

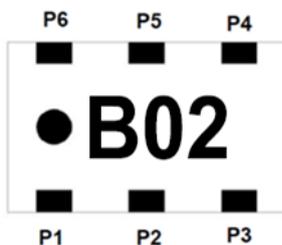
Features

- Multilayer monolithic construction yields high reliability
- Low insertion loss and small size SMD chip design
- Can simplify your complex tuning and circuit design
- LTCC process

Specifications

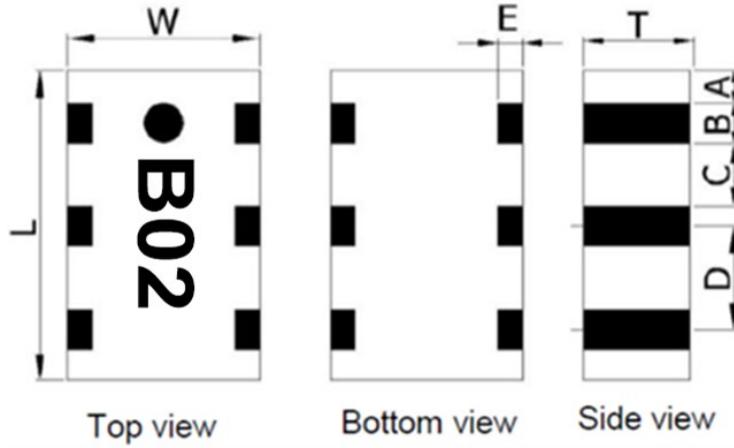
NO.	Items		Spec	Unit
1	Frequency range		80~140	MHz
2	Unbalanced Impedance		50	Ohms
3	Differential Balanced Imp.		50	Ohms
4	Return Loss at Unbalanced Port		10 min.	dB
5	Insertion Loss	80Mhz-140MHz	1.0 max.	dB
		90MHz-120MHz	0.8 max.	
6	Amplitude Difference	80Mhz-140MHz	-0.7~+0.5	dB
		@80MHz	-0.5~+0.5	
		@100MHz	-0.5~+0.5	
		@120MHz	-0.5~+0.5	
7	Phase Difference	80Mhz-140MHz	180 ± 10	deg
		@80MHz	180 ± 5	
		@100MHz	180 ± 5	
		@120MHz	180 ± 5	
8	CMRR		15 min.	dB
9	Power Capacity (CW)		3 max.	W
Operating & Storage Condition (Component)				
Operation Temperature Range: -40°C ~ +85°C				
Storage Temperature Range: -40°C ~ +85°C				
Storage Condition before Soldering (Included packaging material)				
Storage Temperature Range: +5 ~ +40 °C				
Humidity: 30 to 70% relative humidity				

Construction



P1	Unbalance Port	P4	Balance Port
P2	GND or DC feed + RF GND	P5	GND
P3	Balance Port	P6	NC

