦	Cascadable, High Linearity	5	500	17	3.4	33	Connectorized
AMC-143-SMA ♦	Cascadable	5	500	15.8	2.5	20	Connectorized
AM-131-PIN	Cascadable, Low Noise, High Linearity	5	500	11.5	4	34	TO-8
AMC-123-SMA ♦	Cascadable, Low Noise, High Linearity	5	500	10	5.5	30	Connectorized
MAAM-007272-SMA515	Cascadable, High Gain	5	500	27.5	3.5	33	SMT0-8
A515	Cascadable, High Gain	5	500	27.5	3.5	33	TO-8
CA81-2 ♦	Cascadable	20	500	24.5	3	28	Connectorized
CA75 ♦	Cascadable	5	500	21	2.1	21	Connectorized
CA76 ♦	Cascadable, High Gain	5	500	28	3	28	Connectorized
PAW1027-1 ♦	Ultra Linear Power, Multi Carrier	35	500	38	4.2	43	SOT115J
A76	Cascadable, High Gain	5	500	28	3	28	TO-8
CA531 ♦	Cascadable	10	500	31.7	2	14	Connectorized
CA180 ♦	Cascadable	10	500	16.5	3.4	33	Connectorized
SMA59	Cascadable, High Dynamic Range	5	500	11.5	4.3	36	SMT
SMA81-2	Cascadable	20	500	24.5	3	28	SMT
SMA75-3	Cascadable	10	500	20.5	1.7	16	SMT
A75-3	Cascadable	10	500	20.5	1.7	16	TO-8
SMA75	Cascadable	5	500	21	2.1	21	SMT
SMA74	Cascadable, High Gain	5	500	30	3	20	SMT
SMA531	Cascadable	10	500	31.7	2	14	SMT
SMA58	Cascadable	5	500	11.5	4	34	SMT
EA53-2	Cascadable	5	500	19	3.6	24	TO-5
SMA73	Cascadable, High Gain	5	500	32	3.5	15	SMT
A74	Cascadable, High Gain	5	500	30	3	20	TO-8
A58	Cascadable	5	500	11.5	4	34	TO-8
SMA1	Cascadable	5	500	16	2.4	11	SMT
A1	Cascadable Amplifier	5	500	16	2.4	11	TO-8
A73	Cascadable, High Gain	5	500	32	3.5	15	TO-8
SMA76	Cascadable, High Gain	5	500	28	3	28	SMT
A75	Cascadable Amplifier	5	500	21	2.1	21	TO-8
SMA76-1	Cascadable, High Efficiency	5	500	27.5	3	26	SMT
A59	Cascadable, High Dynamic Range	5	500	11.5	4.3	36	TO-8
A531	Cascadable	10	500	31.7	2	14	TO-8
A76-1	Cascadable, High Efficiency	5	500	27.5	3	26	TO-8
SMA53	Cascadable	10	500	15	3	16	SMT
A81-2	Cascadable	20	500	24.5	3	28	TO-8
MAAM-008317-CA7503 ♦	Cascadable	10	500	20.5	1.7	16	Connectorized
SMA180	Cascadable	10	500	16.5	3.4	33	SMT
MAAM-007272-OCA514	Cascadable, High Gain	5	500	28	4	32	Connectorized
A53	Cascadable	10	500	15	3	16	TO-8
A514	Cascadable, High Gain	5	500	28	4	32	TO-8
A511	Cascadable Amplifier	10	500	17	3.4	33	TO-8
A180	Cascadable	10	500	16.5	3.4	33	TO-8
A80	Cascadable	20	500	29	2.5	27	TO-8
A81-3	Cascadable	20	500	17	4	20	TO-8
SMA80	Cascadable	10	550	29	2.3	27	Ceramic SMT0-8
AM-160-PIN ♦	Cascadable, Low Noise	100	600	28.2	1.6	30	TO-8
AM-191-PIN ♦	Cascadable	100	600	23.5	2.5	32	TO-8
SMA67-1	Cascadable, High Efficiency	10	600	15	3.7	30	SMT

