



**SM1109**

**MAXIMUM RATING:**

- Input Power Level: 10 dBm
- DC Voltage : 3V
- Operating Temperature: -30°C to +85°C
- Storage Temperature: -40°C to +85°C
- Moisture Sensitivity Level: Level 3 (**MSL3**)

**ELECTRICAL CHARACTERISTICS:**

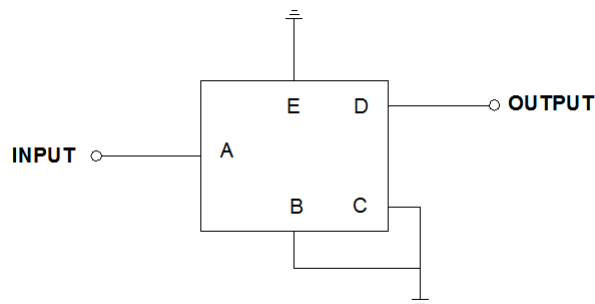
Terminating source impedance:  $Z_s = 50 \Omega$  (Single-ended)

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

Item	Unit	Min.	Typ.	Max.
<b>Center frequency</b> <b>Fc</b>	MHz	-	1950	-
<b>Insertion Loss</b> (1920~1980 MHz) <b>IL</b>	dB	-	1.6	2.5
<b>Amplitude Ripple</b> (1920~1980 MHz)	dB <sub>p-p</sub>	-	0.7	2.0
<b>VSWR</b> (1920~1980 MHz)	-	-	2.0	2.4
<b>Attenuation</b> (Reference level from 0 dB)				
DC ~ 1577 MHz	dB	30	33	-
1577 ~ 1880 MHz	dB	22	30	-
2110 ~ 2170 MHz	dB	35	42	-
2500 ~ 3120 MHz	dB	28	34	-
3840 ~ 3960 MHz	dB	25	31	-
5760 ~ 5940 MHz	dB	15	21	-

