



SM1109-5

**MAXIMUM RATING:**

- Input Power Level:  
@ Input Power(2535~2655MHz): 29dBm,TD-LTE5MHz(50% duty cycle), +50°C, 5000H  
@ Input Power(2575~2635MHz): 32dBm,TD-LTE5MHz(50% duty cycle), +50°C, 5000H
- DC Voltage : 5V
- Operating Temperature: -40°C to +85°C
- Storage Temperature: -55°C to +125°C
- Moisture Sensitivity Level: Level 1
- ESD 50V(MM) 100V(HBM)
- AEC-Q200 Qualified

**ELECTRICAL CHARACTERISTICS:**

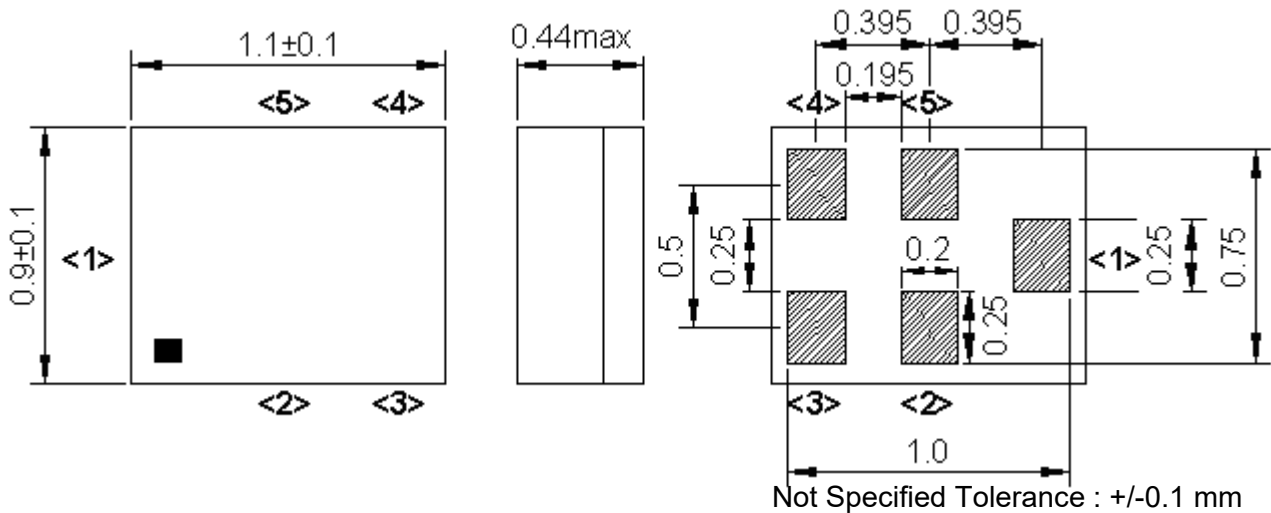
Terminating source impedance :  $Z_s = 50 \parallel 3.0nH \ \Omega$  (Single-ended)

Terminating load impedance :  $Z_L = 50 \parallel 3.0nH \ \Omega$  (Single-ended)

Item	Unit	Min.	Typ.	Max.	Note
<b>Center Frequency</b> <b>Fc</b>	MHz	-	2595	-	-
<b>Insertion Loss</b> (2535~2545MHz)	<b>IL</b>	dB (*1)	2.1	4.5	-30~+25°C
				3.6	+25~+85°C
<b>Insertion Loss</b> (2545~2655MHz)	<b>IL</b>	dB (*1)	1.9	3.0	+23~+27°C
				3.2	
<b>Input VSWR</b> (2535~2545MHz)			1.4	2.4	-30~+25°C
				2.2	+25~+85°C
<b>Input VSWR</b> (2545~2655MHz)			1.6	2.0	
<b>Output VSWR</b> (2535~2545MHz)			1.4	2.4	-30~+25°C
				2.2	+25~+85°C
<b>Output VSWR</b> (2545~2655MHz)			1.6	2.0	
<b>Attenuation</b> (reference level from 0 dB)					
10 ~ 960 MHz	dB	40	56	-	-
1225 ~ 2400 MHz	dB	30	35	-	-
2400 ~ 2483 MHz	dB	36	42	-	-
2750 ~ 4900 MHz	dB	30	38	-	-
4900 ~ 8000 MHz	dB	28	36	-	-

(\*1) Specification of insertion loss excludes loss that comes from the test board.