Dimensions

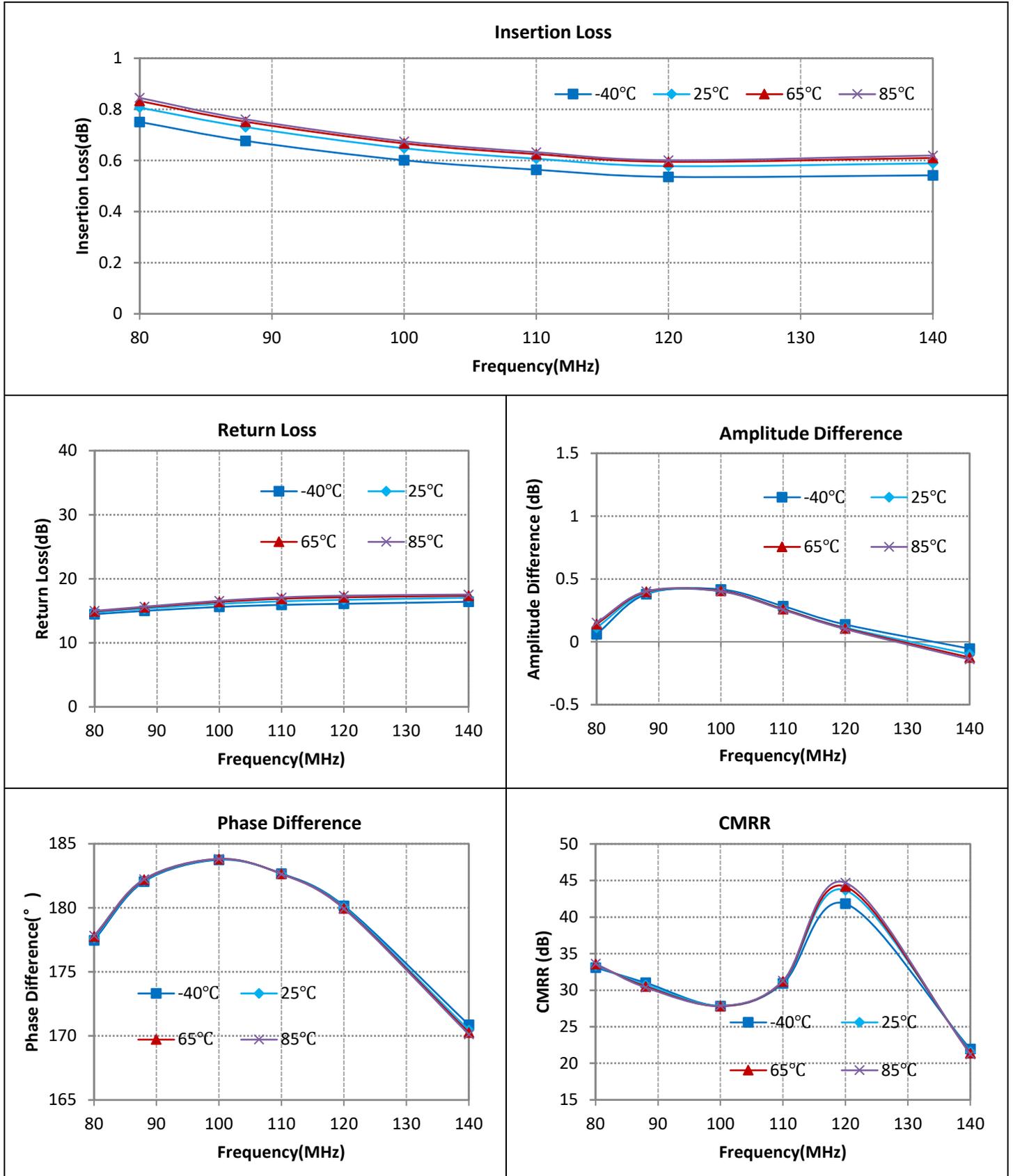


Symbol	L	W	T	A	B	C	D	E
Dimension (mm)	2.0 ± 0.15	1.25 ± 0.15	0.95 ± 0.15	0.20 ± 0.1	0.30 ± 0.1	0.35 ± 0.1	0.65 ± 0.1	0.25 ± 0.1

Typical Performance Data T=25°C

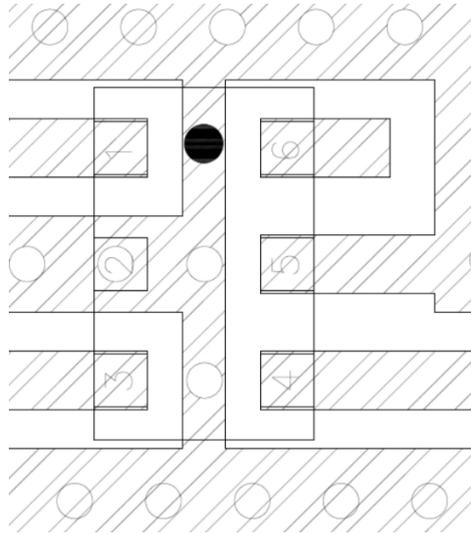
Frequency (MHz)	Return Loss (dB)	Insertion Loss (dB)	Amplitude Difference (dB)	Phase (deg)	CMRR (dB)
80	14.78	0.81	0.11	177.65	33.38
88	15.34	0.73	0.39	182.14	30.72
100	16.08	0.65	0.40	183.78	27.87
110	16.48	0.61	0.26	182.66	31.13
120	16.72	0.58	0.11	180.05	43.66
140	17.05	0.59	-0.10	170.46	21.57

Typical Electrical Characteristics (T=-40°C,25°C,65°C,85°C)



