



SM1109-5

MAXIMUM RATING:

- Input Power Level: 10 dBm
- DC Voltage: 5 V
- Operating Temperature: -20 °C to +85 °C
- Storage Temperature Range: -40 °C to +100 °C
- Moisture Sensitivity Level: Level 1 (MSL 1)
- ESD: 50V(NM, 100V(HBM))

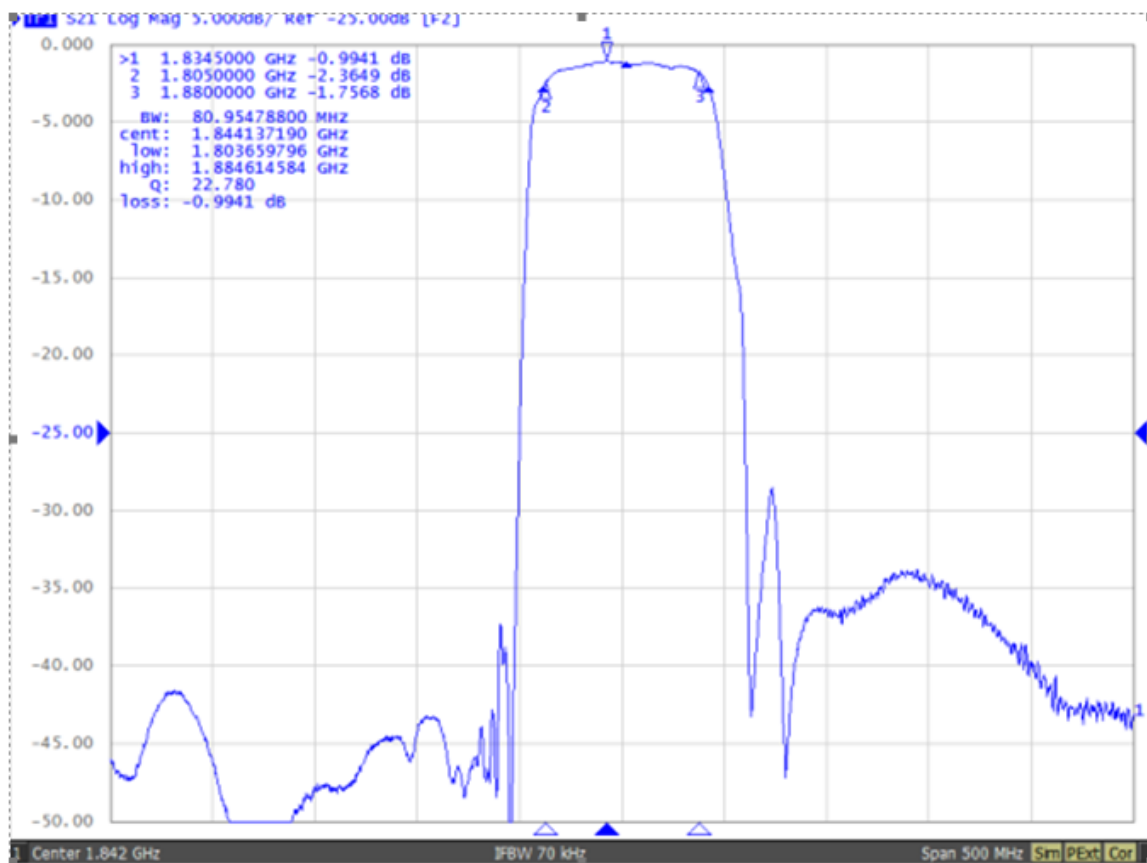
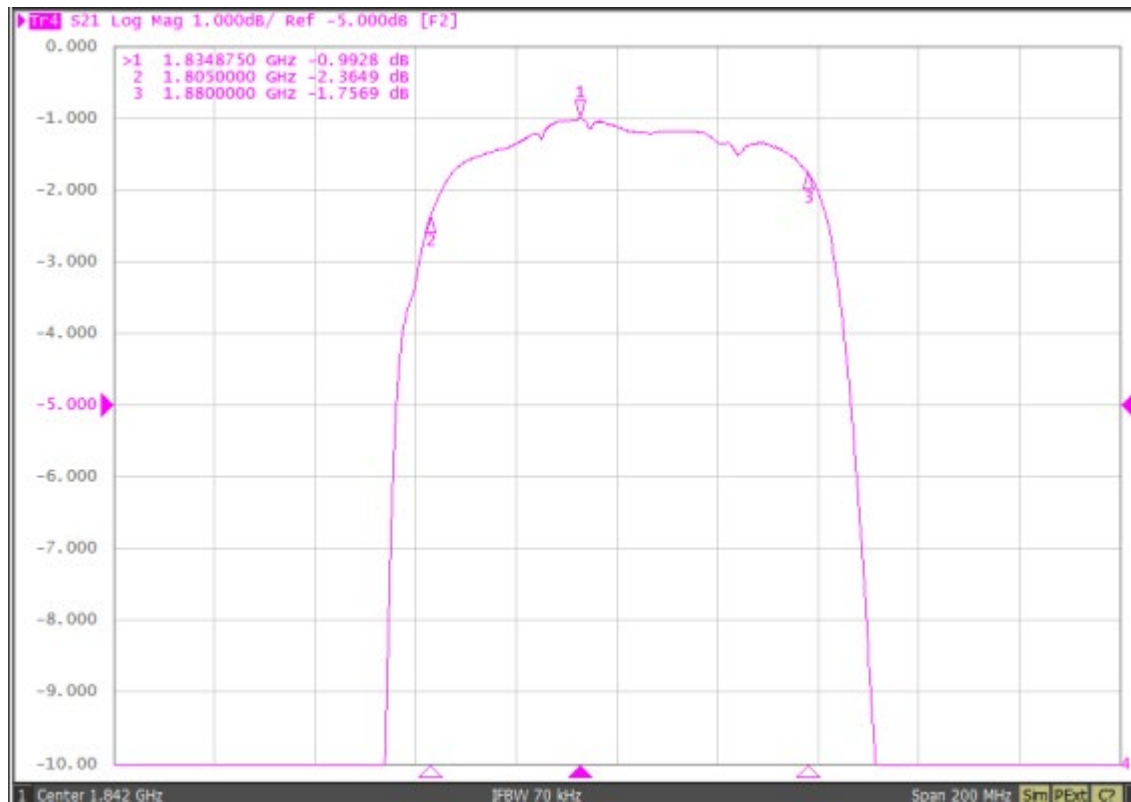
ELECTRICAL CHARACTERISTICS:

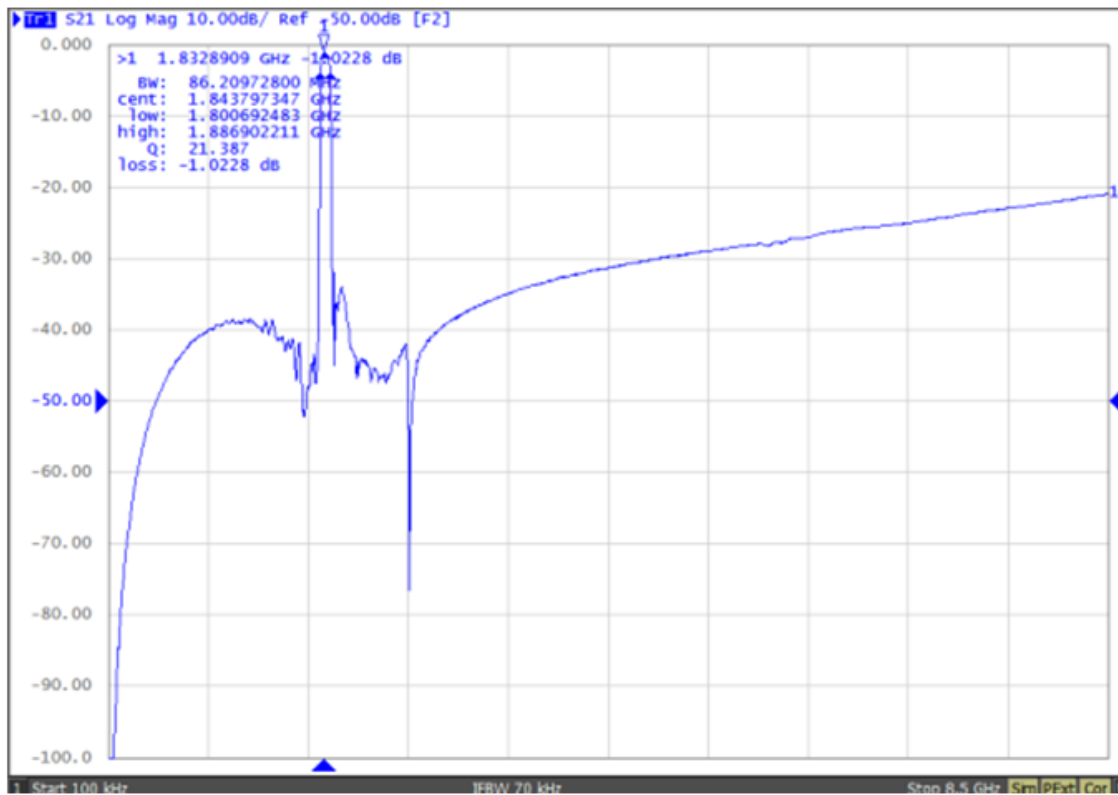
Terminating source impedance: $Z_s = 50 // 33nH \Omega$ (Single-ended)

