



Delivering High Reliability... Commercial Off-The-Shelf Solutions

RF and Microwave Broadband Signal Processing Components

macomtech.com



RF and Microwave Broadband Signal Processing Components



Our product portfolio includes heritage-rich brands such as:

ANZAC
M/A-COM
OMNI SPECTRA
PHOENIX
MICROWAVE
R H G
STELLEX
WATKINS
JOHNSON

M/A-COM Technology Solutions is a leading supplier of Commercial Off-The-Shelf (COTS) products for the aerospace and defense markets. Our broad product portfolio includes heritage-rich brands such as M/A-COM, Omni Spectra, Stellex, and more. Our COTS products offer the same sophistication and performance as custom-designed products, but are available immediately. Our products are used in radar communications, electronic warfare, and missile guidance. Industry wide, we are recognized for the high reliability performance of our component designs. And, we have a solid track record in helping our customers reduce costs, shorten design cycles and ramp up production.

- Strong global customer base
- COTS products are commerce controlled EAR99
- Lean manufacturing facilities in the US and Pacific Rim

M/A-COM Tech also offers customer-specific design capabilities. Environmental screening is available on most products. Additionally, we offer expertise in replacement designs for obsolete or discontinued products. Our applications engineering support team is responsive, flexible, innovative, and ready to help you with your next project.

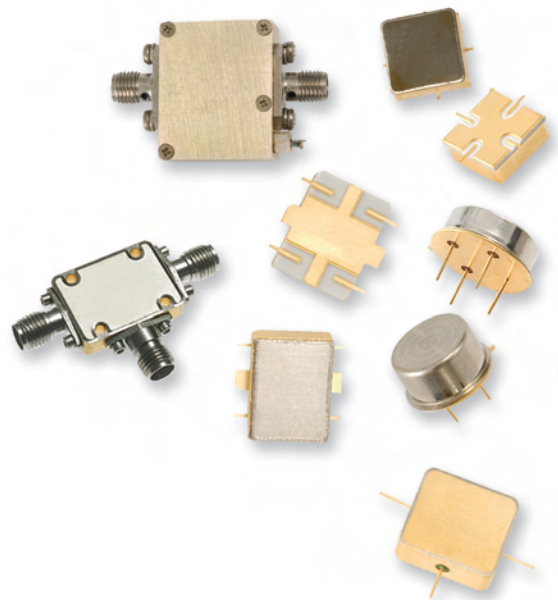
Visit our website at macomtech.com to get more information about our products.

Our Quality Policy

The goal of M/A-COM Technology Solutions is to continually deliver effective, high quality products and services that meet our customers' and internal operations' needs in terms of delivery, performance, safety and value.

Process controls shall be implemented such that the tasks are performed properly the first time, so that products and services meet established, agreed-to requirements.

It is the personal responsibility of every employee to ensure quality, customer satisfaction, continual improvement, maintenance of our quality management system and compliance with customer and regulatory requirements.



M/A-COM Technology Solutions Inc.

