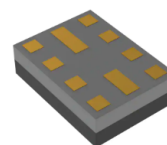


SF2709J

**1222.5 MHz
SAW Diplexer**



SM1511-10

MAXIMUM RATING:

- Input Power Level: 15 dBm
- DC Voltage : 0 V
- Operating Temperature: -40°C to +105°C
- Storage Temperature: -40°C to +105°C
- Moisture Sensitive Level: MSL 3

ELECTRICAL CHARACTERISTICS:

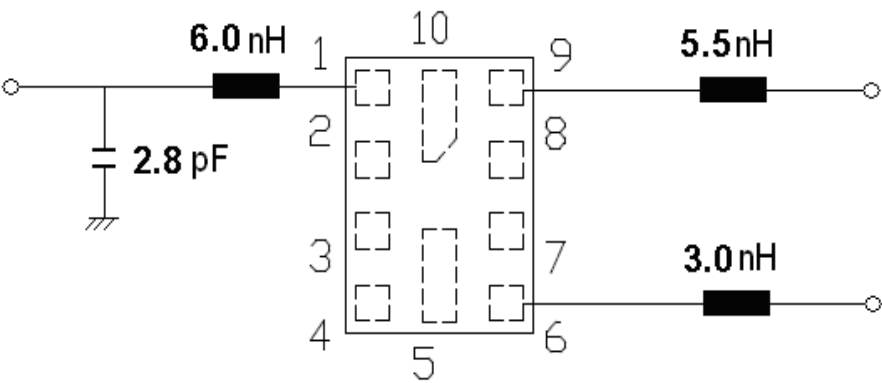
Terminating source impedance (single) : $Z_s = 50 \Omega$
Terminating load impedance (single) : $Z_L = 50 \Omega$

Item (L2 Band to Antenna)	Unit	Min.	Typ.	Max.
Center frequency	MHz	-	1222.5	-
Insertion Loss (1196 ~ 1249 MHz)	dB	-	2.0	3.5
Group Delay Ripple (1197.14 ~ 1217.14 MHz)	ns		12	20
Group Delay Ripple (1221.6 ~ 1233.6 MHz)	ns		0.3	5
Group Delay Ripple (1240 ~ 1252 MHz)	ns		6.1	10
Amplitude Ripple (1196 ~ 1249 MHz)	dB	-	0.8	2.0
Attenuation (reference level from 0 dB)				
880 ~ 920 MHz	dB	35	43	-
1565 ~ 1606 MHz (L1 Band)	dB	30	34	-
1710 ~ 1850 MHz	dB	25	31	-
1850 ~ 1920 MHz	dB	25	30	-
1920 ~ 1980 MHz	dB	25	30	-
Temperature Coefficient of Frequency	ppm/K	-	-36	-

Item (L1 Band to Antenna)	Unit	Min.	Typ.	Max.
Center frequency	MHz	-	1582.5	-
Insertion Loss (1559 ~ 1606 MHz)	dB	-	2.6	3.5
Group Delay Ripple (1559 ~ 1606 MHz)	ns		5	15
Amplitude Ripple (1559 ~ 1606 MHz)	dB	-	0.7	2.0
Attenuation (reference level from 0 dB)				
10 ~ 920 MHz	dB	28	33	-
1196 ~ 1249 MHz (L2 Band)	dB	30	36	-
1427 ~ 1453 MHz	dB	25	32	-
1453 ~ 1501 MHz	dB	20	28	-
1501 ~ 1525 MHz	dB	15	23	-
1710 ~ 1785 MHz	dB	20	26	-
1850 ~ 1980 MHz	dB	30	36	-
Temperature Coefficient of Frequency	ppm/K	-	-36	-

