

SM1109-5

MAXIMUM RATING:

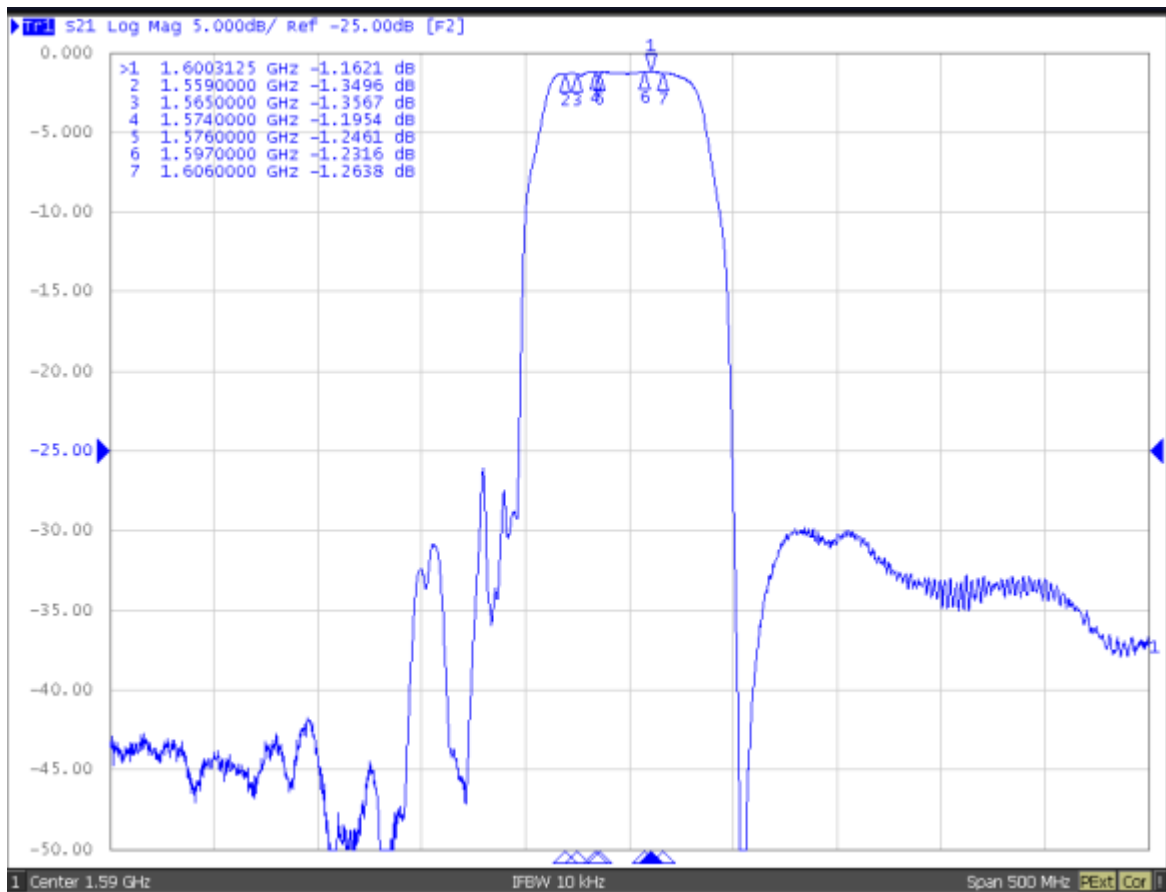
- Input Power Level: 10 dBm
- DC Voltage : 3V
- Operating Temperature: -40°C to +85°C
- Storage Temperature: -40°C to +105°C
- Moisture Sensitivity Level: Level 3(MSL3)

ELECTRICAL CHARACTERISTICS:

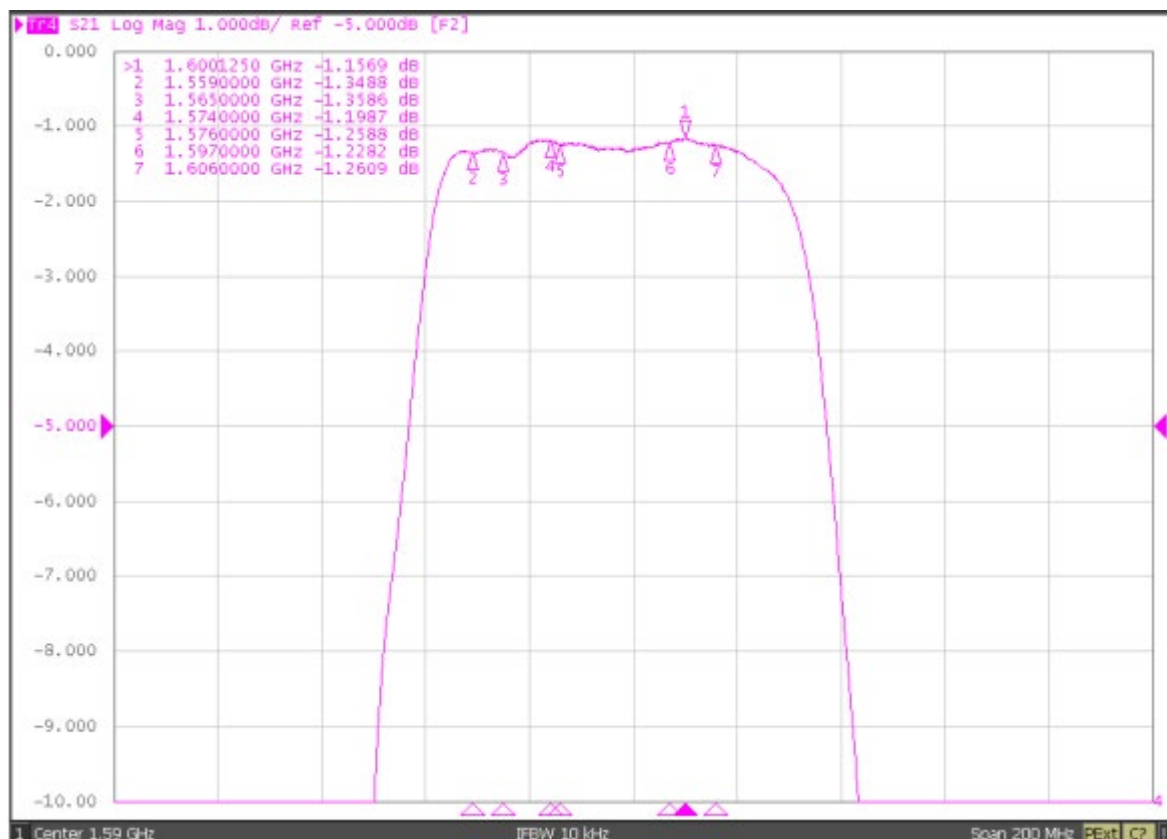
Item	Unit	Min.	Type.	Max. -40°C to +85°C	Max. -40°C to +105°C
Center Frequency Fc	MHz	-	1585.655	-	-
Insertion Loss (1565.42~1585.42MHz)	dB	-	1.4	1.7	1.7
Insertion Loss (1574.42~1576.42MHz)			1.2	1.3	1.4
Insertion Loss (1597.55~1605.89 MHz)			1.4	1.7	1.7
VSWR (1565.42~1585.42MHz)		-	1.7	1.8	2.0
VSWR (1597.55~1605.89 MHz)		-	1.5	1.8	2.0
Return loss S11 (1597.55~1605.89 MHz)	dB		-17	-15	-15
Return loss S22 (1597.55~1605.89 MHz)	dB		-17	-15	-15
Amplitude ripple (1565.42~1605.89MHz)	dB	-	0.5	1.0	1.0
Group Delay Variation					
(1565.42~1585.42MHz)	ns		4	5	6
(1574.42~1576.42MHz)	ns		2	4	5
(1597.55~1605.89 MHz)	ns		3	5	8
Attenuation					-
10 ~ 960 MHz	dB	35	40	-	-
1427 1453 MHz	dB	37	42	-	-
1453 1501 MHz	dB	25	30	-	-
1501 1525 MHz	dB	21	26	-	-
1626 1660 MHz	dB	2	5	-	-
1710 1785 MHz	dB	27	32	-	-
1850 1910 MHz	dB	33	38	-	-
1920 ~ 1980 Hz	dB	33	38	-	-
2110 2170 MHz	dB	33	38	-	-
2400 2500 MHz	dB	41	46	-	-
2500 2570 MHz	dB	39	44	-	-
Temperature coefficient	ppm/°C	-36			
Package size	mm	SMD 1.1x0.9			