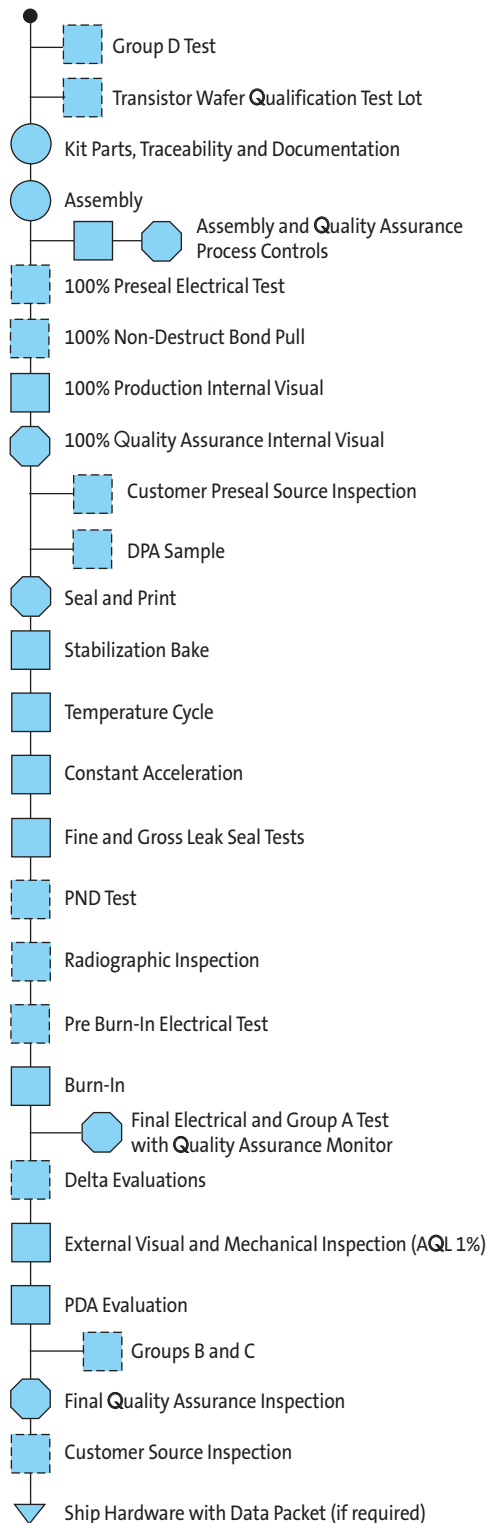
Lowell, Massachusetts 01851
North America 800.366.2266 • Europe +353.21.244.6400
India +91.80.43537383 • China (Shanghai) +86.21.5108.6464

macomtech.com

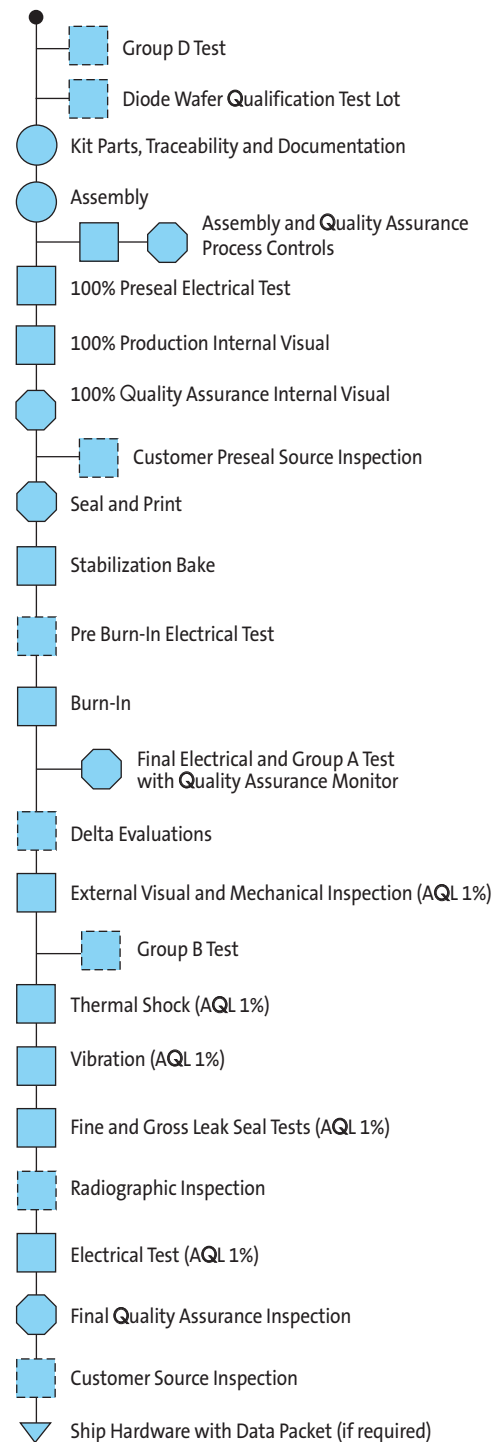
Manufacturing and Screening Flow Charts for High Reliability COTS Products