**OUTLINE DRAWING:**

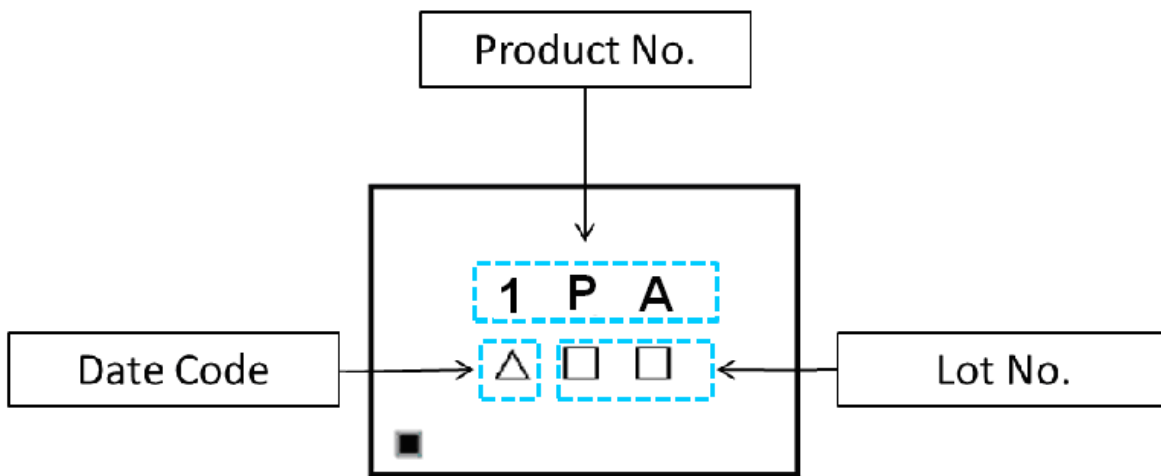


**Pin assignment**

Pin No.	Pin name	Description
1	In	Input
2	GND	Ground
3	GND	Ground
4	Out	Output
5	GND	Ground