**Notes:** No Matching Network.

**MEASUREMENT CIRCUIT:**



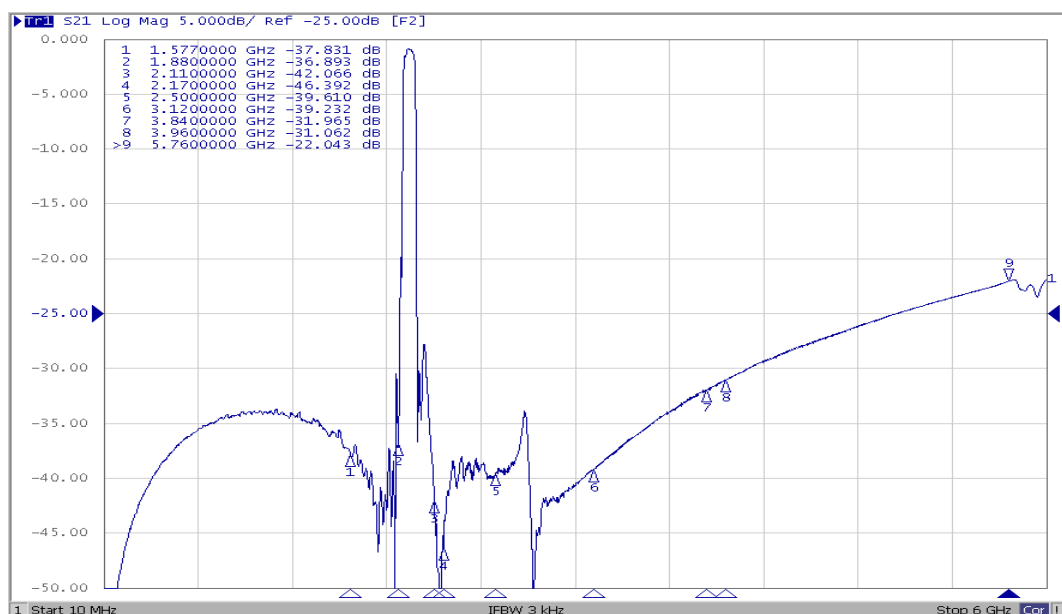
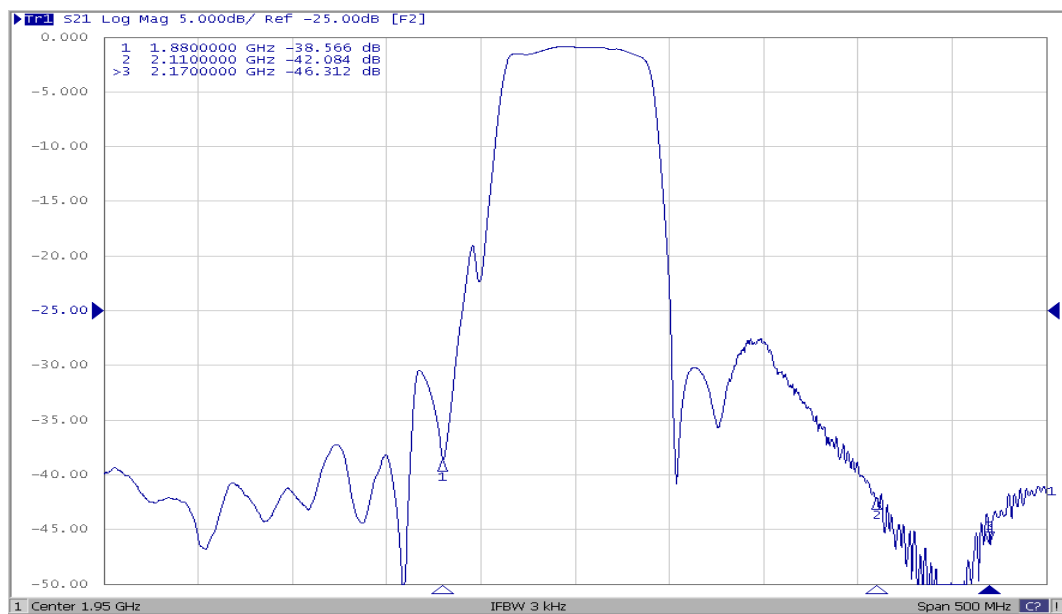
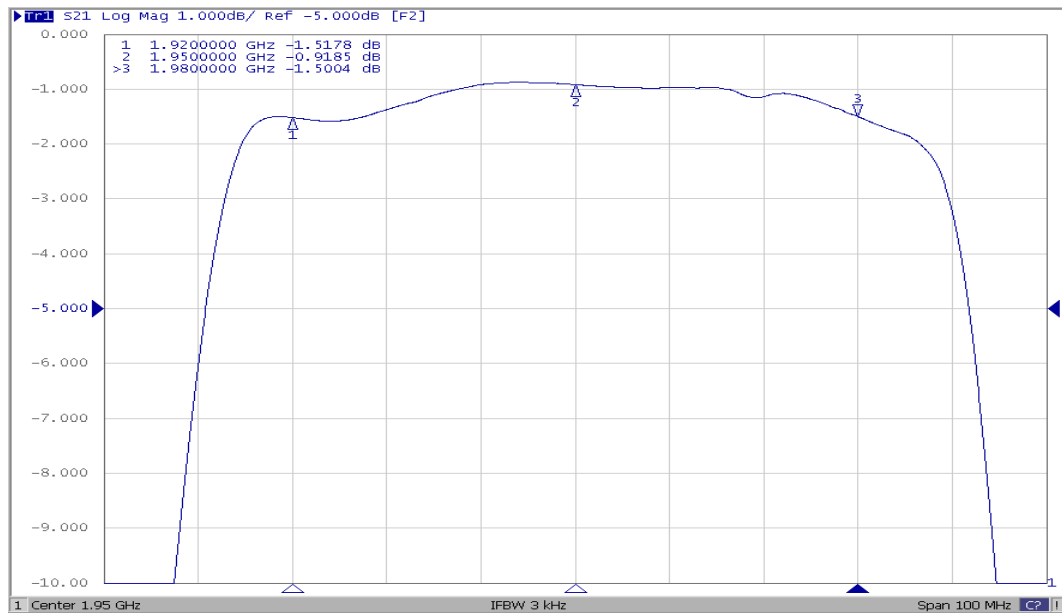
Source & Load Impedance: 50  $\Omega$