Thin Film Assembly Hermetic Packages* (amplifiers, limiting amplifiers, limiters, attenuators)



Solder Assembly Hermetic Packages* (mixers, frequency doublers)



Note: Dashed boxes represent optimal screening beyond the standard catalog test plan

* In accordance with MIL-PRF-38534, Class H (MIL-STD-883, Method 5008)

** In accordance with MIL-M-28837 and MIL-STD-202

Class A Amplifiers

Frequency (MHz)	Part Number	Gain (dB)	Rev Isolation (dB)	NF (dB)	I/O VSWR	P1dB (dBm)	OIP3 (dBm)	Phase Noise (dBc/Hz)	Voltage (Vdc)	Current (mA)	Package
10 - 250	A70-2	8	11	2.2	1.9:1	19	38	-165	15	25	TO-8/SMT0-8/CA
5 - 300	A79	14	18	4.0	1.5:1	22	38	-165	15	88	TO-8/SMT0-8/CA
5 - 300	A59	11.8	16	3.9	1.6:1	22	36	-185	15	88	TO-8/SMT0-8/CA
5 - 500	AM-147-PIN	17	16	3.4	1.7:1	20	32	-170	15	52	TO-8-1/SMA
10 - 500	PA512	18	24	5.2	1.8:1	27.5	39	-165	15	200	TO-8/SMT0-8/CA
10 - 1000	A1021	26	35	3.8	1.4:1	14.5	26	-160	5	50	TO-8/SMT0-8/CA
10 - 1000	A19-1	11.5	16	5.5	1.5:1	22.5	35	-160	15	90	TO-8/SMT0-8/CA
100 - 1200	A1212	14	23	1.6	1.8:1	19	29	-160	5	50	TO-8/SMT0-8/CA
100 - 2000	A32	13	20	2.1	1.8:1	21	32	-160	15	94	TO-8/SMT0-8/CA
10 kHz - 2500	A3010	10.5	20	4.5	2.0:1	19	32	-160	+12/-5.2	140	TO-8/SMT0-8/CA
20 - 2700	MAAM-007501-SA2002	12.5	22	2.5	1.7:1	27	40	-165	9	165	TO-8/SMT0-8/CA
1000 - 4000	A4012	18	36	3.5	1.7:1	15.5	26	-165	5	65	TO-8/SMT0-8/CA
1000 - 4000	PA48	16	33	5.5	1.6:1	24	34	-160	15	225	TO-8/SMT0-8/CA
2000 - 6000	A6011	15	20	1.5	1.9:1	18	30	-165	5	58	TO-8/SMT0-8/CA
2000 - 12000	6884-700	27	50	2.7	1.8:1	14.2	25	-160	15	143	TO-8/SMT0-8/CA

Limiting Amplifiers

Frequency (MHz)	Part Number	Gain (dB)	NF (dB)	I/O VSWR	P1dB (dBm)	OIP3 (dBm)	Voltage (Vdc)	Current (mA)	Package
10 - 500	SMLA88	16.5	6.0	1.7:1	17	20.5	15	55	TO-8/SMT0-8/CA
50 - 500	LA7	12.5	7.0	1.5:1	12	15.5	15	54	TO-8/SMT0-8/CA
10 - 1000	LA17	11.5	5.8	1.7:1	10	15.0	15	55	TO-8/SMT0-8/CA
1000 - 4000	LA45-1	14.0	7.5	1.8:1	17	18.5	15	110	TO-8/SMT0-8/CA

Signal Limiters

Frequency (MHz)	Part Number	IL (dB)	I/O VSWR	Output Limiting Level* (dB)	OIP3 (dBm)	Even Order Harmonic Suppression (dBc)	Voltage (Vdc)	Current (mA)	Package
50 - 3000	L1	3	1.7:1	3.5	23	-60	15	7	TO-8/SMT0-8/CA
50 - 4000	L42	4	1.7:1	4.0	23	-60	15	7	TO-8/SMT0-8/CA