**Figure 1. Dimensions and Pin assignment**

**Top View (Mass Production):**



**Marking name : 1PA**

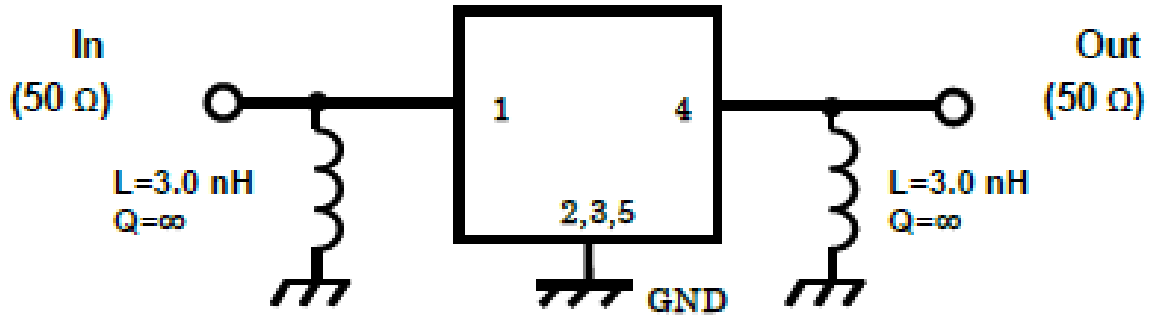
△ : Date Code

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

**Date Code table. (4-year cycle)**

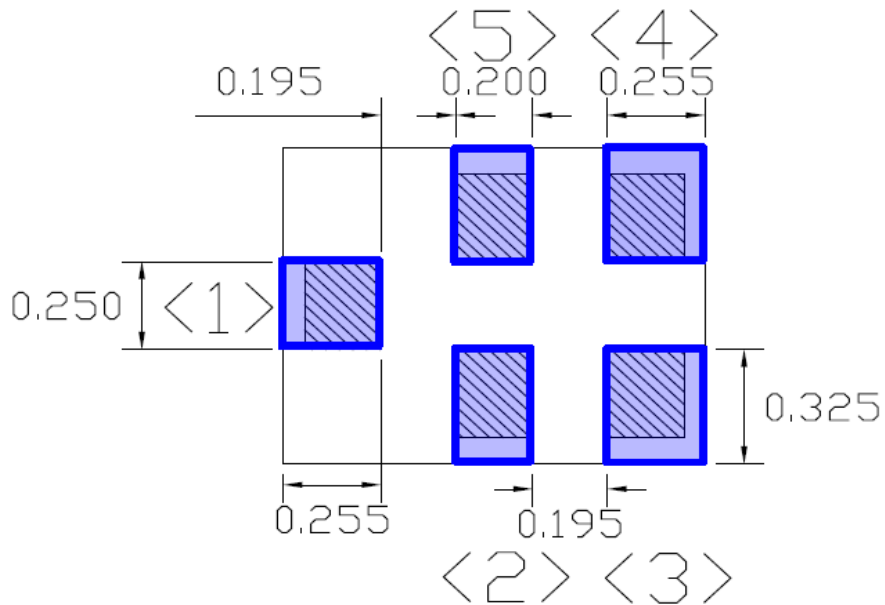
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019	a	b	c	d	e	f	g	h	j	k	l	m
2020	n	p	q	r	s	t	u	v	w	x	y	z
2021	A	B	C	D	E	F	G	H	J	K	L	M

