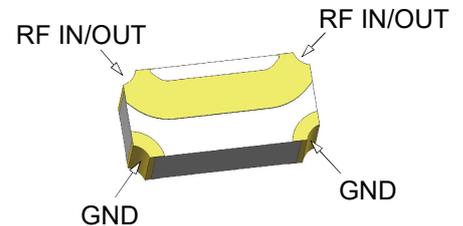


Description

The CR03 is a low profile crossover to intersect an RF and DC circuit trace in an easy to use surface mount package designed for frequencies up to 6 GHz. The CR03 is ideal for any application where an RF circuit must intersect with a DC circuit without resorting to a multilayer PCB.

Parts have been subjected to rigorous qualification testing and units are 100% tested. They are manufactured using materials with x and y thermal expansion coefficients compatible with common substrates such as FR4, G-10, RF-35, RO4003 and polyamide.



Features:

- DC – 6 GHz
- RF – RF Crossover
- Low Loss
- DC Isolation
- Surface Mountable
- Tape And Reel
- Convenient Package
- CTE compatible with FR4, G-10, RF-35, RO4350B and polyimide
- 100% Tested
- RoHS Compliant

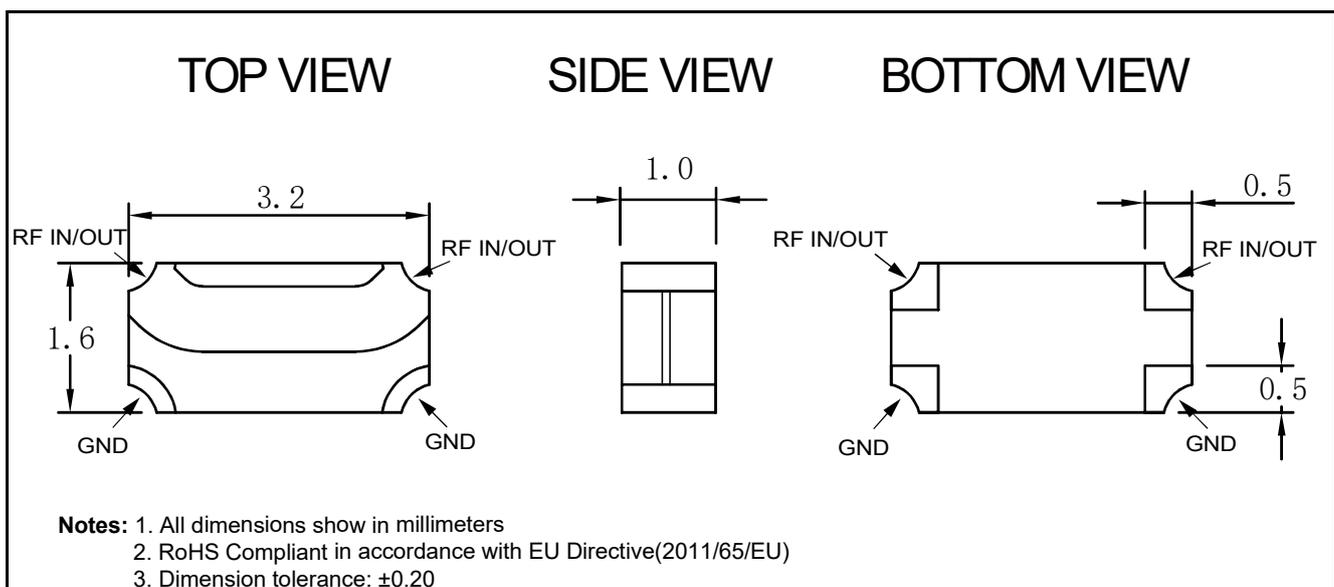
Electrical Specifications

Frequency	Port Impedance	Return Loss
<i>GHz</i>	<i>Ohms</i>	<i>dB Min</i>
DC – 3.0	50	20
3.0 – 6.0	50	20
Insertion Loss	Power	Operating Temp.
<i>dB Max</i>	<i>Avg. CW Watts at 85 °C</i>	<i>°C</i>
0.10	30	-55 to +125
0.15	20	-55 to +125