Terminating load impedance: $Z_L = 50 // 12nH \Omega$ (Single-ended)

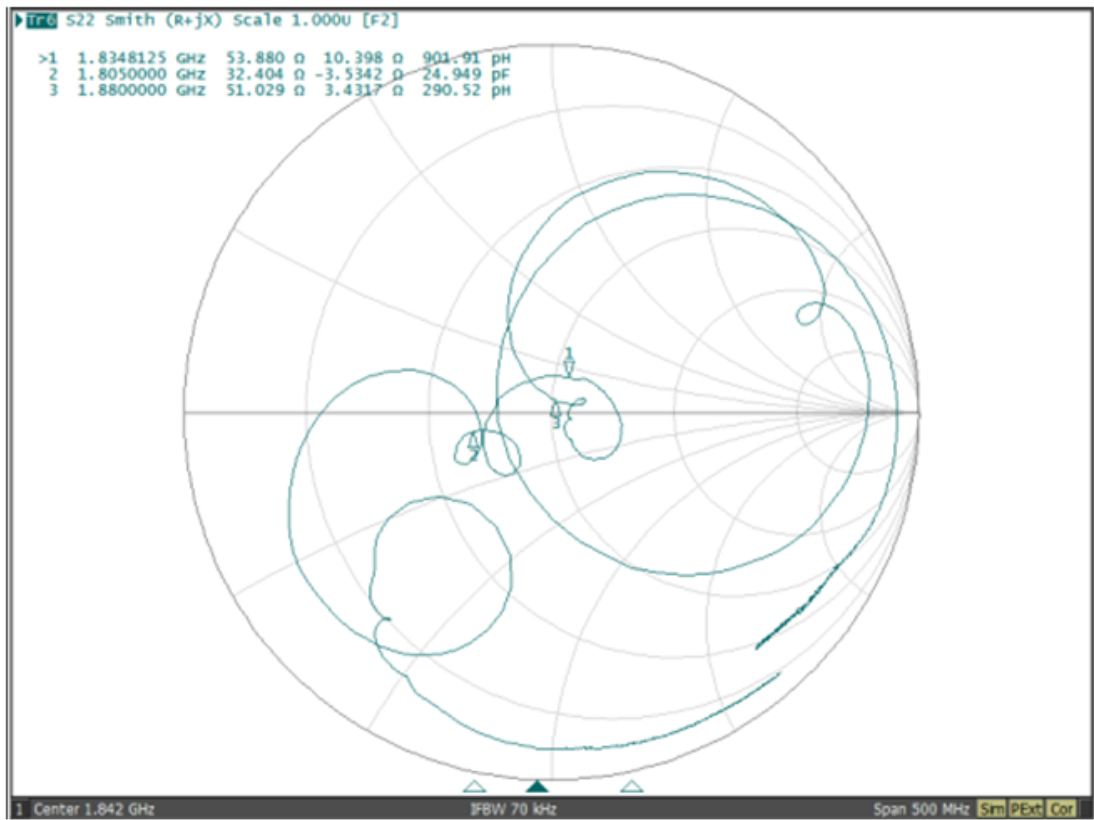
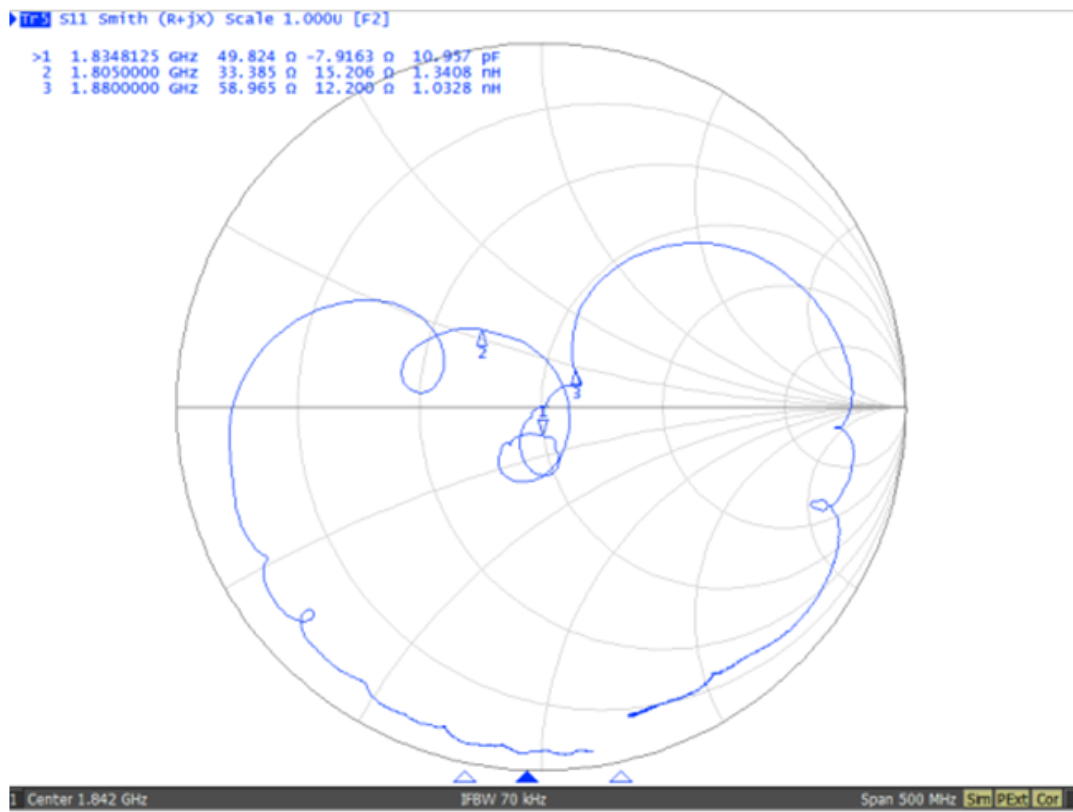
Item	Unit	Min.	Typ.	Max.
Center Frequency F_c	MHz	-	1842.5	-
Insertion Loss (1805 ~ 1880 MHz) IL	dB	-	2.0	4.0
Amplitude Ripple (1805 ~ 1880 MHz)	dB _{p-p}	-	1.8	3.3
VSWR Input (1805 ~ 1880 MHz)	-	-	1.9	2.3
VSWR Output (1805 ~ 1880 MHz)	-	-	1.8	2.2
Attenuation (Reference level from 0 dB)				
DC ~ 960 MHz	dB	34	37	-
1558 ~ 1608 MHz	dB	35	41	-
1710 ~ 1785 MHz	dB	34	38	-
1920 ~ 2400 MHz	dB	25	35	-
2400 ~ 2500 MHz	dB	33	44	-
2500 ~ 3610 MHz	dB	25	36	-
3610 ~ 3760 MHz	dB	25	36	-
3760 ~ 5415 MHz	dB	20	29	-
5415 ~ 5640 MHz	dB	20	29	-
5640 ~ 7220 MHz	dB	18	24	-
7220 ~ 7520 MHz	dB	16	23	-
7520 ~ 8000 MHz	dB	14	21	-
Temperature coefficient	ppm/°C	-36		
Package size	mm	SMD 1.1x0.9		