**MEASUREMENT CIRCUIT:**



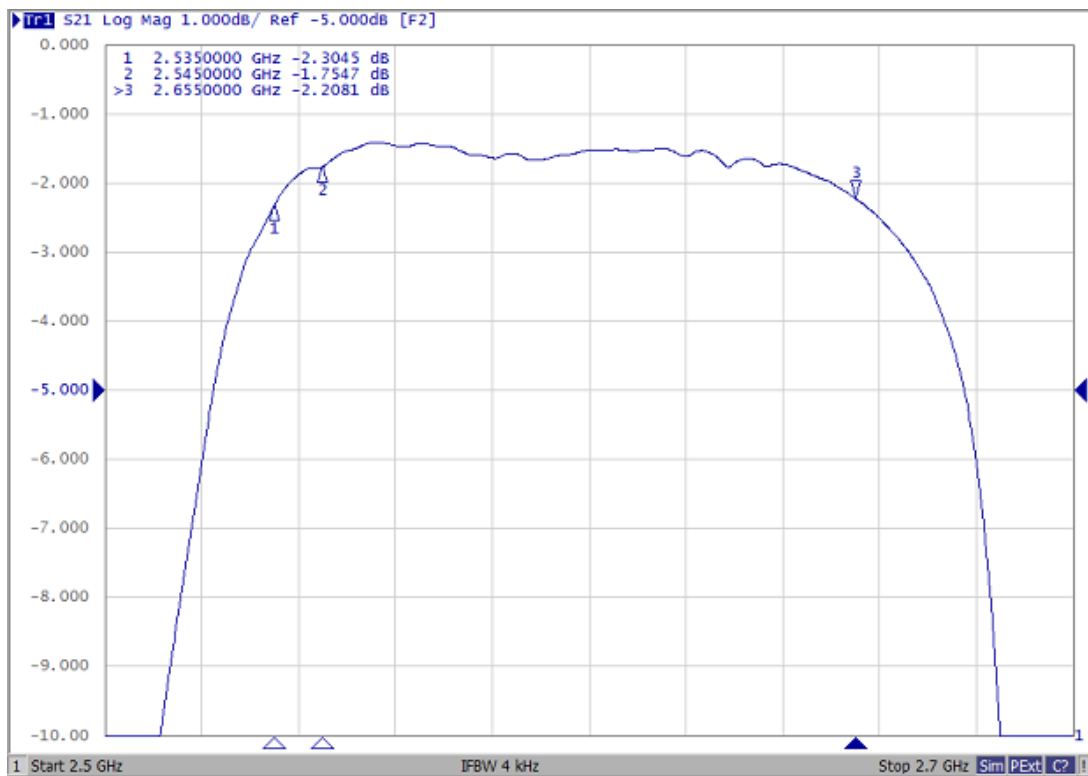
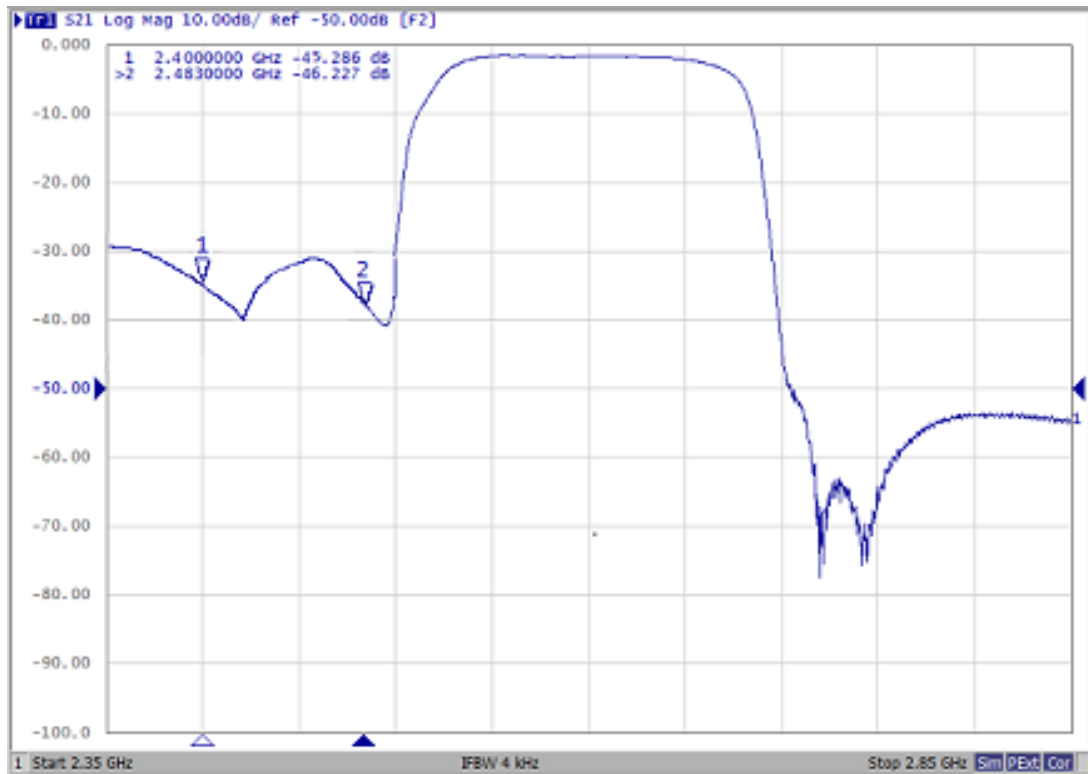
1 to 5: Pin No.