**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**



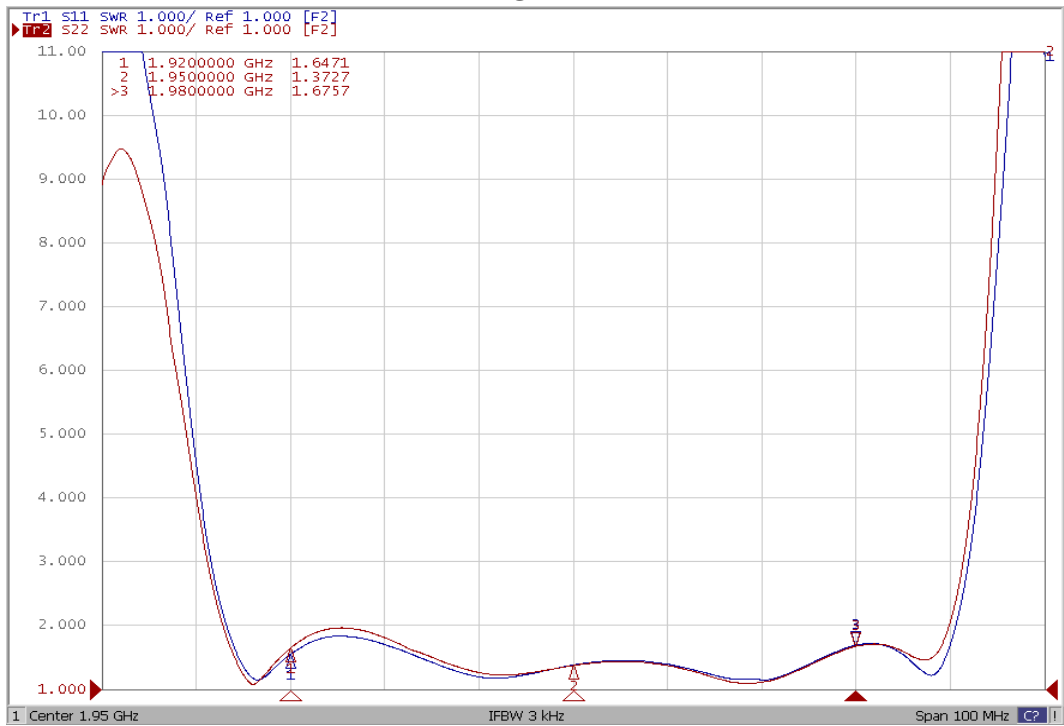
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

## FREQUENCY CHARACTERISTICS:

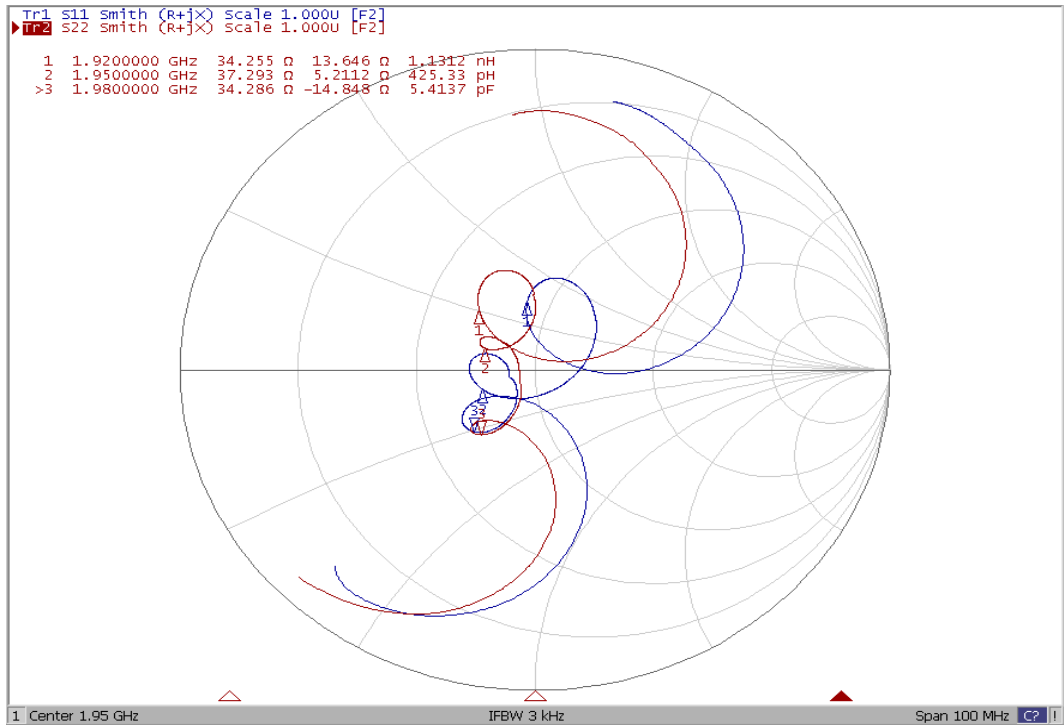


Reflection Functions:

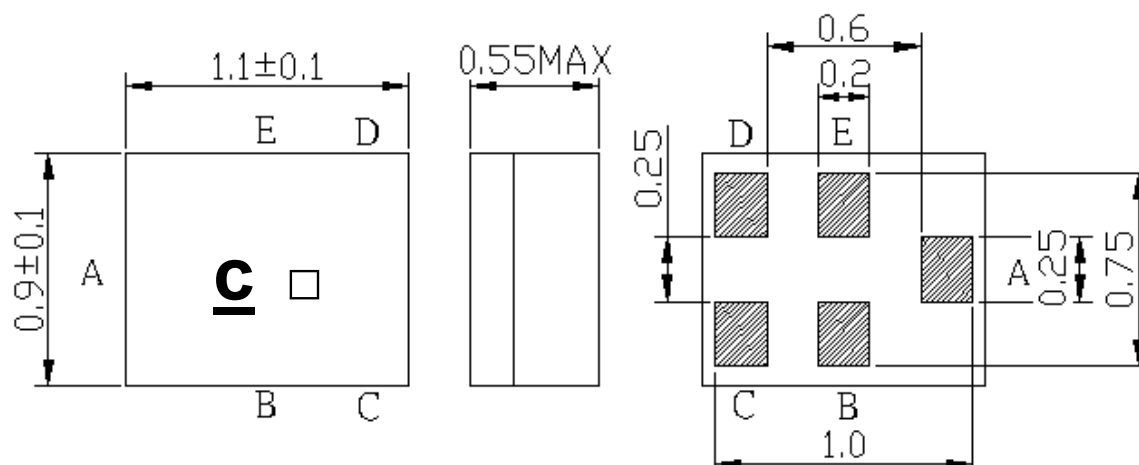
VSWR



Smith Chart



## OUTLINE DRAWING:



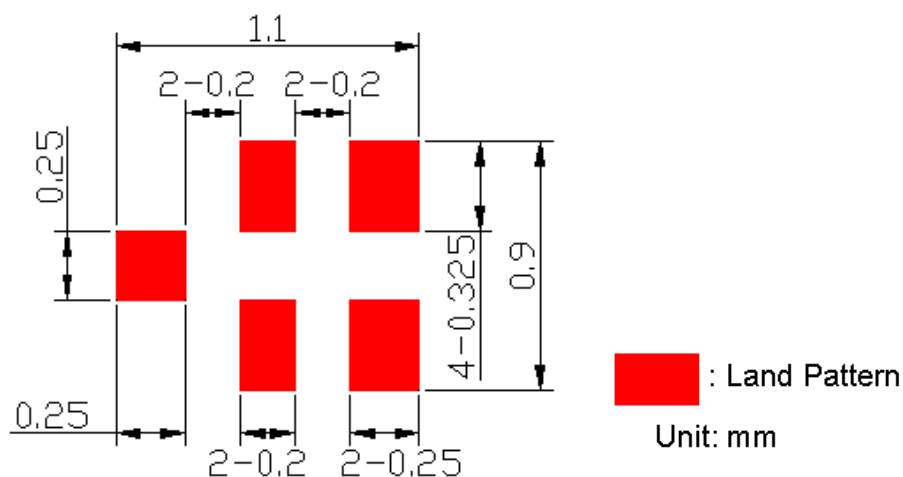
Pin Description	
B, C, E	Ground
A	Input
D	Output

Marking Descriptions	
□	Date Code(Year+Month)

□ : 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	<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>j</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>

