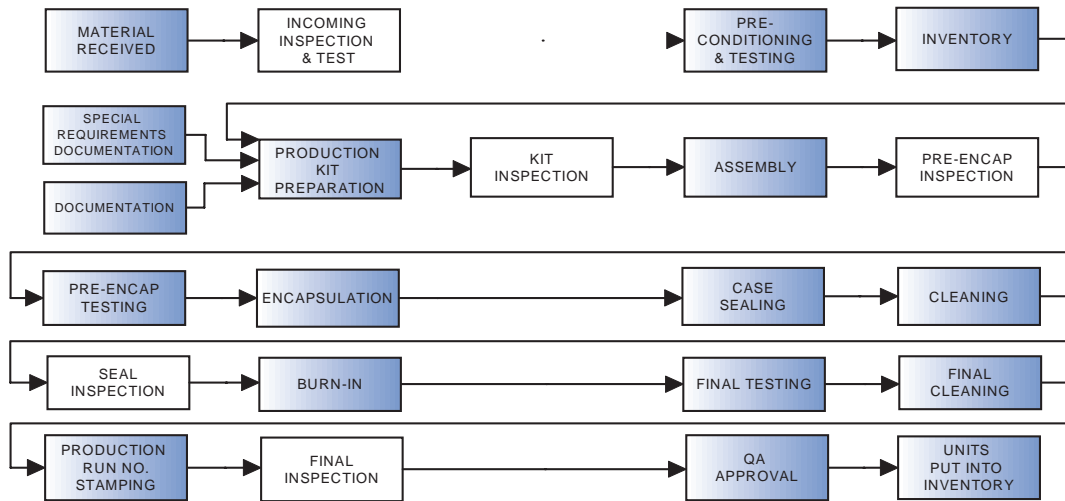


Mini-Circuits Guarantees Quality

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. As a minimum they will meet 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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