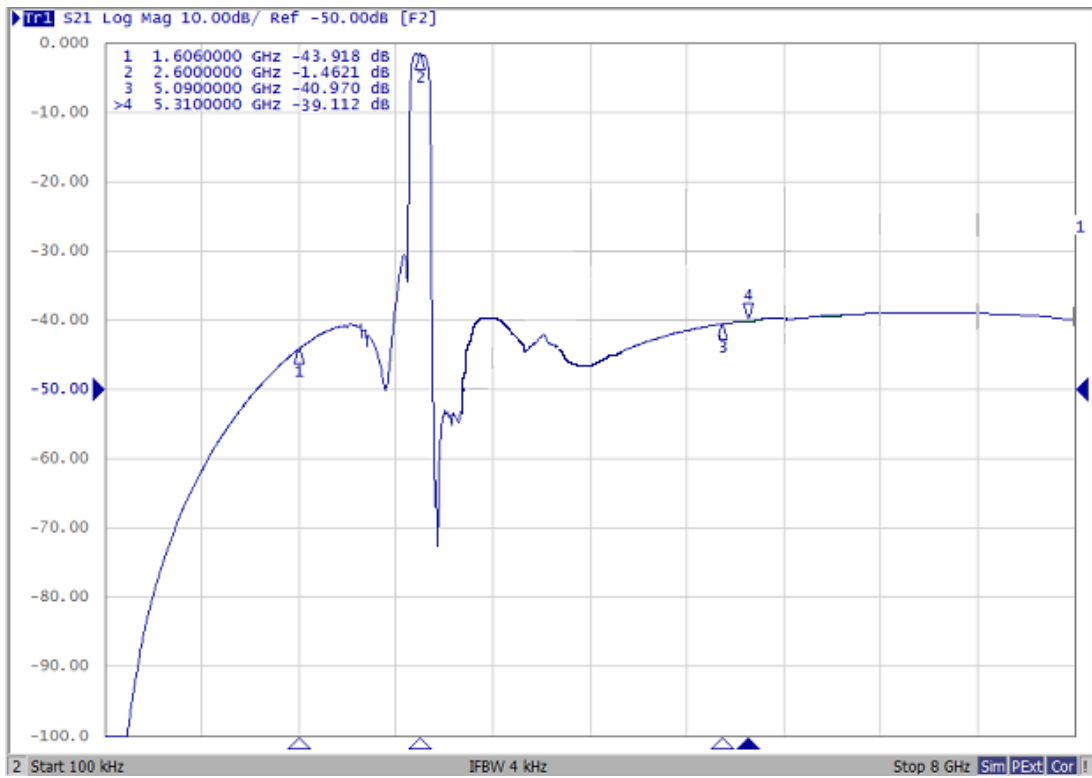
**PCB Footprint :**



# Frequency Characteristics