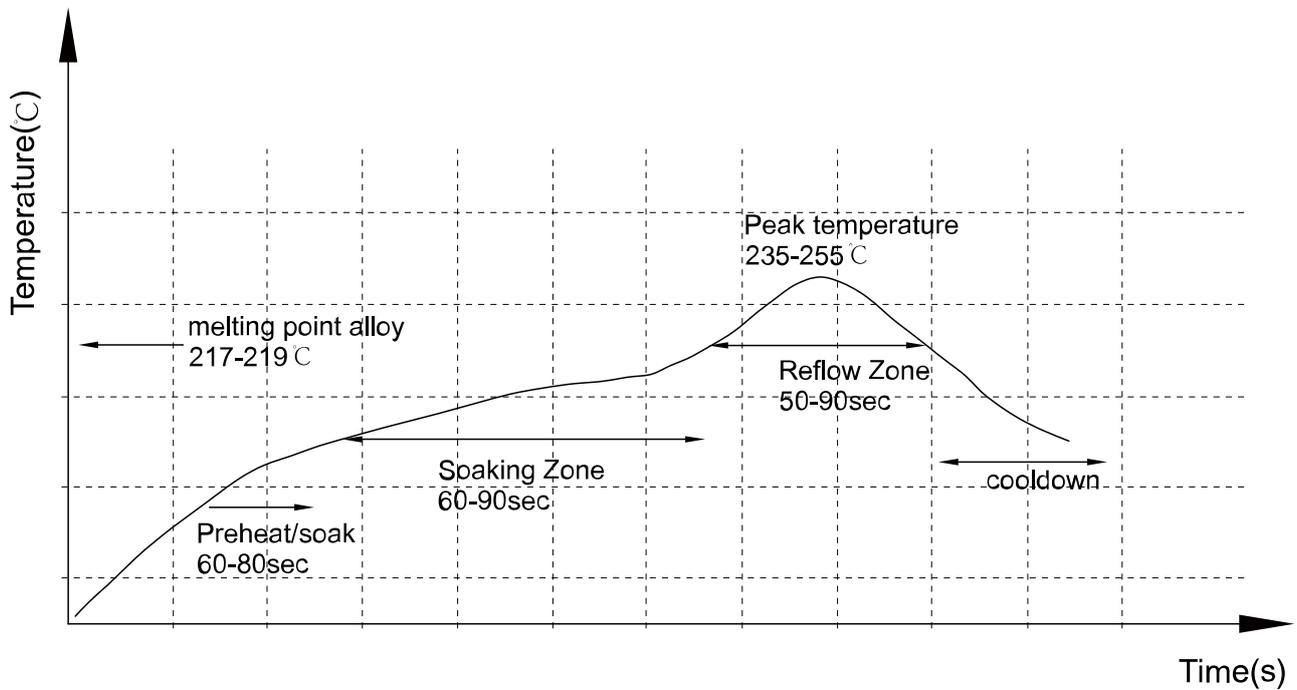
Mounting Considerations

Without DC Feed

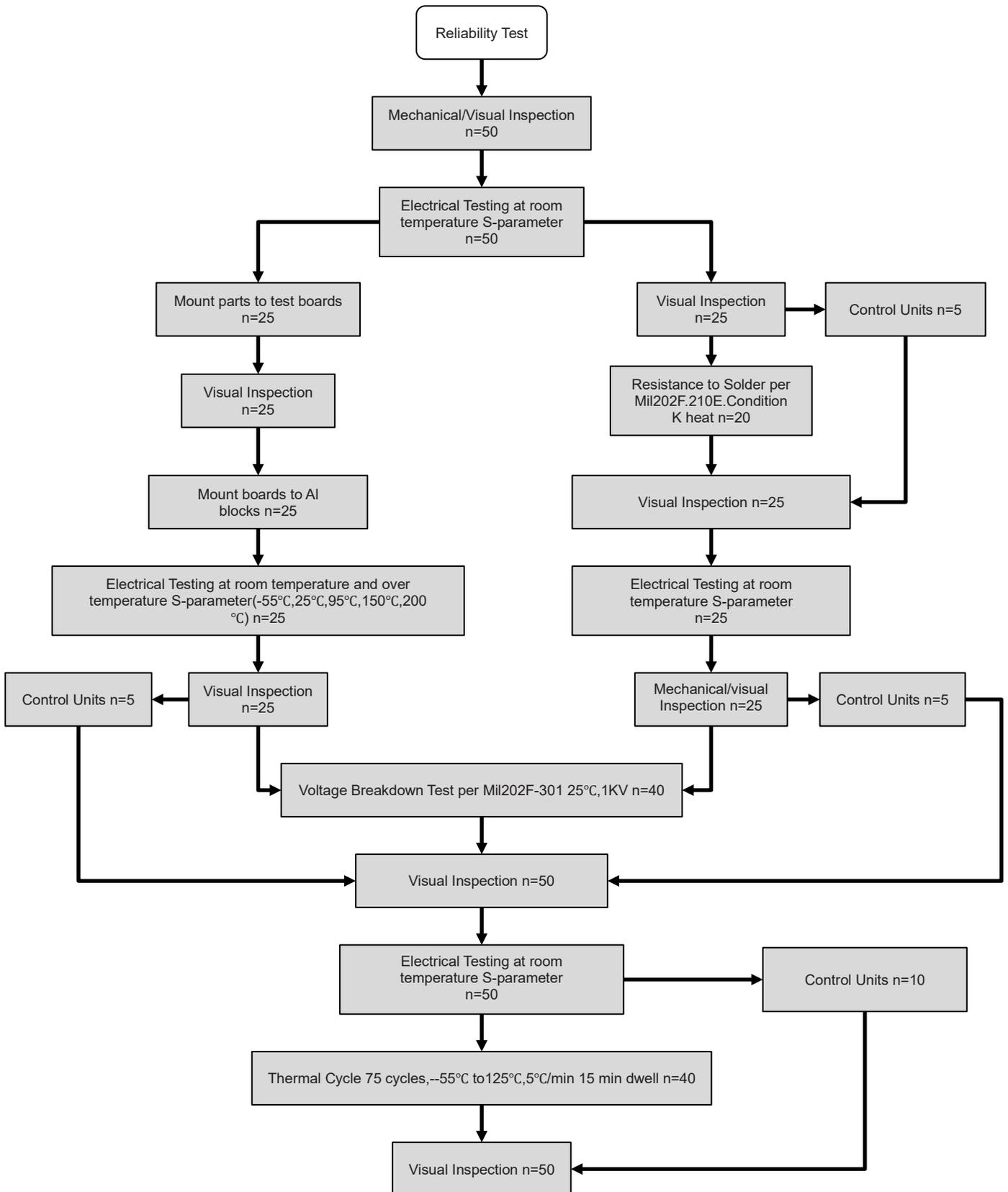


Line width to be design to match 50W characteristic impedance, depending on PCB material and thickness