Frequency Characteristics

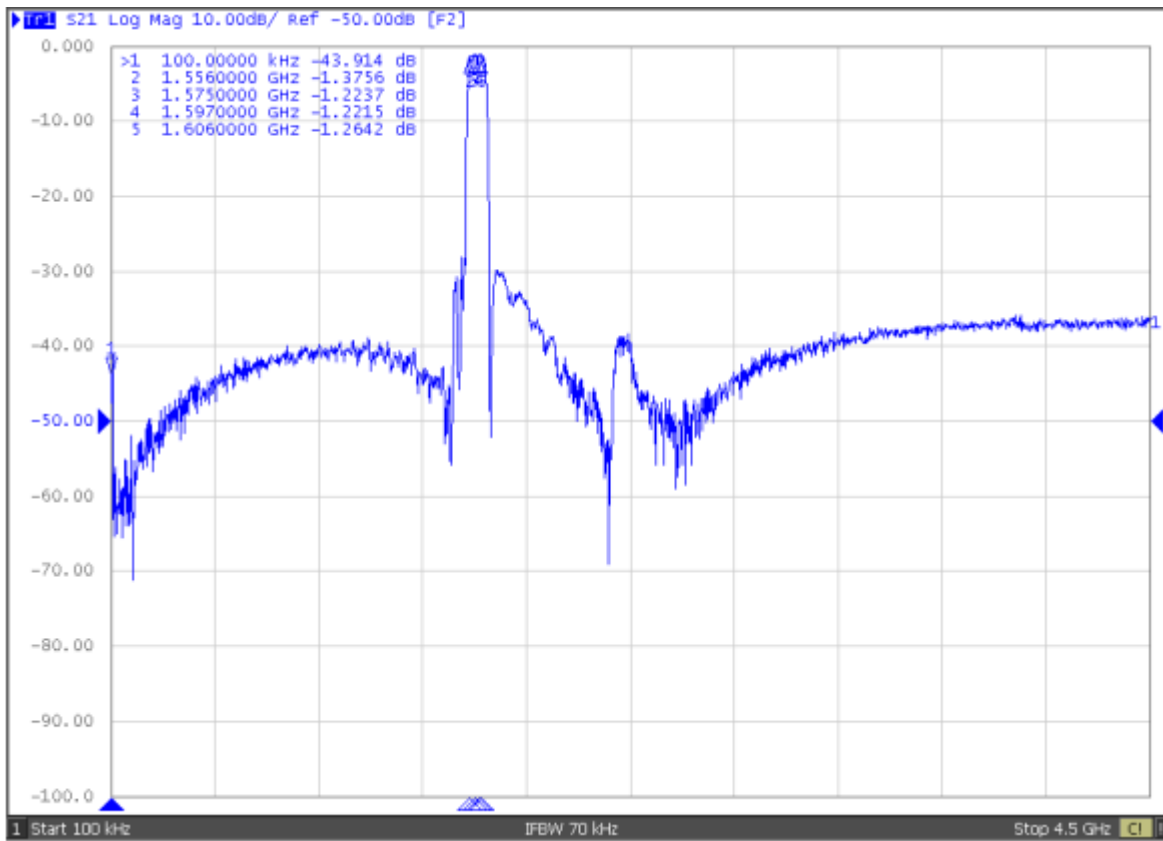
S21 response: (span 500MHz)