FREQUENCY CHARATERISTIC:



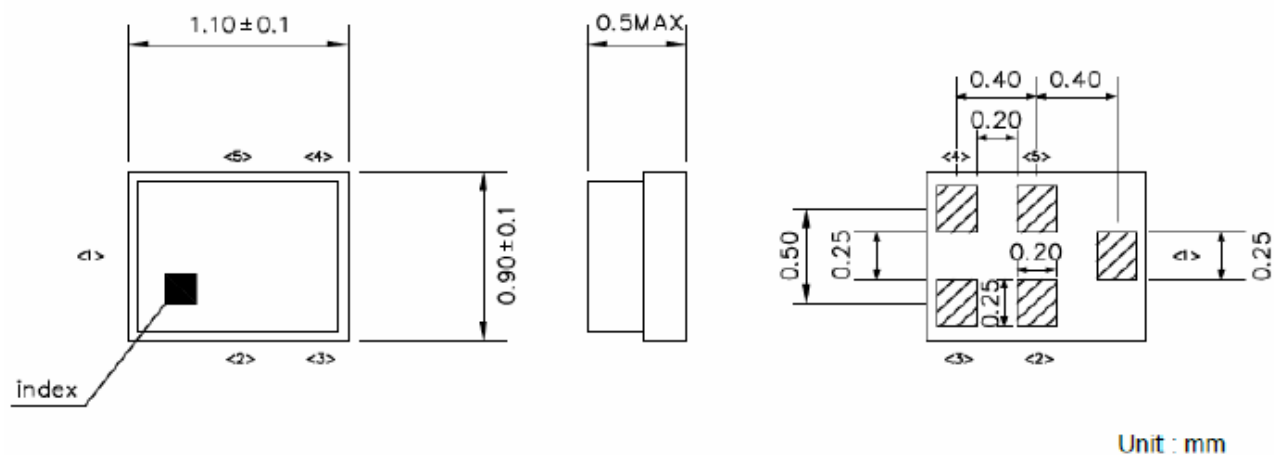


Reflection Functions:



OUTLINE DRAWING:

Device size: 1.1typ. x 0.9typ. x 0.5max.



Pin Configuration

Pin No.	Symbol	Function
1	IN	Unbalanced pin
2	GND	Ground
3	GND	Ground
4	OUT	Unbalanced pin
5	GND	Ground

Top View (Mass Production):