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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
SMA611	Cascadable, Low Noise, Low Volt	5	700	15	3.2	24	SMT
CA67-1 ♦	Cascadable, High Efficiency	10	600	15	3.7	30	Connectorized
A67-1	Cascadable, High Efficiency	10	600	15	3.7	30	TO-8
A611	Cascadable, Low Noise, Low Volt	5	700	15	3.2	24	TO-8
A67	Cascadable, High Efficiency	10	800	14	4	30	TO-8
SMA67	Cascadable, High Efficiency	10	800	14	4	30	SMT
AMC-176-SMA ♦	Cascadable	5	1000	13.2	4	27	Connectorized
CA66-3 ♦	Cascadable, High Efficiency	10	1000	26	3	13	Connectorized
A11	Cascadable Amplifier	5	1000	14.7	3.1	10	TO-8
SMA66-3	Cascadable, High Efficiency	10	1000	26	3	13	SMT
SMA1031	Cascadable, High Gain	10	1000	28.5	2.7	22	SMT
A12	Cascadable Amplifier	10	1000	16	2.8	22	TO-8
A66-3	Cascadable, High Efficiency	10	1000	26	3	13	TO-8
A1031	Cascadable, High Gain	10	1000	28.5	2.7	22	TO-8
A18-1	Cascadable, High Dynamic Range	10	1000	14.7	3.8	30	TO-8
SMA11-2	Cascadable	5	1000	16	2.5	10	SMT
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
SMA63	Cascadable	5	1000	16	3	15	SMT
AMC-182-SMA ♦	Cascadable, High Gain	5	1000	28.2	3.5	20	Connectorized
A63	Cascadable	5	1000	16	3	15	TO-8
SMA12	Cascadable	10	1000	16	2.8	22	SMT
MAAM-008198-SMA162	Cascadable, High Efficiency	10	1200	13	3.5	18	SMT0-8
SMA1211	Cascadable, Low Volt	10	1200	14	2.8	20	SMT
CA12 ♦	Cascadable, Low Volt	10	1200	14	2.8	20	Connectorized
CA1212 ♦	Cascadable, Low Volt	100	1200	14	1.8	29	Connectorized
A1212	Cascadable Amplifier	100	1200	14	1.8	29	TO-8
SMA1212	Cascadable, Low Volt	100	1200	14	1.8	29	SMT
MAAM-008198-OCA162	Cascadable, High Efficiency	10	1200	13	3.5	18	Connectorized
A1211	Cascadable Amplifier	10	1200	14	2.8	20	TO-8
CA28-2 ♦	Cascadable, High Efficiency	10	1500	14	3.5	24	Connectorized
A28-2	Cascadable, High Efficiency	10	1500	14	3.5	24	TO-8
A25-1	Cascadable	2	1500	13.5	3	22	TO-8
SMA28-2	Cascadable, High Efficiency	10	1500	14	3.5	24	SMT
SMA25-1	Cascadable	2	1500	13.5	3	22	SMT
CA25-1 ♦	Cascadable	2	1500	13.5	3	22	Connectorized
AM-153-PIN ♦	Cascadable, Low Noise	300	1800	12.4	2.5	17	TO-8
PA38	Cascadable, Medium Power	200	2000	10	4	34	TO-8
CA32 ♦	Cascadable, Hi Linearity	100	2000	13	2.1	32	Connectorized
SMA32	Cascadable, Hi Linearity	100	2000	13	2.1	32	SMT
SMA32-1	Cascadable, Low Noise, Low Volt	100	2000	11.5	2.5	25	SMT
A32-1	Cascadable, Low Noise, Low Volt	100	2000	11.5	2.5	25	TO-8
A32	Cascadable, Hi Linearity	100	2000	13	2.1	32	TO-8
CPA38 ♦	Cascadable, Medium Power	200	2000	10	4	34	Connectorized
CA32-1 ♦	Cascadable, Low Noise, Low Volt	100	2000	11.5	2.5	25	Connectorized
SMA31-1	Cascadable	10	2000	11.5	3.5	9	SMT