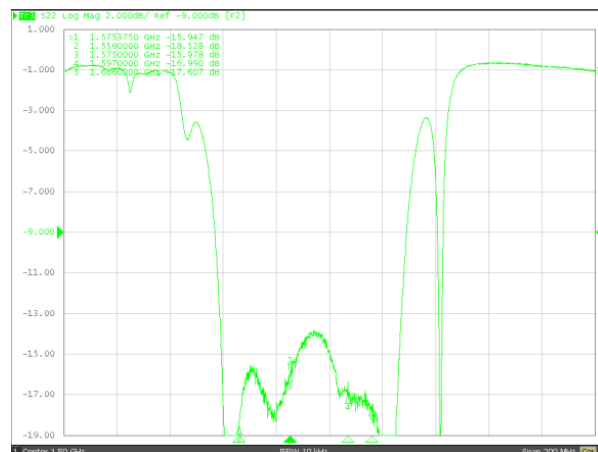
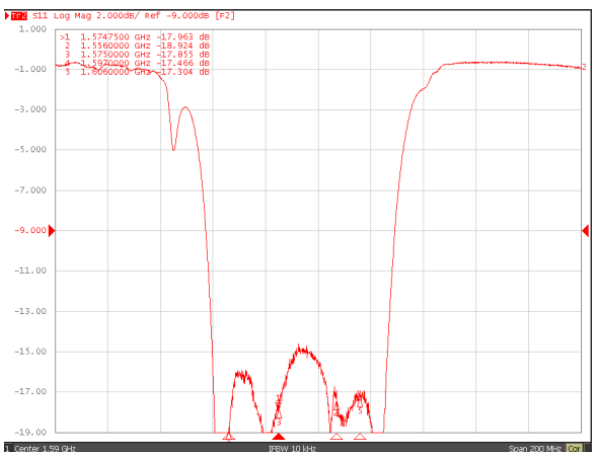
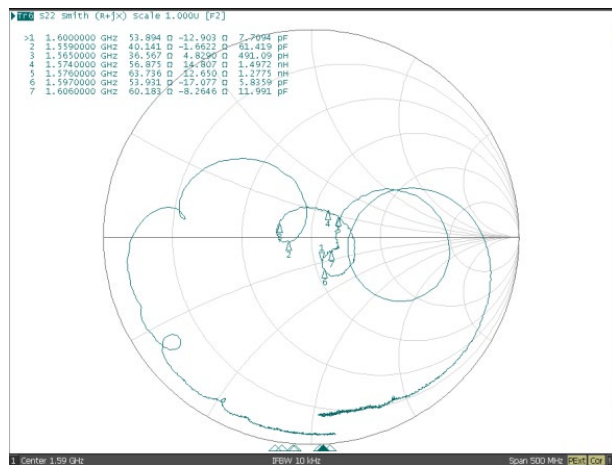
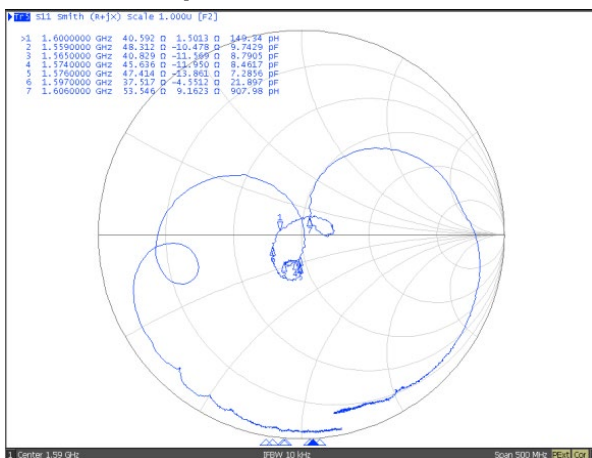
S21 response: (span 200MHz)



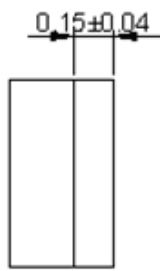
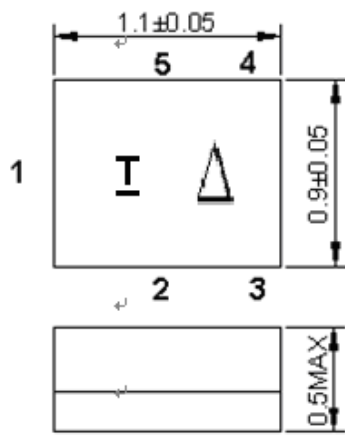
S21 response: (span 4.5GHz)



S11/S22 response:



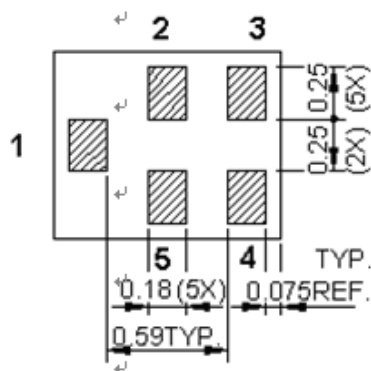
Outline Drawing



All tolerances are ± 0.05 mm unless otherwise specified
Coplanarity : 0.1 mm max.