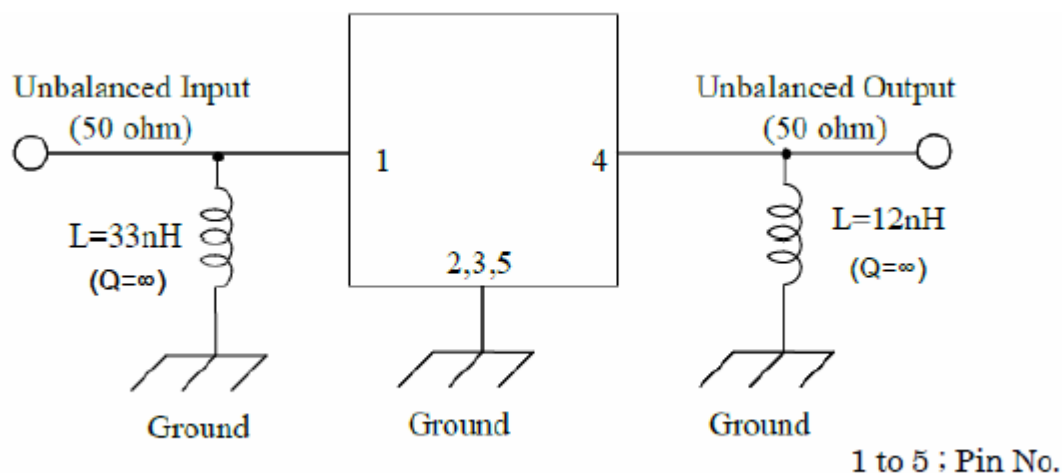
△ : Date Code

□ : Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

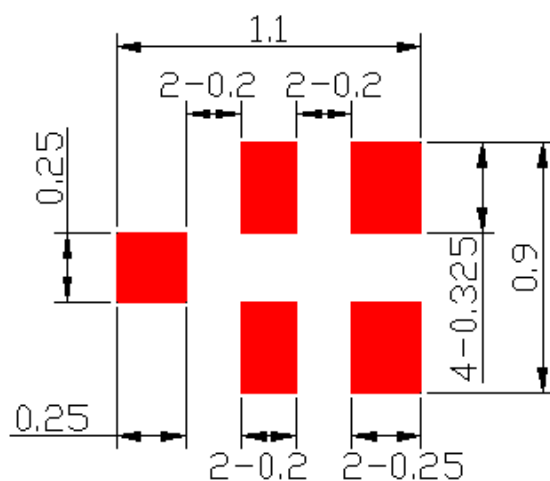
△: Date Code(Follow the table)

YEAR/Month	1	2	3	4	5	6	7	8	9	10	11	12
2021	A	B	C	D	E	F	G	H	J	K	L	M
2022	N	P	Q	R	S	T	U	V	W	X	Y	Z
2023	a	b	c	d	e	f	g	h	j	k	l	m
2024	n	p	q	r	s	t	u	v	w	x	y	z
2025	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>J</u>	<u>K</u>	<u>L</u>	<u>M</u>
2026	<u>N</u>	<u>P</u>	<u>Q</u>	<u>R</u>	<u>S</u>	<u>T</u>	<u>U</u>	<u>V</u>	<u>W</u>	<u>X</u>	<u>Y</u>	<u>Z</u>
2027	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>	<u>l</u>	<u>m</u>
2028	<u>n</u>	<u>p</u>	<u>q</u>	<u>r</u>	<u>s</u>	<u>t</u>	<u>u</u>	<u>v</u>	<u>w</u>	<u>x</u>	<u>y</u>	<u>z</u>

MEASUREMENT CIRCUIT:



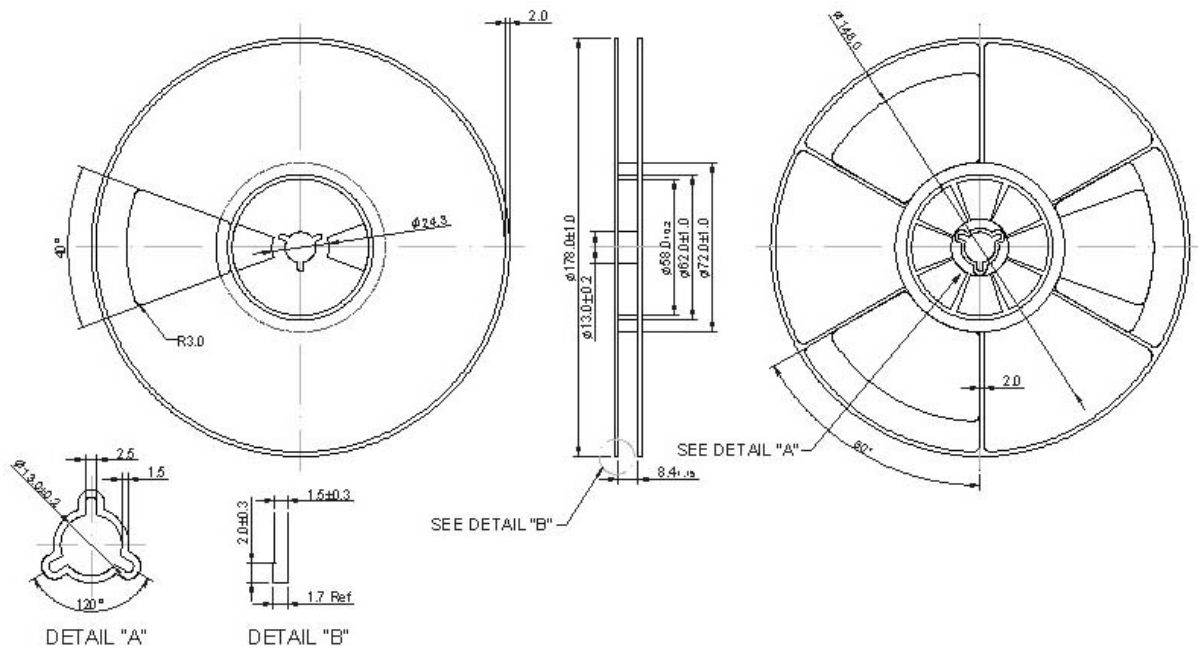
PCB Footprint:



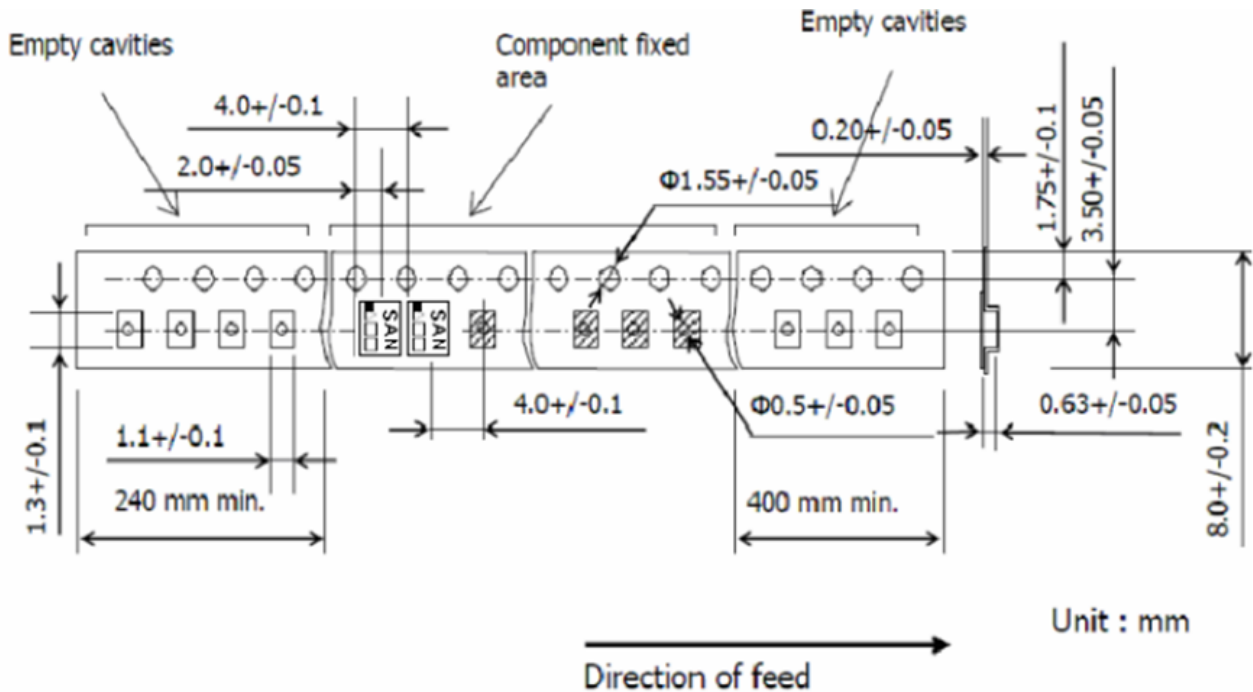
PACKING:

Reel Count: 7" = 5000

1. REEL DIMENSION

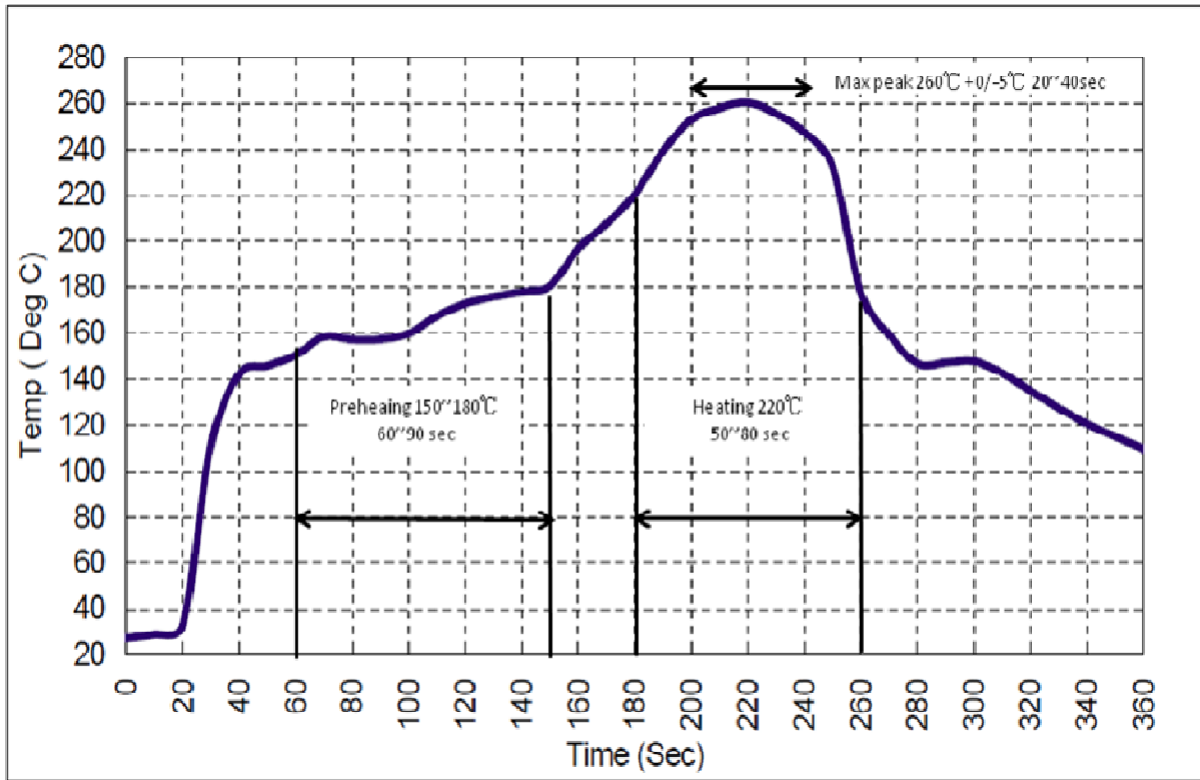


2. TAPE DIMENSION



RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C+0/-5°C peak (20~40sec).
4. Time: 2 times.



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.