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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
A33	Cascadable	10	2000	9.5	4.5	15	TO-8
A31-1	Cascadable Amplifier	10	2000	11.5	3.5	9	TO-8
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	SMTO-8
CA4011 ♦	Cascadable, Low Noise, Low Volt	1000	4000	15.5	2	29	Connectorized
CA45-1 ♦	Cascadable	1000	4000	17.5	4	26	Connectorized
SMA45	Cascadable	1000	4000	17.5	4	29	SMT
CA45 ♦	Cascadable	1000	4000	17.5	4	29	Connectorized
A45-1	Cascadable	1000	4000	17.5	4	26	TO-8
SMA4012	Cascadable, Low Noise, Low Volt	1000	4000	18	3.5	26	SMT
A4012	Cascadable, Low Noise, Low Volt	1000	4000	18	3.5	26	TO-8
A4011	Cascadable, Low Noise, Low Volt	1000	4000	15.5	2	29	TO-8
SMA45-1	Cascadable	1000	4000	17.5	4	26	SMT
SMA4011	Cascadable, Low Noise, Low Volt	1000	4000	15.5	2	29	SMT
A45	Cascadable	1000	4000	17.5	4	29	TO-8
A61	Cascadable, Low Noise, Low Volt	2000	6000	7.5	3.2	25	TO-8
A6011	Cascadable, Low Noise, Low Volt	2000	6000	14.8	1.5	30	TO-8
SMA61	Cascadable, Low Noise, Low Volt	2000	6000	7.5	3.2	25	SMT
CA6011 ♦	Cascadable, Low Noise, Low Volt	2000	6000	14.8	1.5	30	Connectorized
SMA6011	Cascadable, Low Noise, Low Volt	1500	6000	14.8	1.5	30	Ceramic SMTO-8

## Hybrid Amplifiers: Limiting Amplifiers

Part Number	Description	Min Freq (MHz)	Max Freq (MHz)	Gain (dBm)	Package
CAL7 ♦	Cascadable, Limiting Amplifier	50	500	13	SMA
LA7	Cascadable, Limiting Amplifier	50	500	12.5	TO-8
AL7	Cascadable, Limiting Amplifier	50	500	13	TO-8
SMLA7	Cascadable, Limiting Amplifier	50	500	12.5	Ceramic SMTO-8
CLA7 ♦	Cascadable, Limiting Amplifier	50	500	12.5	SMA
SMAL7	Cascadable, Limiting Amplifier	20	550	13	Ceramic SMTO-8
SMLA17	Cascadable, Limiting Amplifier	10	1000	11.5	Ceramic SMTO-8
CLA17 ♦	Cascadable, Limiting Amplifier	10	1000	11.5	SMA
LA17	Cascadable, Limiting Amplifier	10	1000	11.5	TO-8
SML1	Cascadable, Signal Limiter	5	3000	—	Ceramic SMTO-8
L1	Cascadable, Signal Limiter	5	3000	—	TO-8
SMLA45	Cascadable, Limiting Amplifier	1000	4000	11.5	Ceramic SMTO-8
CL42 ♦	Cascadable, Signal Limiter	50	4000	—	SMA
CLA45-1 ♦	Cascadable, Limiting Amplifier	1000	4000	14	SMA
LA45-1	Cascadable, Limiting Amplifier	1000	4000	14	TO-8
LA45	Cascadable, Limiting Amplifier	1000	4000	11.5	TO-8
L42	Cascadable, Signal Limiter	50	4000	—	TO-8
SML42	Cascadable, Signal Limiter	50	4000	—	SMT
SMLA45-1	Cascadable, Limiting Amplifier	800	4200	14	Ceramic SMTO-8

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