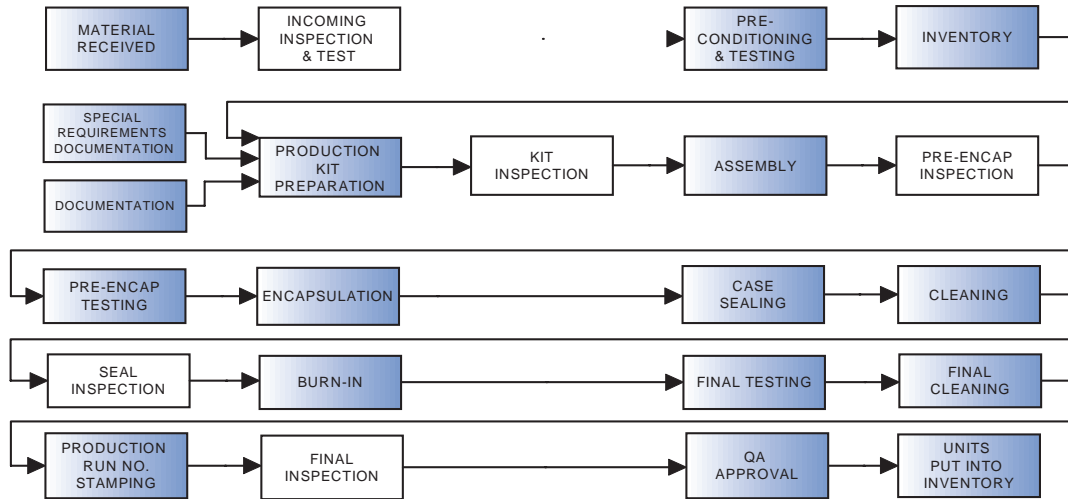


Mini-Circuits Guarantees Quality

Although we have gone beyond our past objective of exceeding 0.1% AQL- no rejects, not even one per 1000 units-this is not satisfactory anymore. Our present commitments are to achieve a Cpk of 1.5, or 4.5 sigma: not even 4 rejects per million units. Mini-Circuits' process controls using

SPC, pre-control and design of experiments reduce variability of performance. "Skinny Sigma" is our way of life and it can be yours. Specify Mini-Circuits RF signal processing components to reduce your inspection costs and improve your production yields.

How Mini-Circuits achieves high reliability



Environmental Specifications

All MCL products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental tests of MIL-STD-202, unless otherwise noted. For amplifiers, see the table of environmental specifications at the beginning of the amplifier section of the Handbook.

Rating or Test	MIL-STD-202		Package Type			
	Method	Condition	Hermetic	Non-Hermetic		
				Metal	Plastic	Connected
Temperature Operating, °C ⁽¹⁾	—	—	-55° to 100°	-55° to 100°	-40° to 85°	-55° to 100°
Temperature Storage, °C ⁽¹⁾	—	—	-55° to 100°	-55° to 100°	-55° to 100°	-55° to 100° ⁽⁴⁾
Altitude: 150,000 feet	105	E	Yes	Yes	Yes	Yes
Humidity: 90%RH, 65°C	106	—	Yes	Yes ⁽²⁾	⁽³⁾	Yes ⁽²⁾
Thermal Shock: -65 to 125°C	107	B	Yes	Yes	-55° to 100°	-55° to 100°
Fine Leak, atm-cc/s	112	C	1x10 ⁻⁷	Not Appl.	Not Appl.	Not Appl.
Gross Leak, atm-cc/s	112	D	1x10 ⁻⁵	Not Appl.	Not Appl.	Not Appl.
Drop: random, 45 minutes	203	—	Yes	Yes	Yes	Yes
Vibration: 2 to 2000 Hz, 20 G's, 12 hours	204	D	Yes	Yes	Yes	Yes
Solderability: 95% coverage	208	—	Yes	Yes	Yes	Not Appl.
Solder heat: 260°C 10 seconds	210	B	Yes	Yes	Yes	Not Appl.
Terminal tensile strength: 4-1/2 lbs., 10 seconds	211	A	Yes	Yes	Yes	Not Appl.
Terminal fatigue: 2 lbs. 3 cycles	211	C	Yes	Yes	Yes	Not Appl.
Mechanical shock: 100 G's, 6 ms	213	I	Yes	Yes	Yes	Yes
Solvent resistance	215	—	Yes	Yes	Yes	Not Appl.

For surface mount models, see surface mount environmental specifications in General Information (section 0)

- Notes:
1. Extended temperature ranges are available for some models: consult factory.
 2. Non-hermetic metal-cased units may require bake-out after test to restore full performance.
 3. Humidity capabilities of plastic-cased units available on special request.
 4. For BW attenuators, with connectors unmated -55° to +85°C.



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