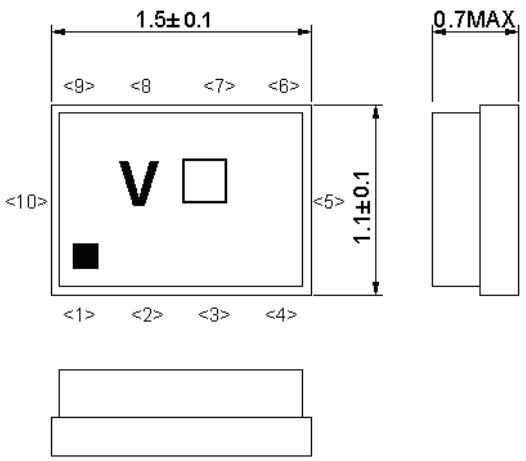
Item (Isolation)	Unit	Min.	Typ.	Max.
Attenuation (reference level from 0 dB)				
1196 ~ 1249 MHz (L2 Band)	dB	38	44	-
1565 ~ 1606 MHz (L1 Band)	dB	38	43	-
Temperature Coefficient of Frequency	ppm/K	-	-36	-

TEST CIRCUIT: Simulation matching port extensions 90ps

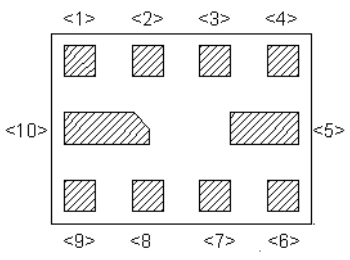


Pin #	Function
(1)	Antenna
(2)	Ground
(3)	Ground
(4)	Ground
(5)	Ground
(6)	L1 Band
(7)	Ground
(8)	Ground
(9)	L2 Band
(10)	Ground

OUTLINE DRAWING:



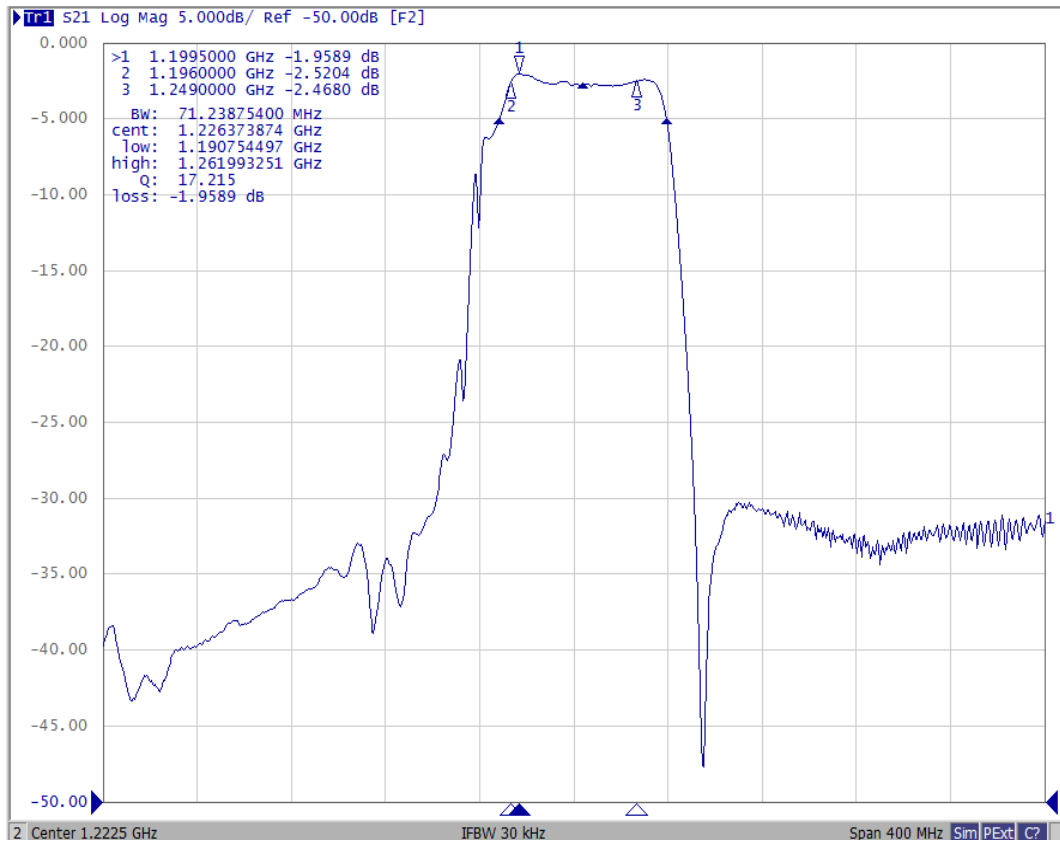
Pin #	Function
(1)	Antenna
(2)	Ground
(3)	Ground
(4)	Ground
(5)	Ground
(6)	L1 Band
(7)	Ground
(8)	Ground
(9)	L2 Band
(10)	Ground