1 to 5 : Pin No.

Unit : mm

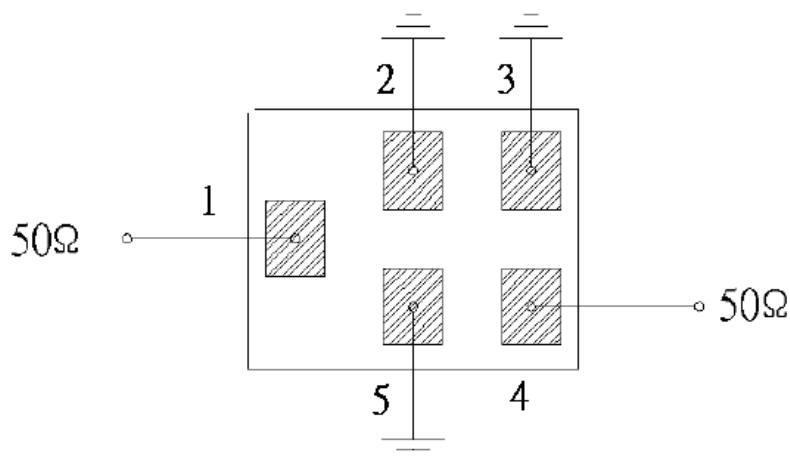


Pin No.	Symbol	Function
1	IN	Input
2	GND	Ground
3	GND	Ground
4	OUT	Output
5	GND	Ground

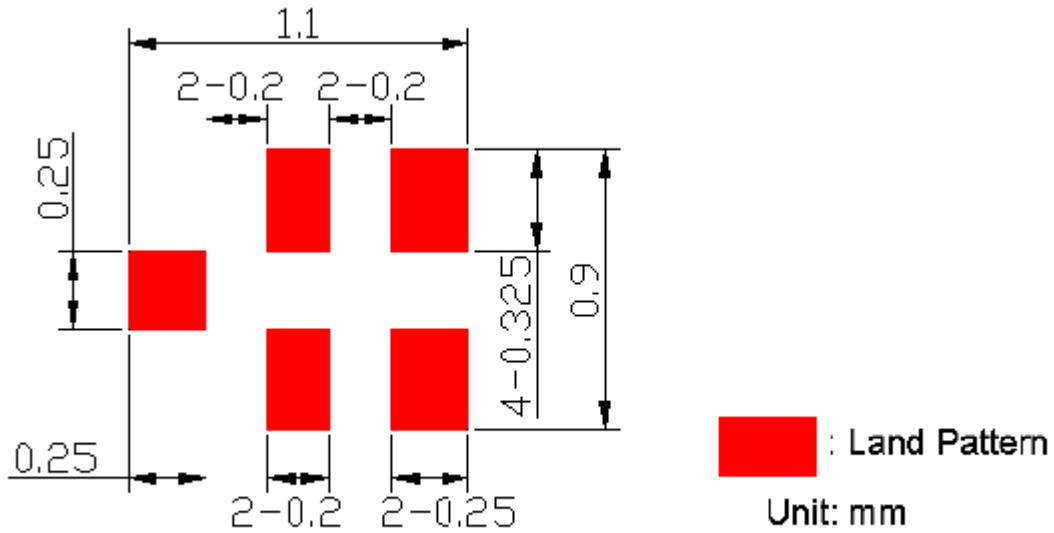
Δ : Year/Month Code (Follow the table)

YEAR/Month	1	2	3	4	5	6	7	8	9	10	11	12
2013	A	B	C	D	E	F	G	H	J	K	L	M
2014	N	P	Q	R	S	T	U	V	W	X	Y	Z
2015	a	b	c	d	e	f	g	h	j	k	l	m
2016	n	p	q	r	s	t	u	v	w	x	y	z
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019	a	b	c	d	e	f	g	h	j	k	l	m
2020	n	p	q	r	s	t	u	v	w	x	y	z