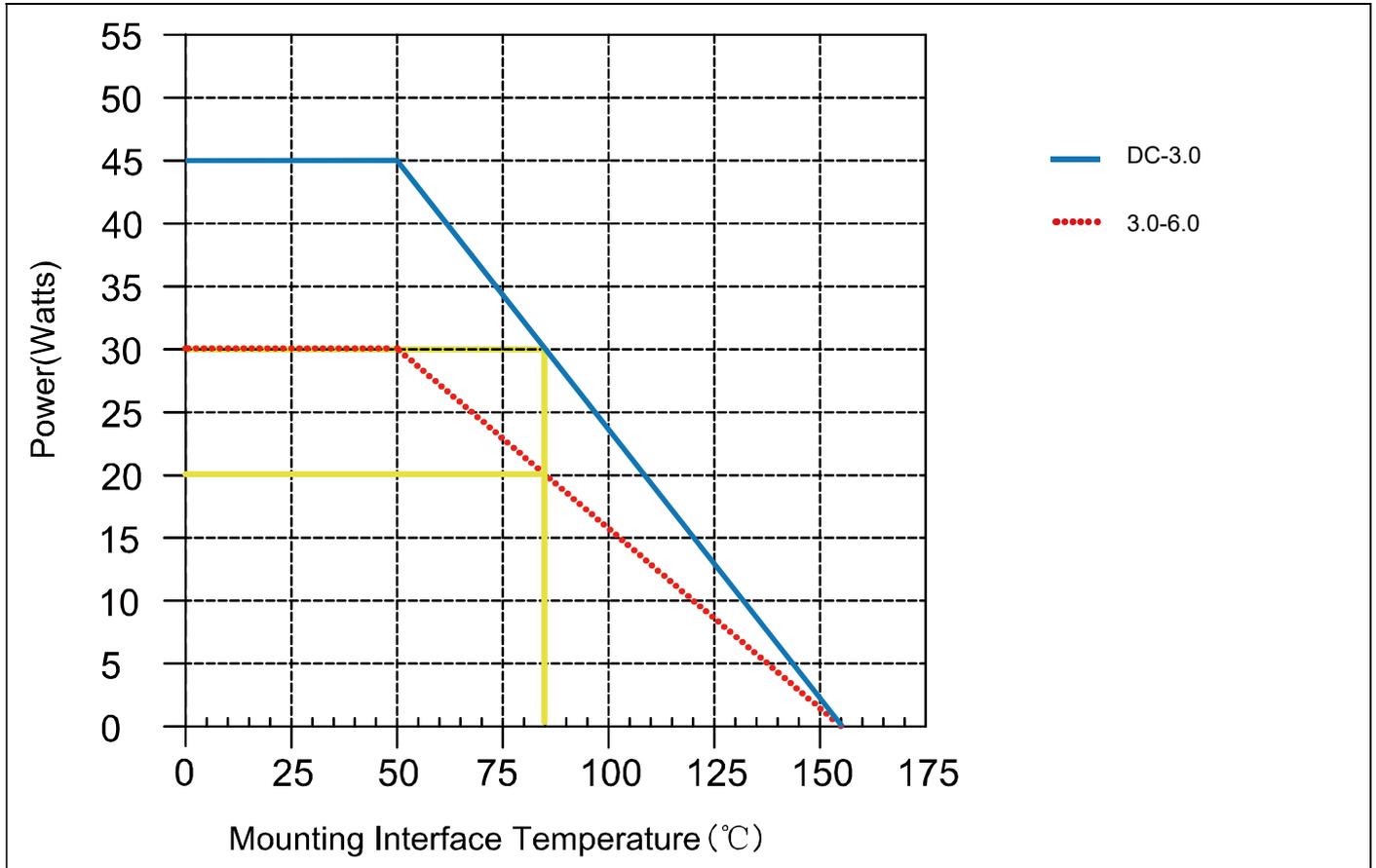
Notes:

1. All the above data are based on specified demo board.
2. Insertion loss: Thru board loss has been removed.

Mechanical Outline



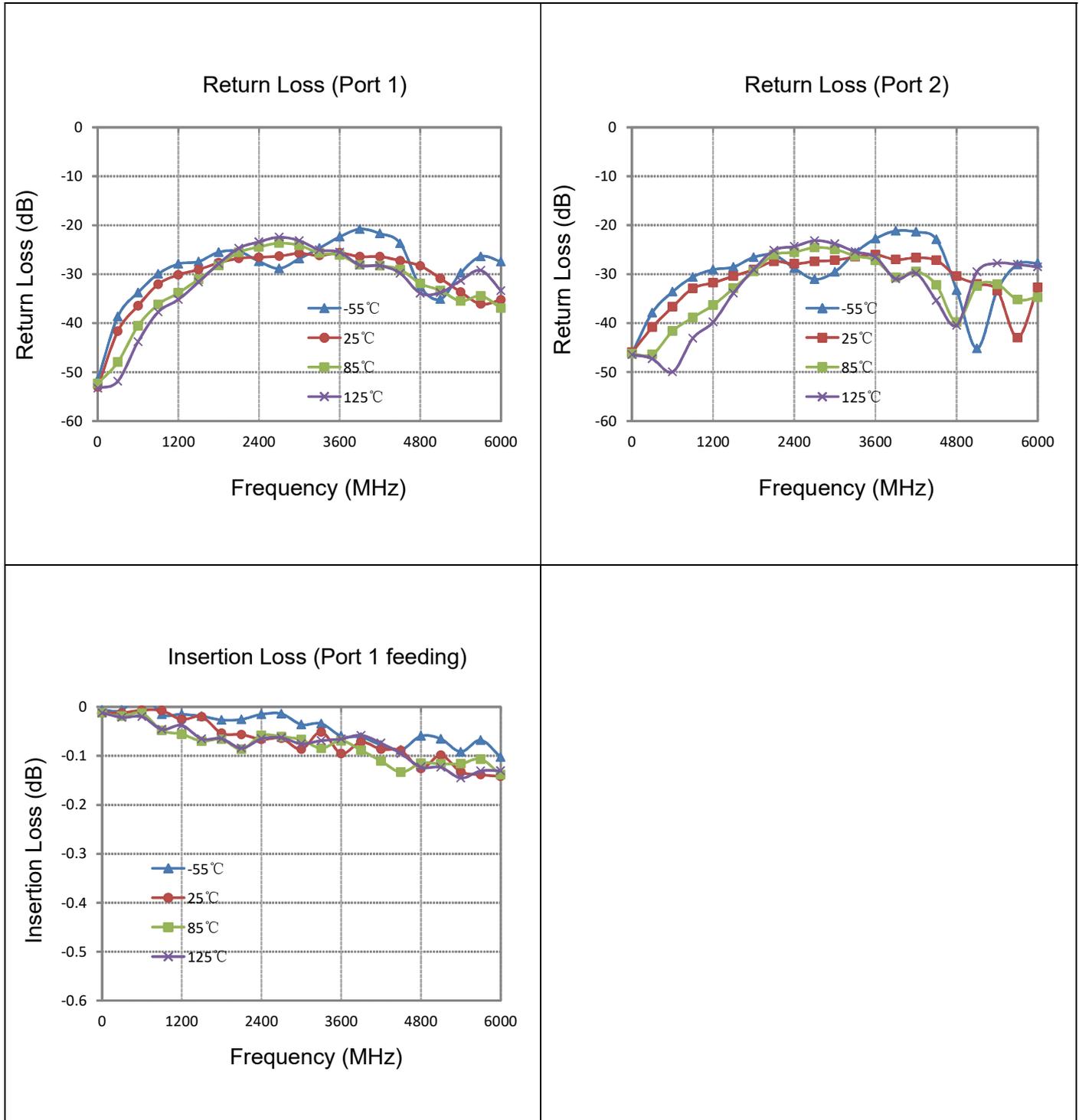
Power Derating Curves



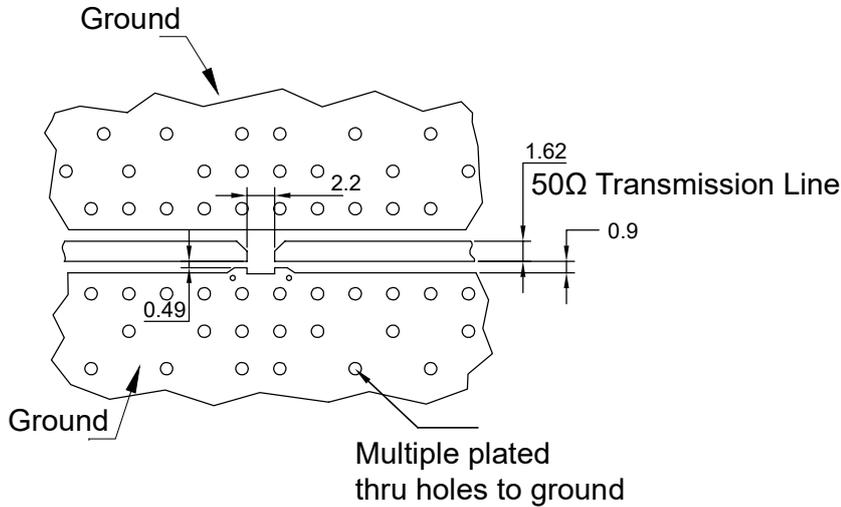
Power Derating:

As the mounting interface temperature approaches the maximum continuous operating temperature, the power handling decreases to zero.

Typical Performance (-55°C, 25°C, 85°C, 125°C:DC-6000 MHz)