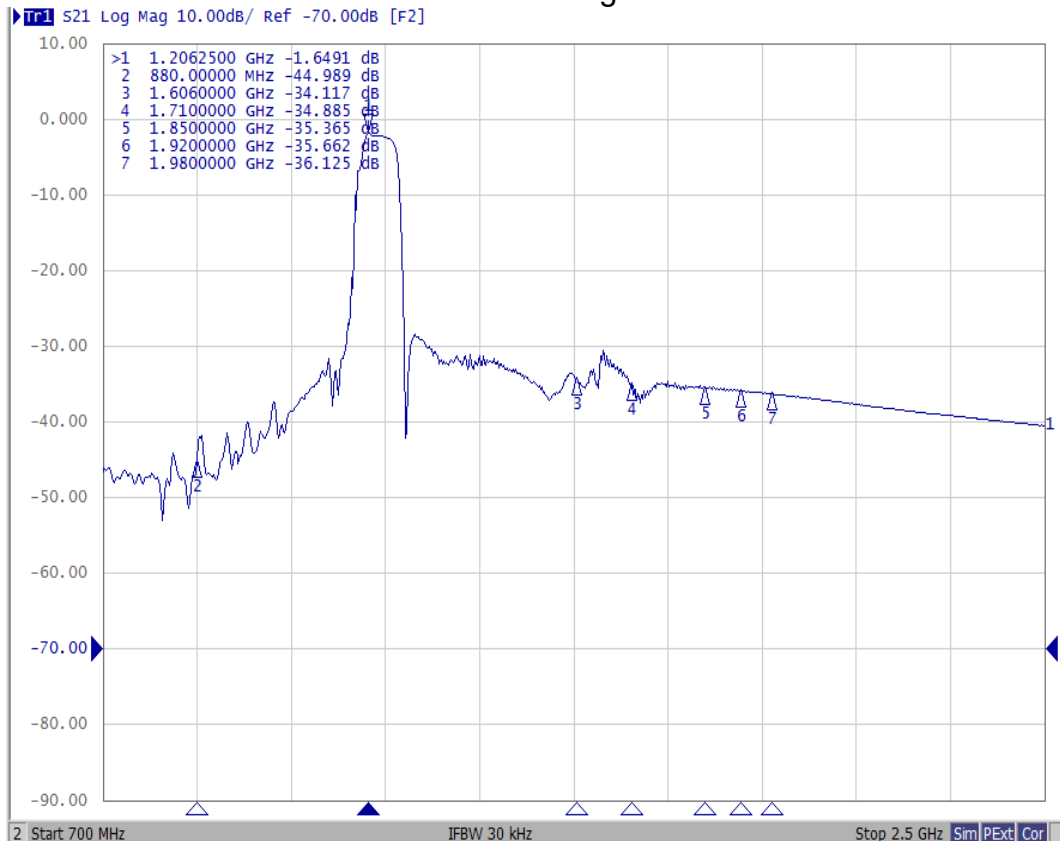
Year/Month	1	2	3	4	5	6	7	8	9	10	11	12
2017	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>J</u>	<u>K</u>	<u>L</u>	<u>M</u>
2018	<u>N</u>	<u>P</u>	<u>Q</u>	<u>R</u>	<u>S</u>	<u>T</u>	<u>U</u>	<u>V</u>	<u>W</u>	<u>X</u>	<u>Y</u>	<u>Z</u>
2019	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</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>
2020	<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>
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