* Pin = +20 dBm Max

Voltage Control Analog Attenuators

Frequency (MHz)	Part Number	IL (dB)	Attenuation Range (dB)	Harmonic Distortion (dBc)	Switching Speed (μsec)	Linearizer Module	Voltage (Vdc)	Current (mA)	Package
5 - 2000	G1	2.5	25	-25	< 60, 10% - 90%	LG1	0 to 15	4	TO-8/SMT0-8/CA
500 - 4000	G40	2.5	25	-25	< 500, 10% - 90%	—	0 to 15	6	TO-8/SMT0-8/CA

Mixers

Frequency (MHz)	IF Freq (MHz)	Part Number	LO Drive (dBm)	Conversion Loss (dB)	LO/RF Isol	Conversion Compression (dB)	Input P1dB (dBm)	Package
0.05 - 200	0 - 200	SM6D	7	7	45	—	—	SMT
1 - 3400	1 - 2000	SM4T17	17	8	35	13	3	SMT
1 - 3500	1 - 3500	MD-169	10	10	35	7	3	FP-2
5 - 1500	0 - 1000	MD-158	7	9	20	1	—	FP
10 - 1500	0 - 800	M2A	7	7.5	40	7	12	TO-8/SMA
300 - 1500	0.1 - 3000	MD-154	10	10	11	7	—	FP
2400 - 6000	0 - 2000	M8H-7	7	6	40	0	13	TO-8/SMA
5000 - 18000	0 - 3000	M79	10	7	32	4	14	Minpac/SMA
4500 - 9500	0 - 2000	MY76H	20	7	35	15	24	Versapac/SMA
5000 - 18000	0 - 3000	MZ7420	20	7.5	35	15	21	Versapac/SMA
2000 - 18000	1000 - 8000	MZ8813	13	7	25	8	19	Versapac/SMA
2000 - 18000	30 - 5000	MY83H	20	8.5	25	17	19	Versapac/SMA
2000 - 18000	1000 - 8000	MY89	10	8	28	4	18.5	Versapac/SMA
2000 - 18000	30 - 5000	MZ9313	13	7	24	8	19	Versapac/SMA
2000 - 24000	100 - 5000	M52	10	8	25	5	16	Minpac/SMA
2000 - 26000	1000 - 15000	MY50	10	8	30	5	15	Versapac/SMA
2000 - 26000	100 - 6000	M53	10	8.5	25	5	16	Minpac/SMA

Couplers

Frequency (MHz)	Part Number	Coupling (dB)	IL (dB)	Maximum Power (W)	Isolation (dB)	Package
10 - 500	CH/CHS-134	10.8	1.6	1	20	FP-2/SF-1
5 - 1000	CH-140	19.75	0.3	3	20	FP-2
1000 - 2000	JH-141	—	0.3	25	18	FP-2

Power Splitters / Combiners

Frequency (MHz)	Part Number	Channels	Isolation (dB)	Phase Balance (°)	Amplitude Balance	Package
1 - 100	MTH-50	2	30	1	0.1	TO-5-1
10 - 500	DS-112	4	25	5	0.2	FP-5
10 - 500	DS-109	2	35	1	0.15	FP-2
10 - 500	DS-319	2	25	1	0.2	TO-8-2
5 - 1000	DS/DSS-327	2	20	3	0.2	FP-2/SF-1
25 - 1000	DS-323	3	24	4	0.4	FP-3
10 - 2000	DS/DSS-313	2	23	5	0.3	FP-2/SF-1

*Performance is typical at +25°C. Sample list of available models from an extensive product line selection

M/A-COM Technology Solutions Inc.

Lowell, Massachusetts 01851
 North America 800.366.2266 • Europe +353.21.244.6400
 India +91.80.43537383 • China (Shanghai) +86.21.5108.6464
macomtech.com