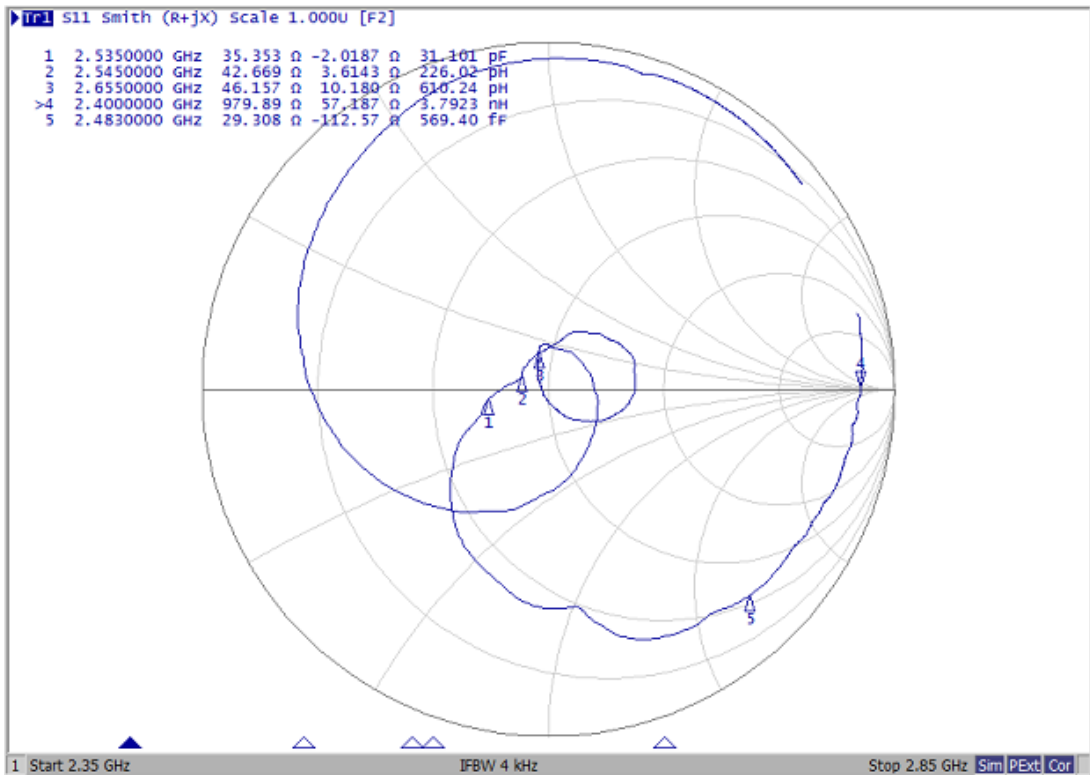
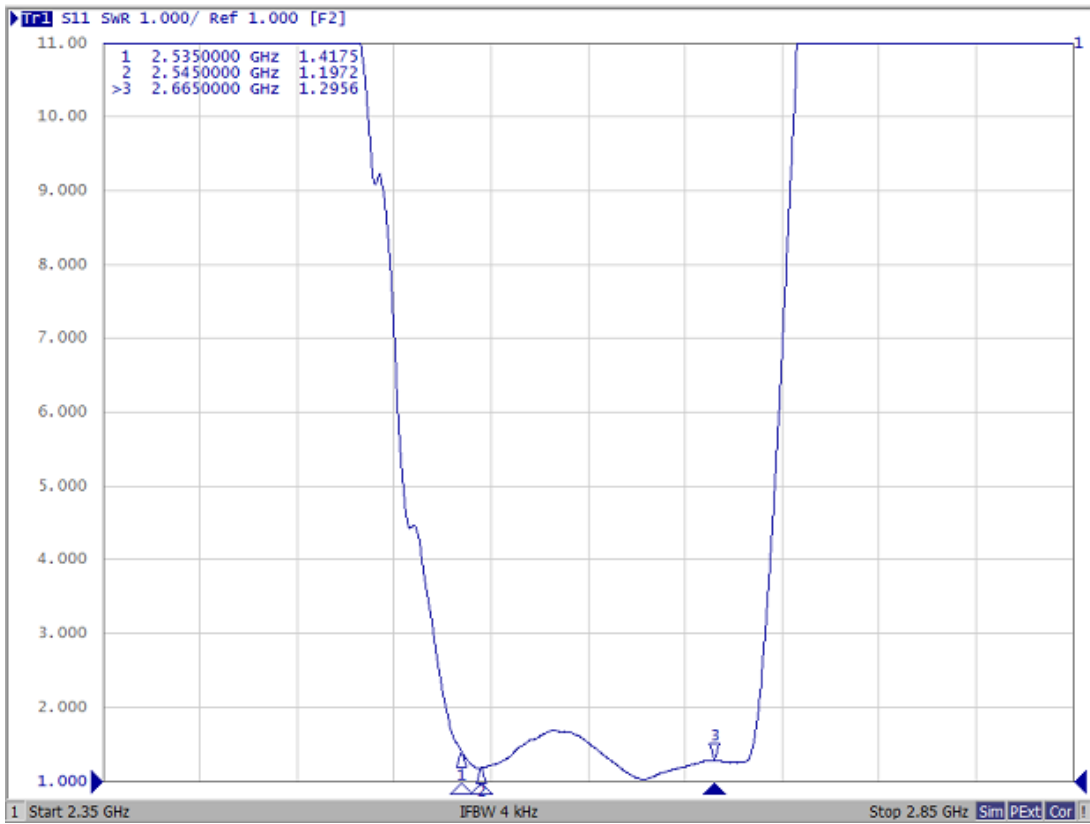
# Passband