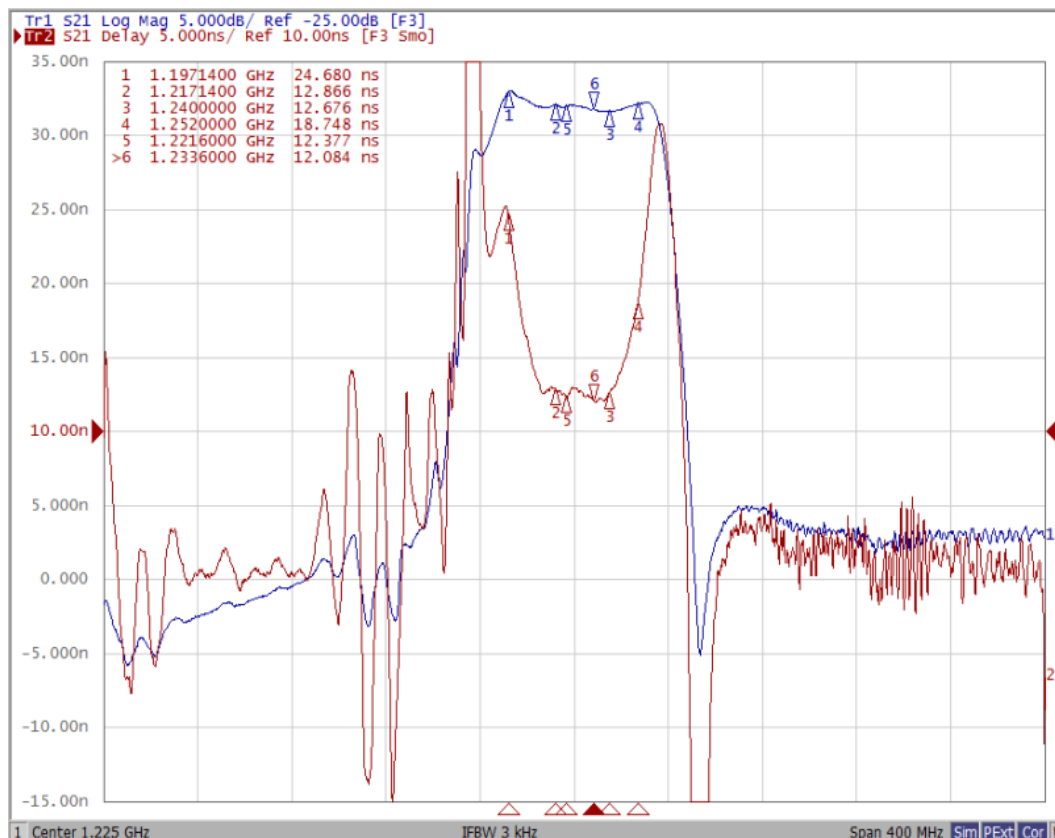
Frequency Characteristics:

L2 Pass Band

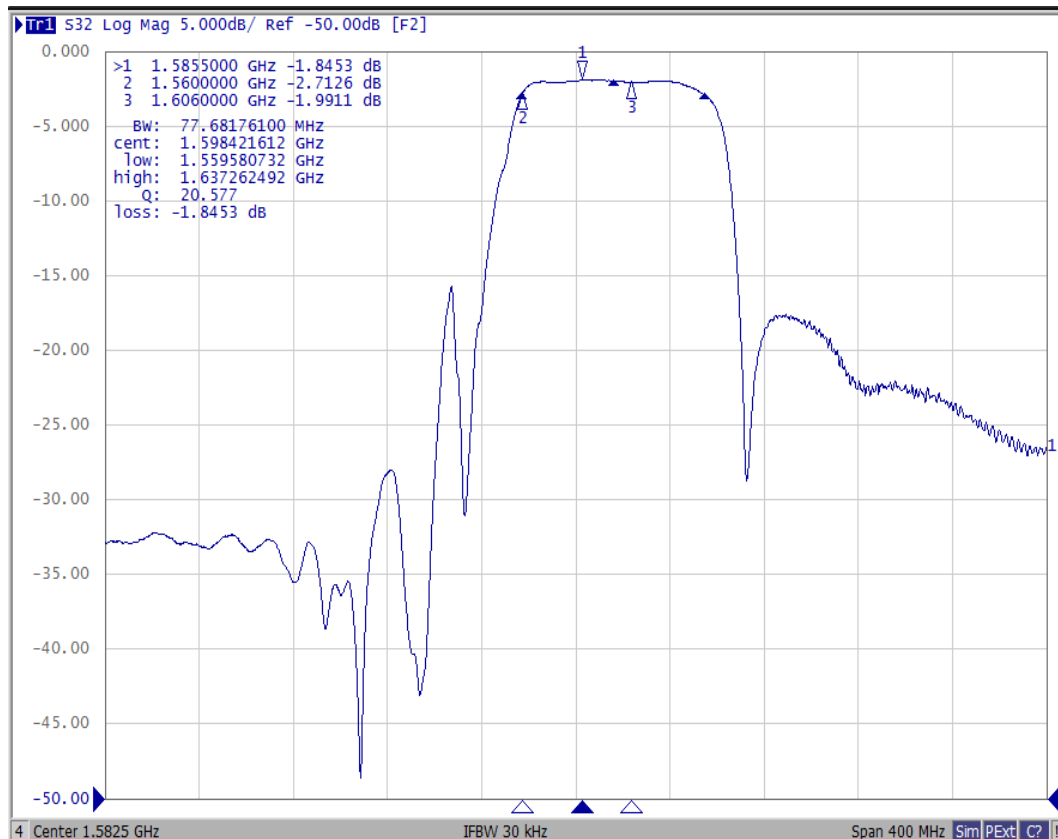


L2 Full Range

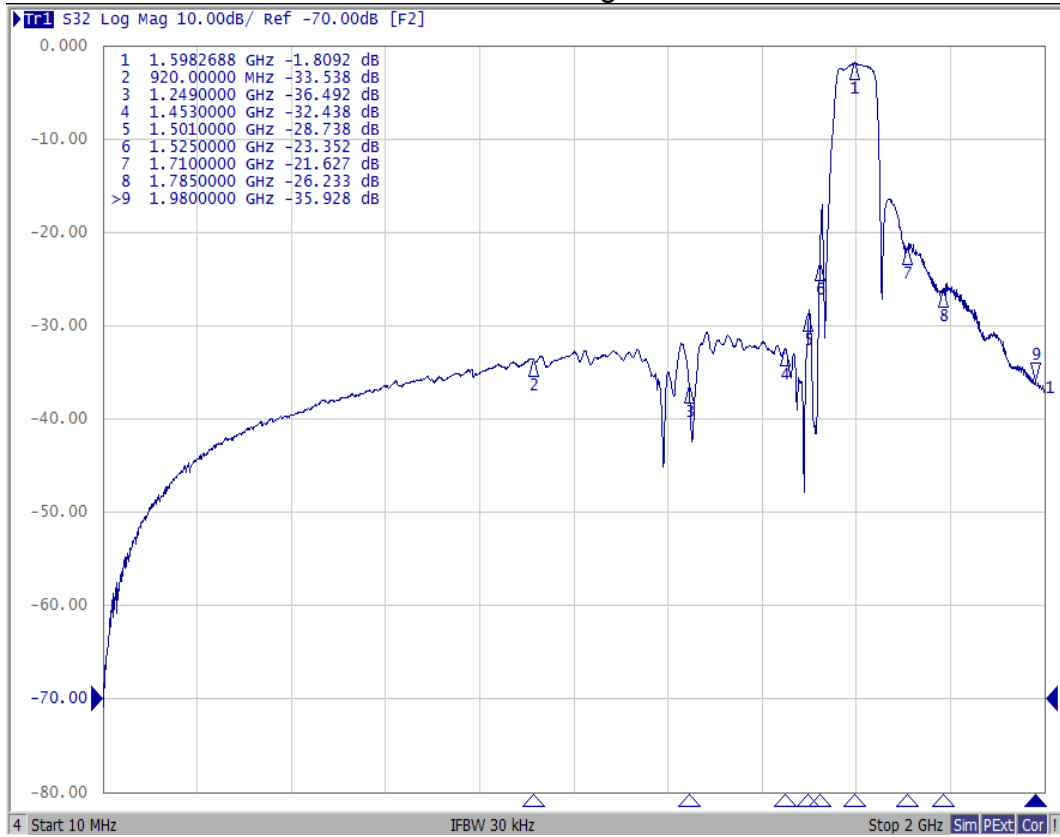