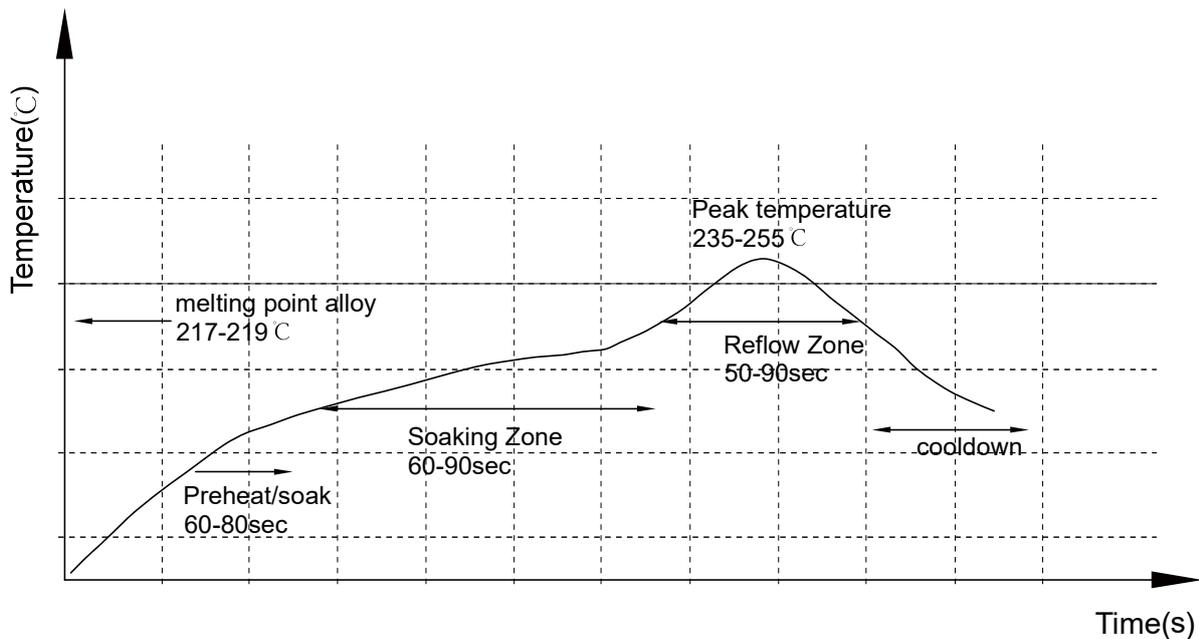
Recommended PCB Layout



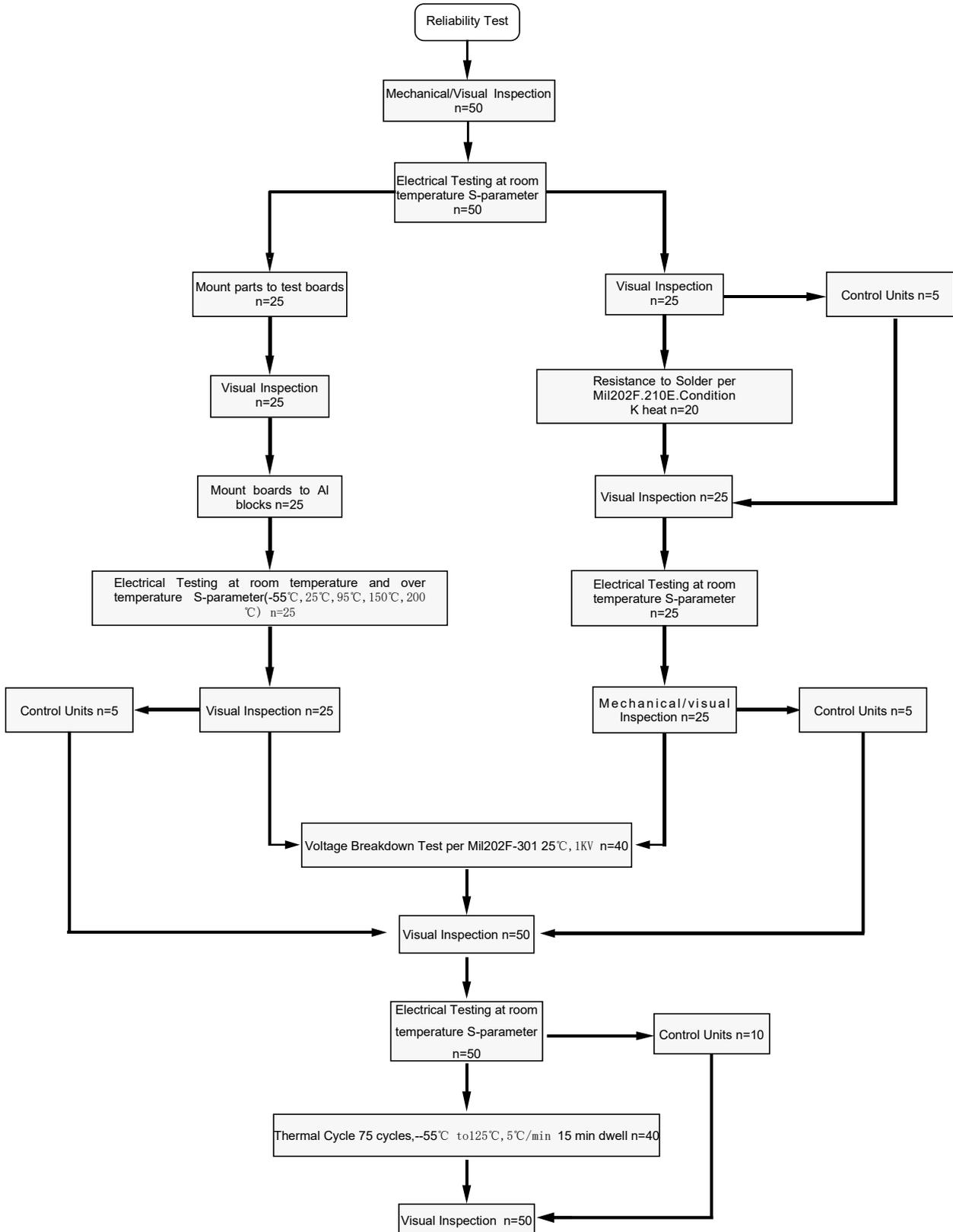
NOTE:

1. 50Ω line width is shown above designing from RO4350B dielectric thickness 0.762mm; copper 1 OZ
2. Bottom side of the PCB is continuous ground plane.
3. All dimensions shown in mm.