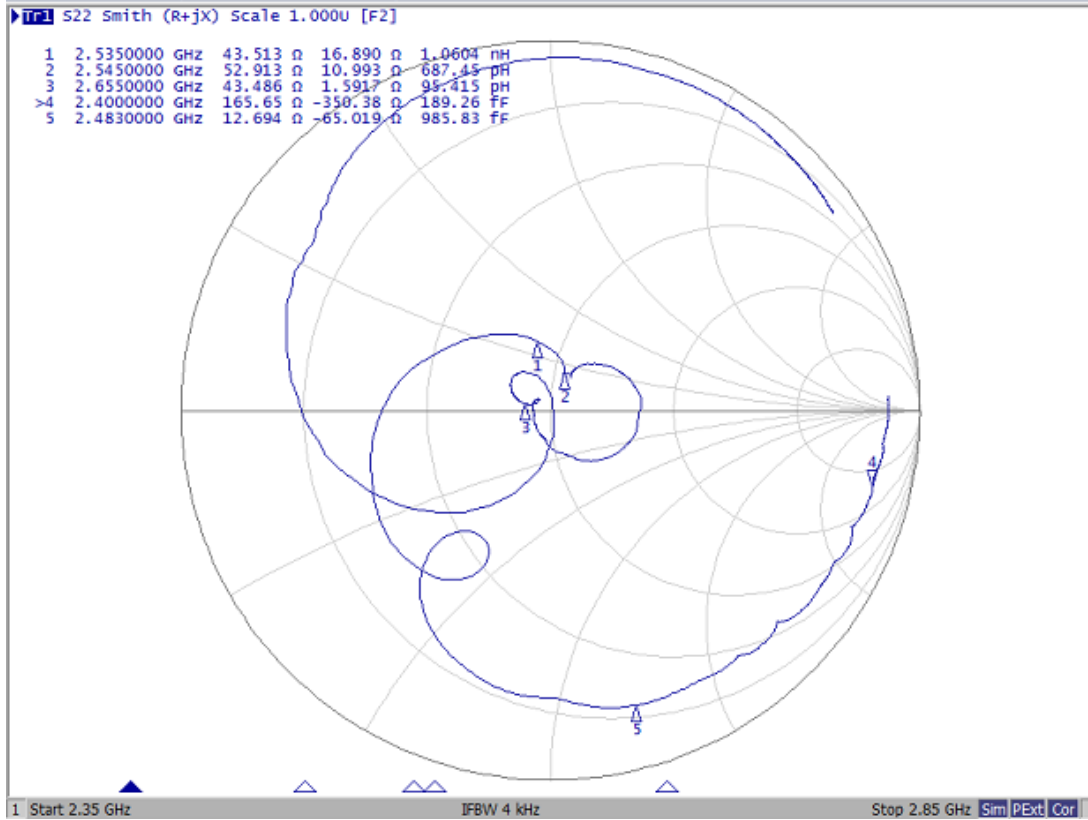
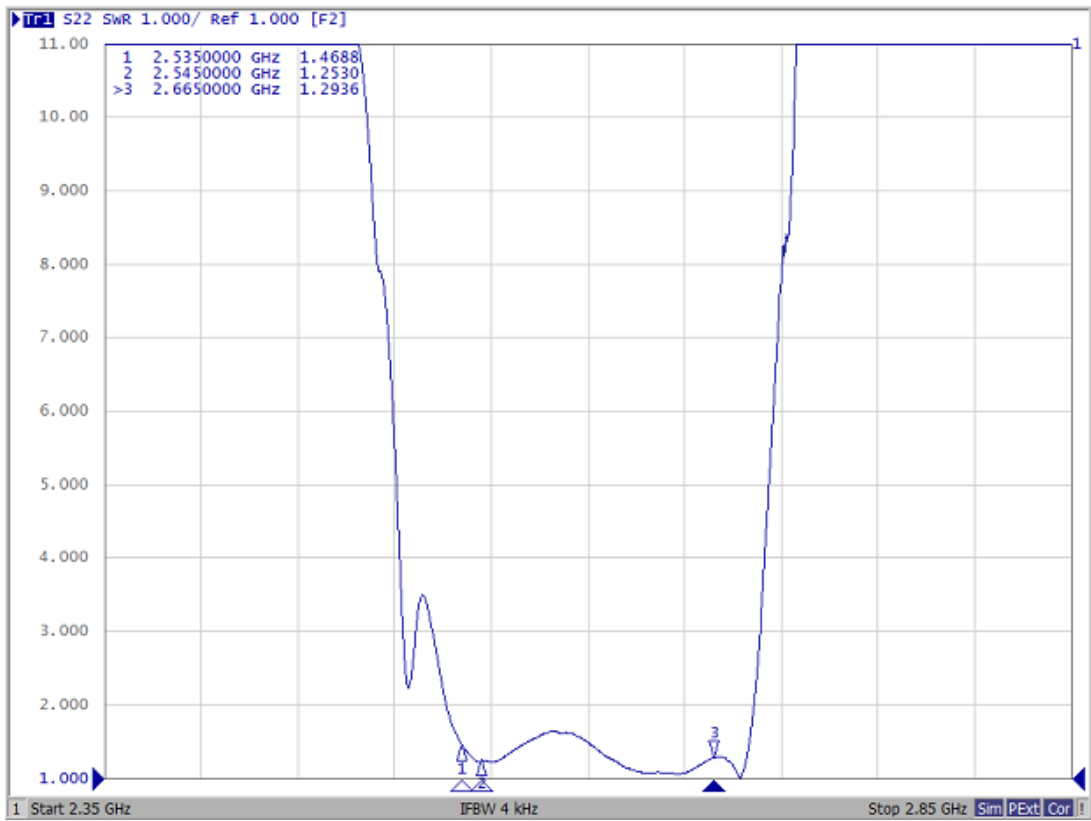