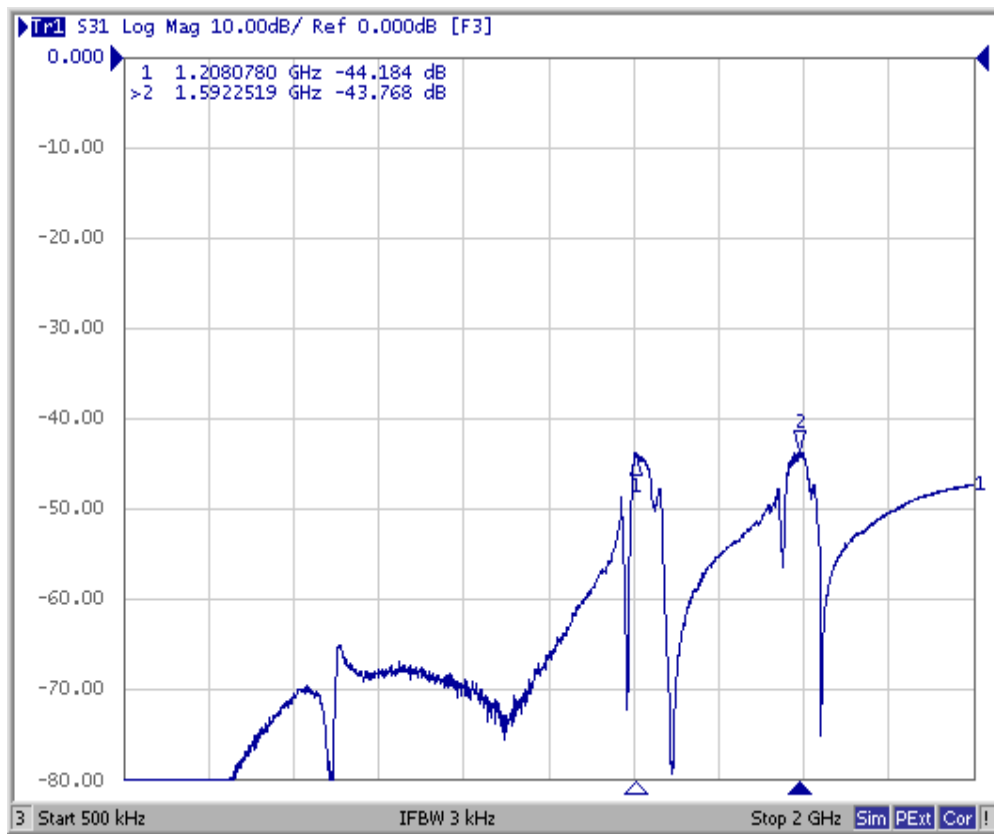
L1 Pass Band



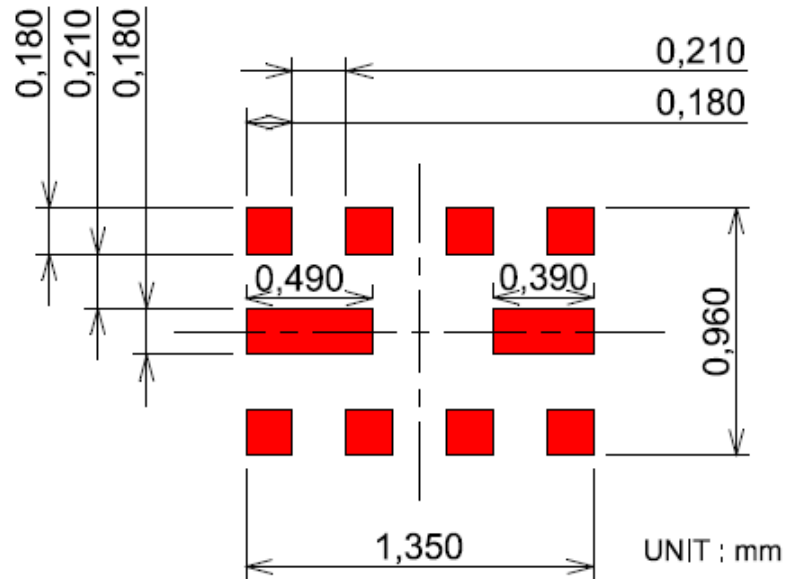
L1 Full Range