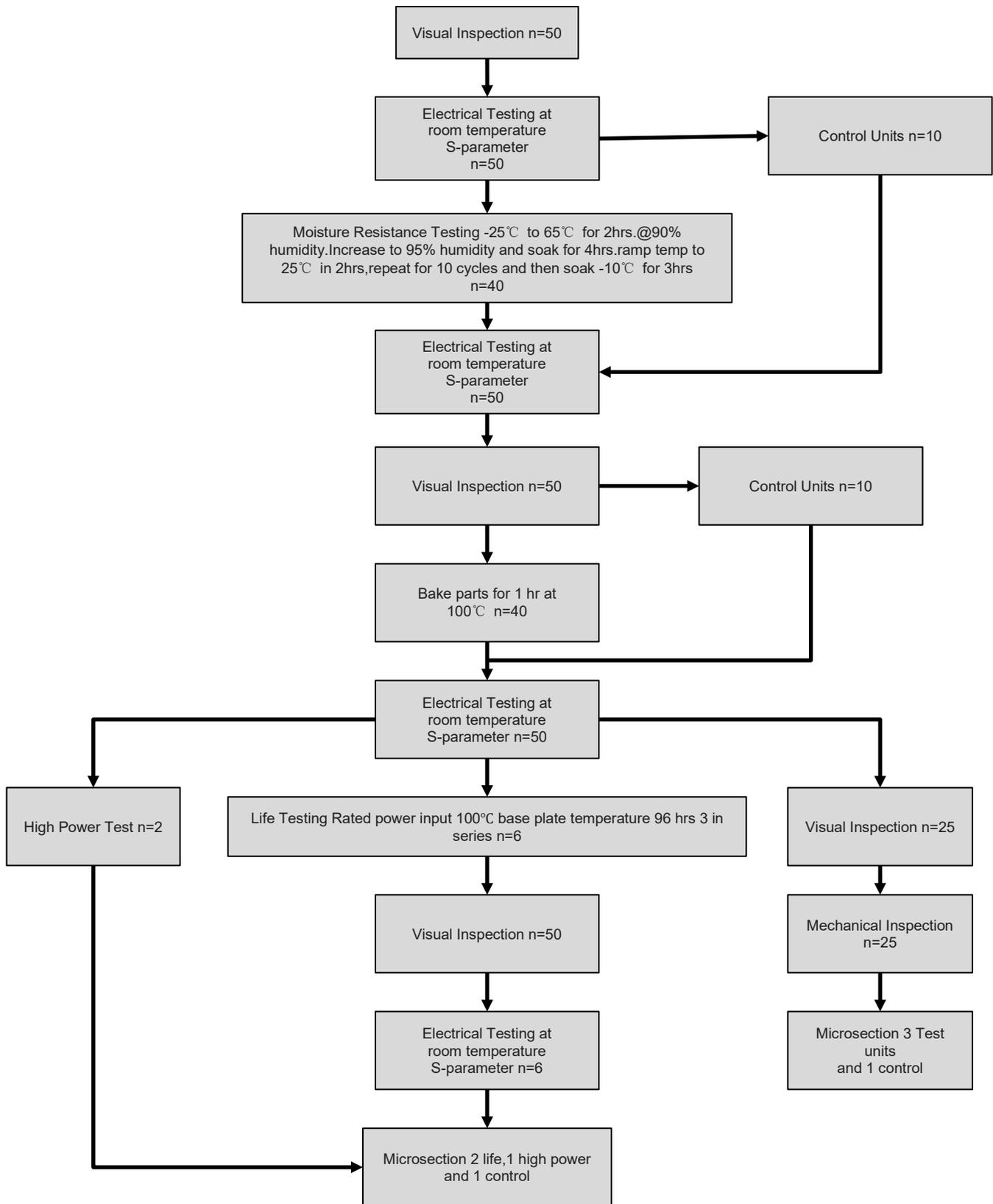
Reflow Profile



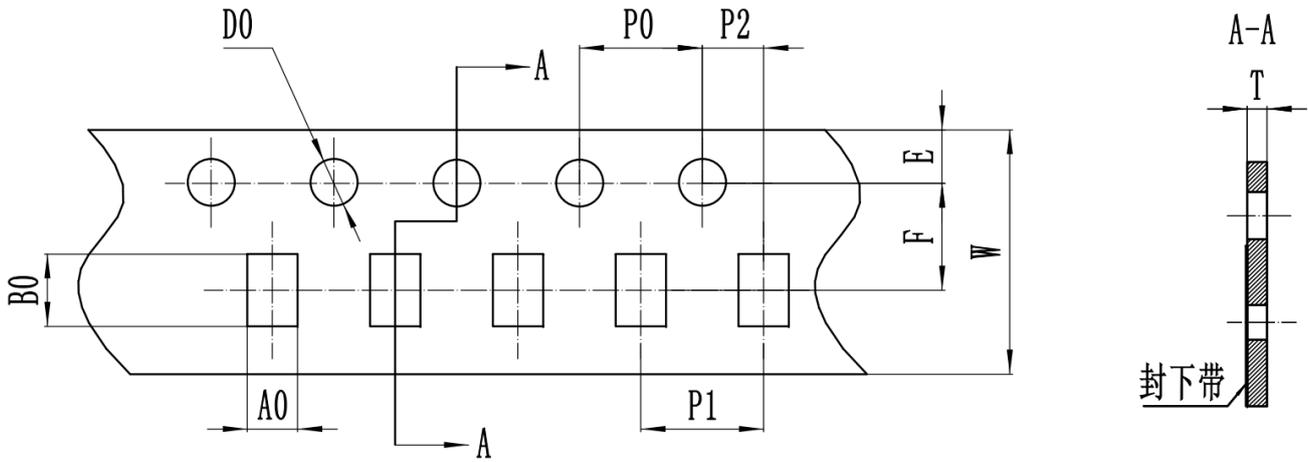
Reliability Test Flow



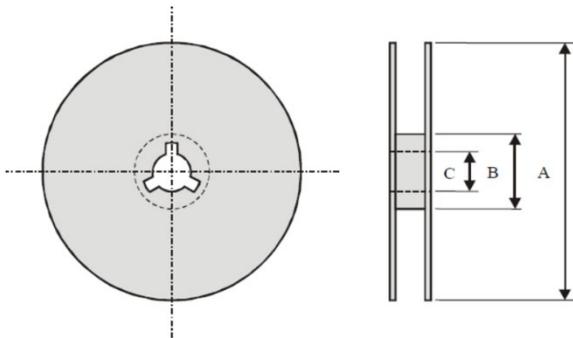
Reliability Test Flow



Plastic Tape specifications (unit: mm)



Index	A0	B0	ØD	T	W	E	F	P0	P1	P2
Dimension (mm)	1.50 ± 0.05	2.25 ± 0.05	1.55 ± 0.05	1.07 ± 0.05	8.0 ± 0.1	1.75 ± 0.1	3.50 ± 0.05	4.0 ± 0.1	4.0 ± 0.1	2.00 ± 0.05



Index	A	B	C
Dimension (mm)	Ø177.8	Ø56.8	Ø11.1

Taping Quantity: 4000 pieces per 7" reel