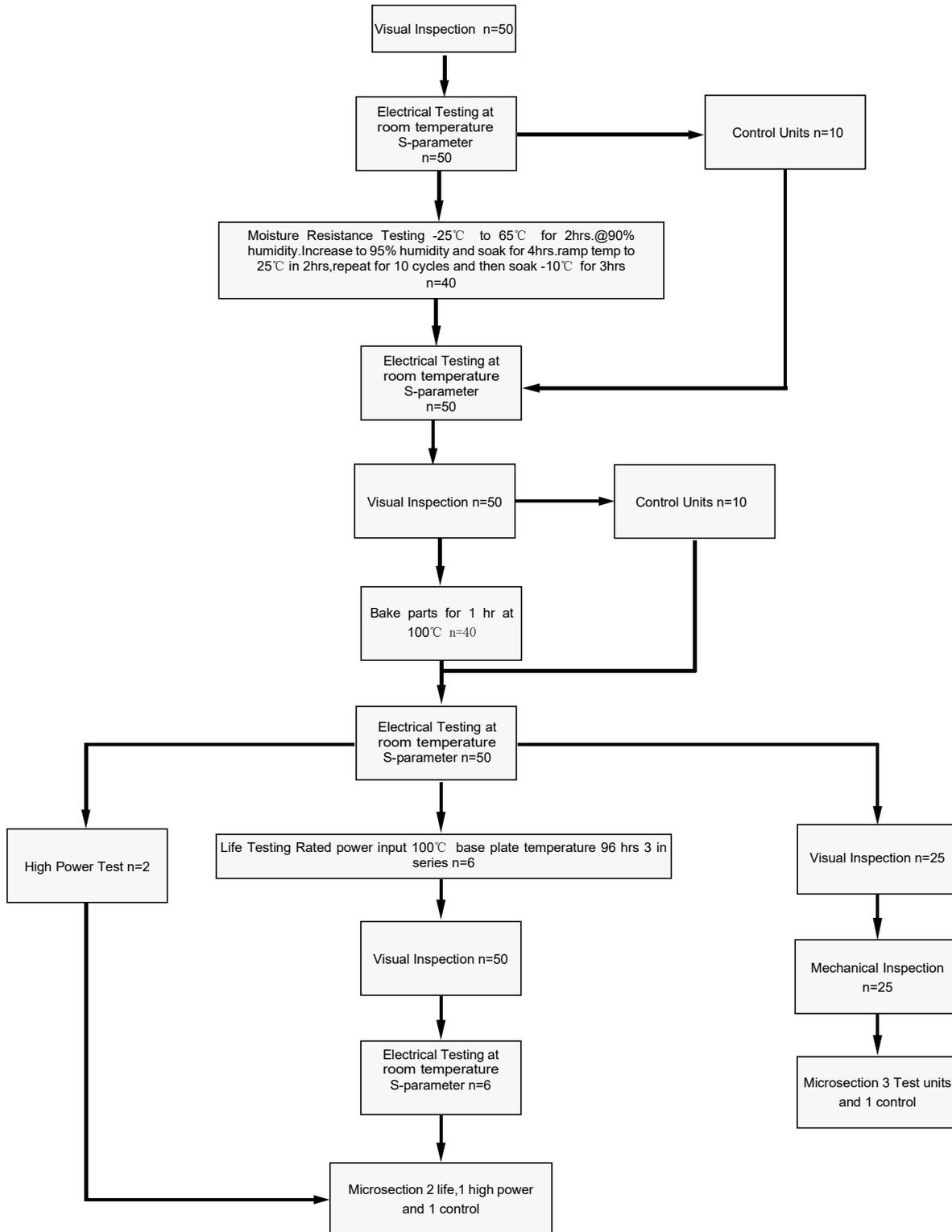
Reflow Profile



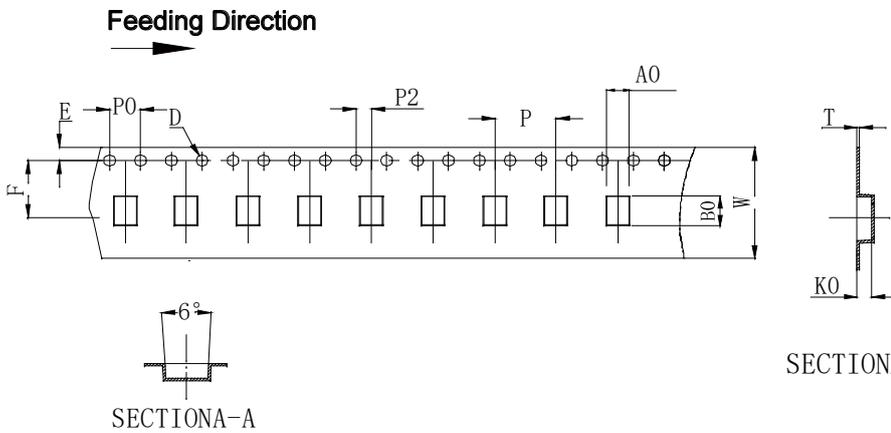
Reliability Test Flow



Reliability Test Flow



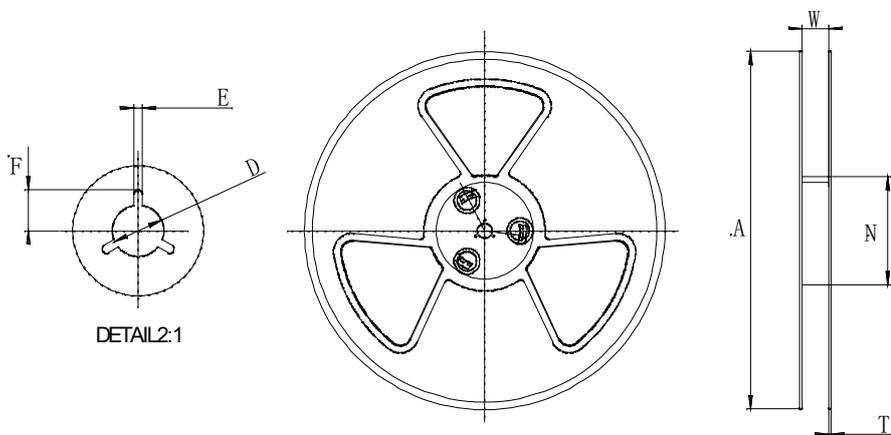
Tape and Reel Drawing



Notice:

- A. 10 Sprocket hole pitch cumulative tolerance is 0.2mm.
- B. Carrier camber shall be not more than 1mm per 100mm through a length of 250mm.
- C. All dimensions meet EIA-418-B requirements.
- D. A0 & B0 measured as indicated.
- E. K0 measured from a place on the inside bottom of the pocket to top surface of carrier.
- F. Material: PE 100
- G. Thickness: 0.30 ± 0.05 mm
- H. 1000 units (maximum) / T&R

ITEM	W	A0	B0	K0	P	F	E	D	P0	P2	T	7"
DIM(mm)	12.0	1.80	3.40	1.10	8.00	7.50	1.75	1.50	4.00	2.00	0.30	P/R
TOLE	+0.30 -0.30	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.00	+0.10 -0.10	+0.10 -0.10	+0.05 -0.05	1000pcs



Symbol	Dimensions	
	(mm)	(inch)
W	12.0±0.4	0.47
A	177±0.5	7.0
N	63±0.3	2.48
T	1.8±0.2	0.071
E	2.1±0.3	0.083
F	10.75±0.3	0.423
D	13.5+0.5/-0.2	0.531