Measurement Circuit



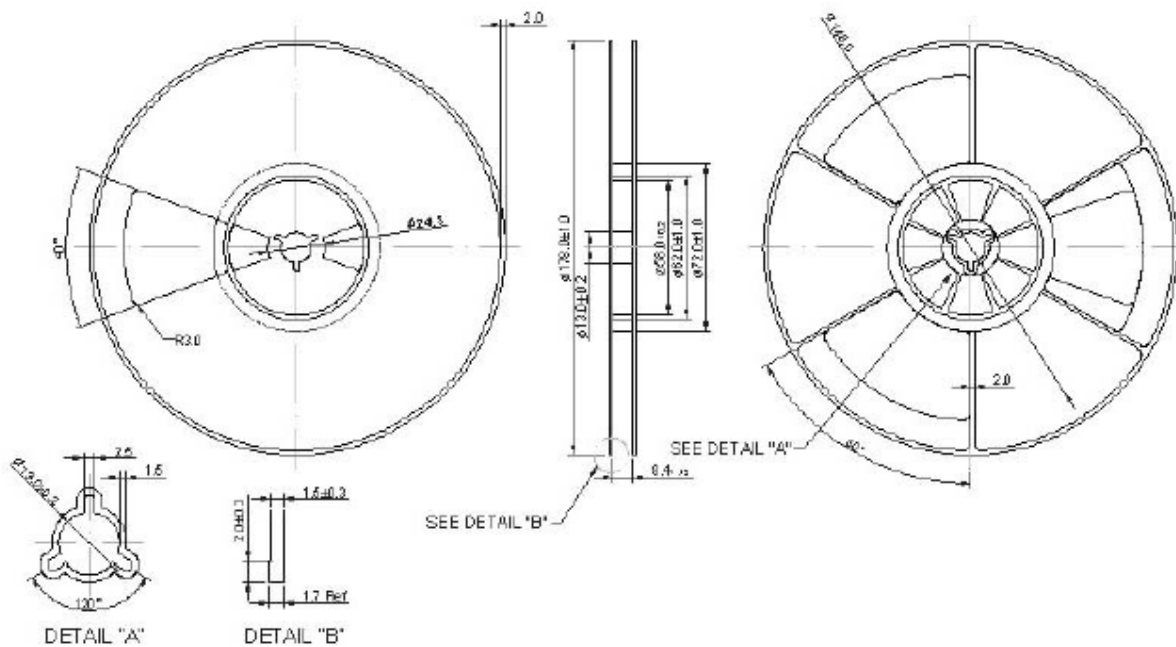
PCB Footprint



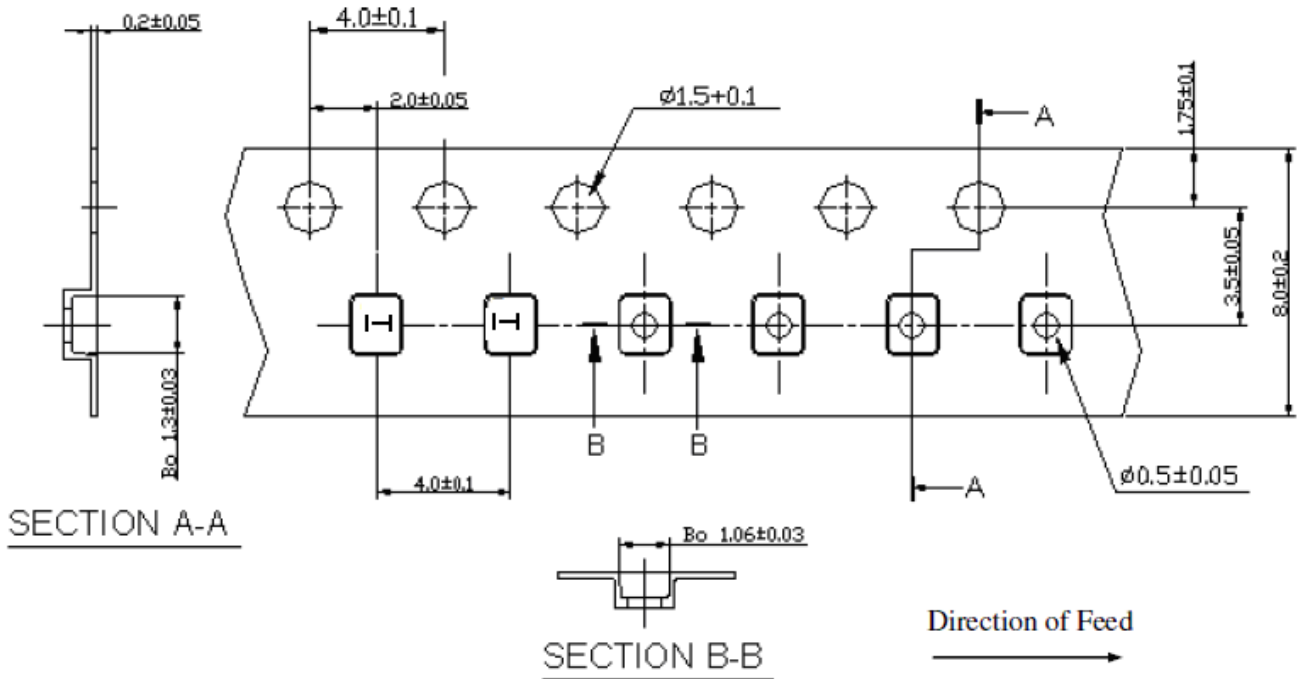
Packing

1. REEL DIMENSION

7" reel = 5000

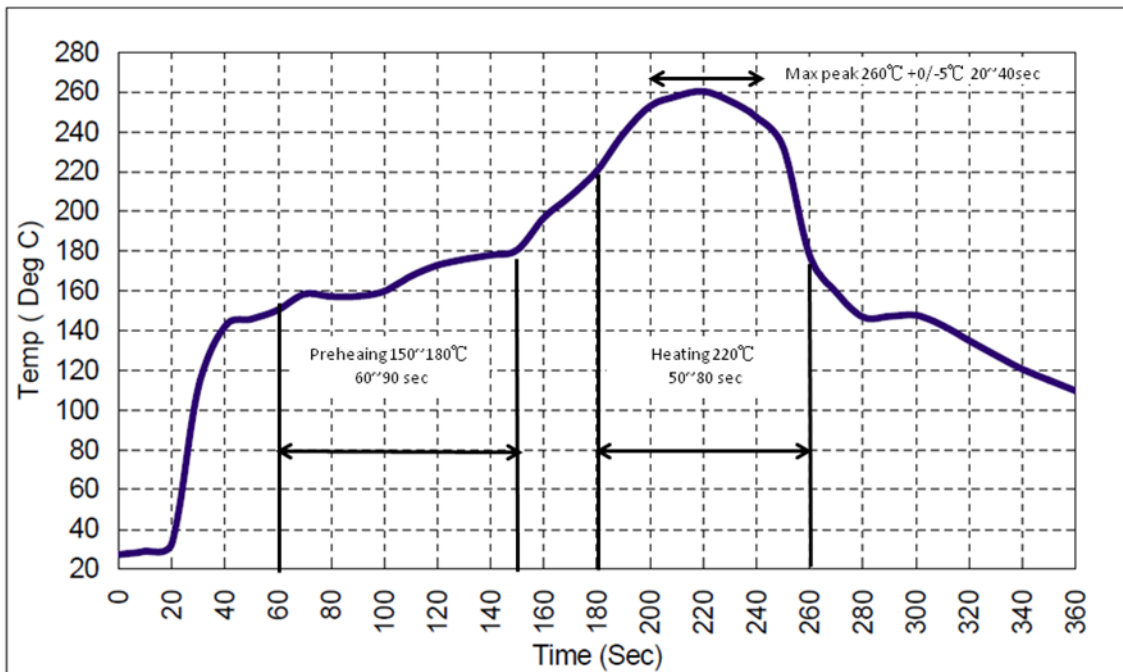


Tape Dimension



Recommended profile reflow

1. Preheating shall be fixed at $150 \sim 180^{\circ}\text{C}$ 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 $260^{\circ}\text{C} + 0/-5^{\circ}\text{C}$ peak (20~40sec).
4. Time: 2 times.



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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.