## PCB Footprint :



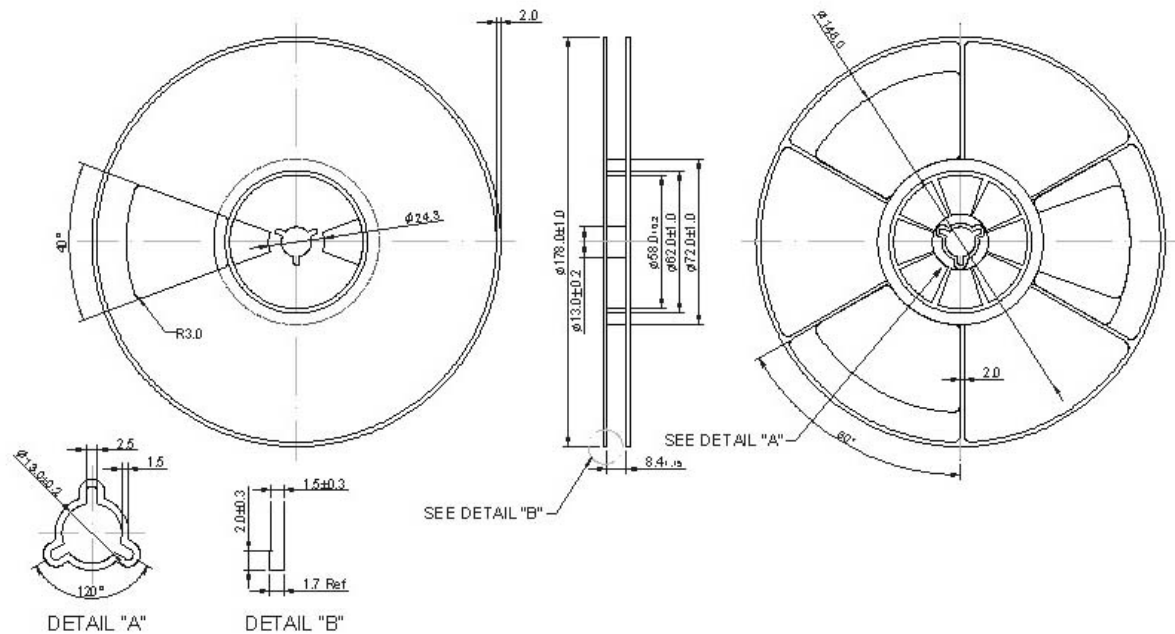
## PACKING:

### REEL DIMENSION

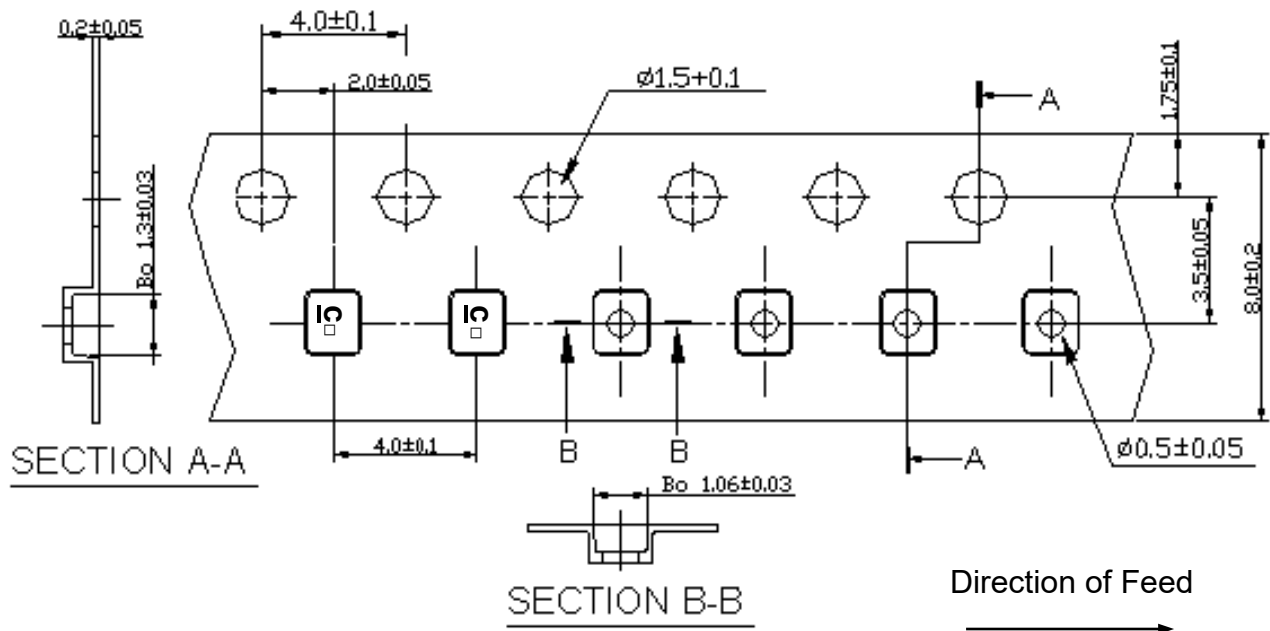
Reel Count:

7" = 3000

13" = 10,000



### 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.