Isolation



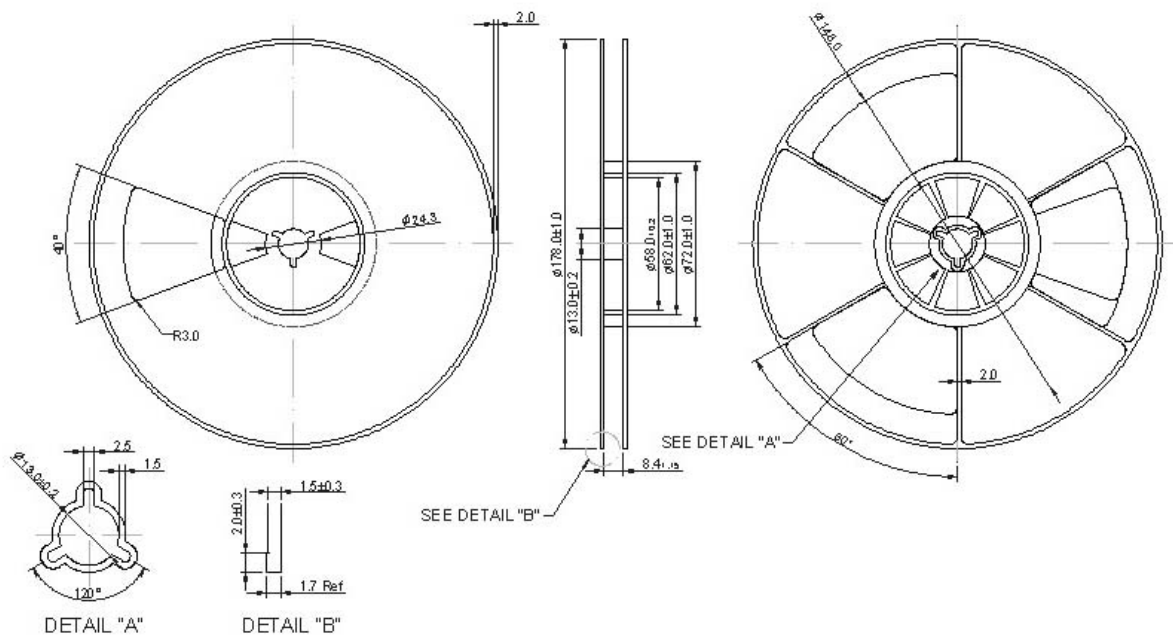
PCB FOOTPRINT:



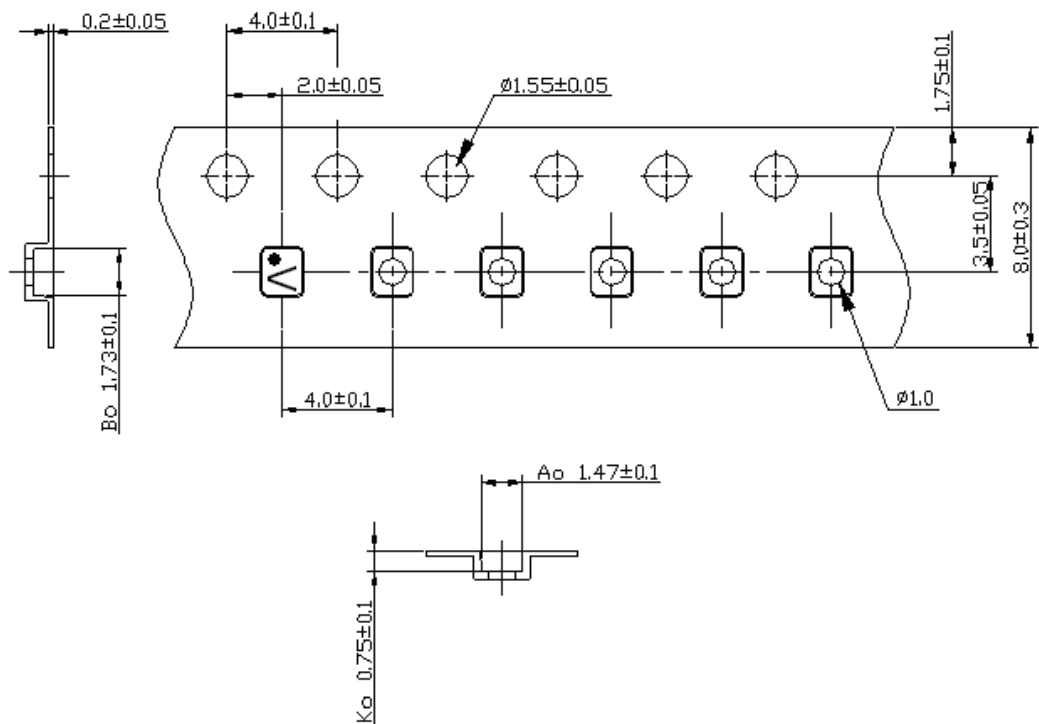
PACKING:

1. REEL DIMENSION

7" Reel = 2000

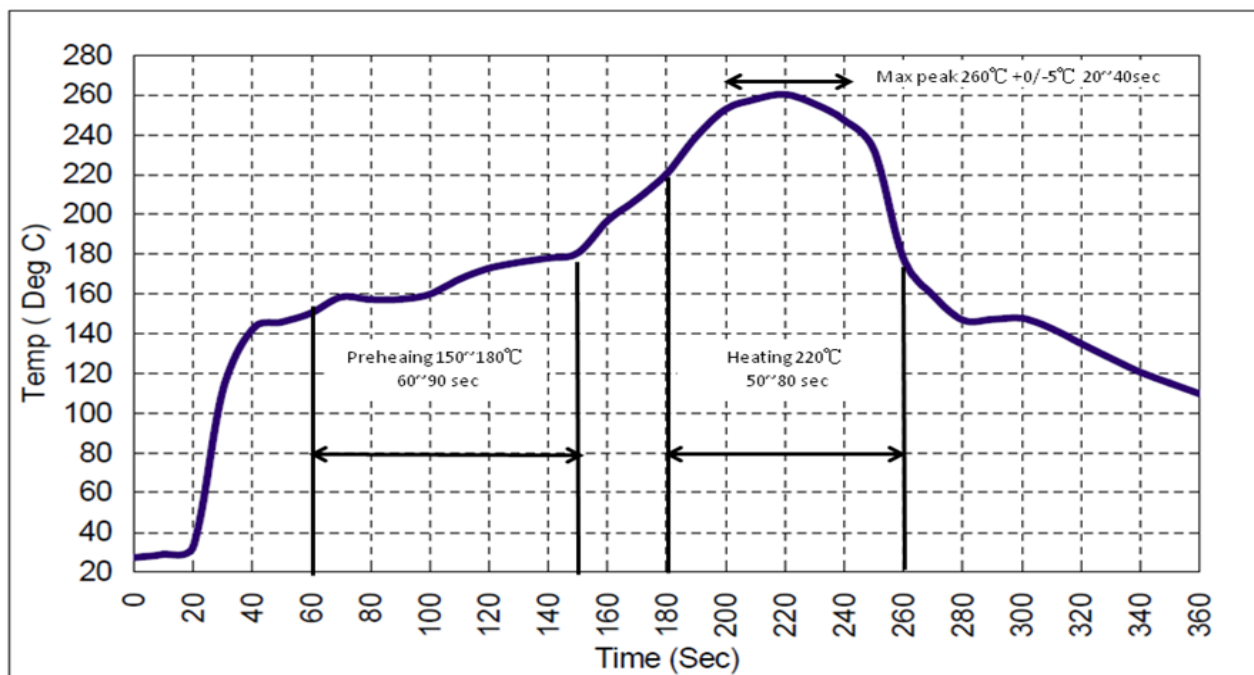


2. TAPE DIMENSION



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.