# Reflection Functions :

## VSWR 11



# VSWR 22

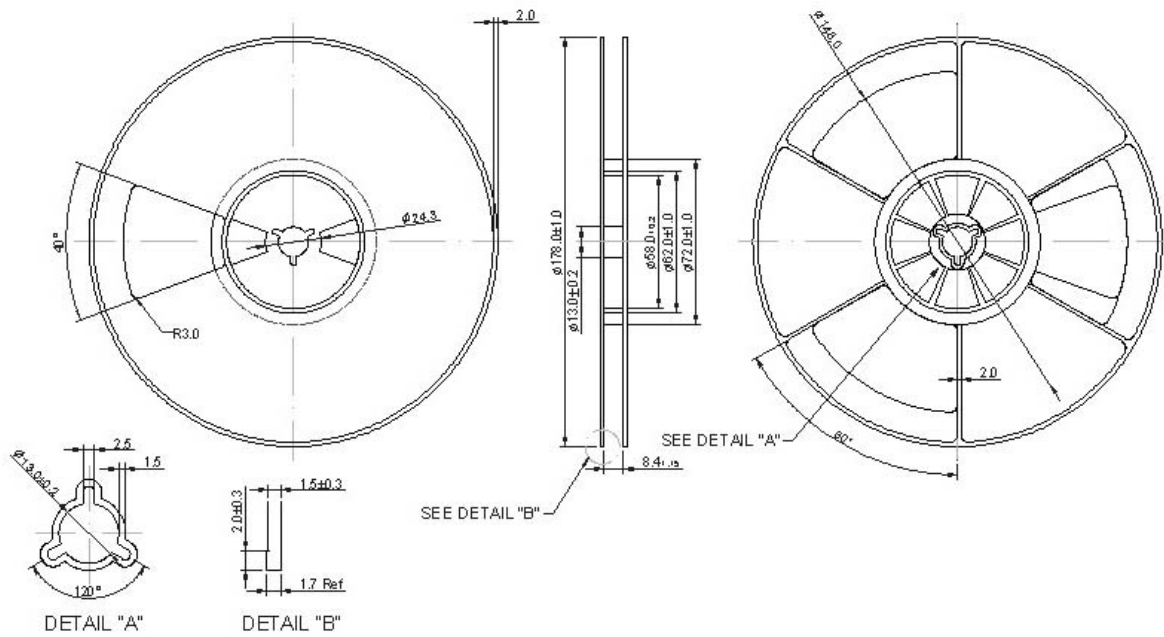


**PACKING:**

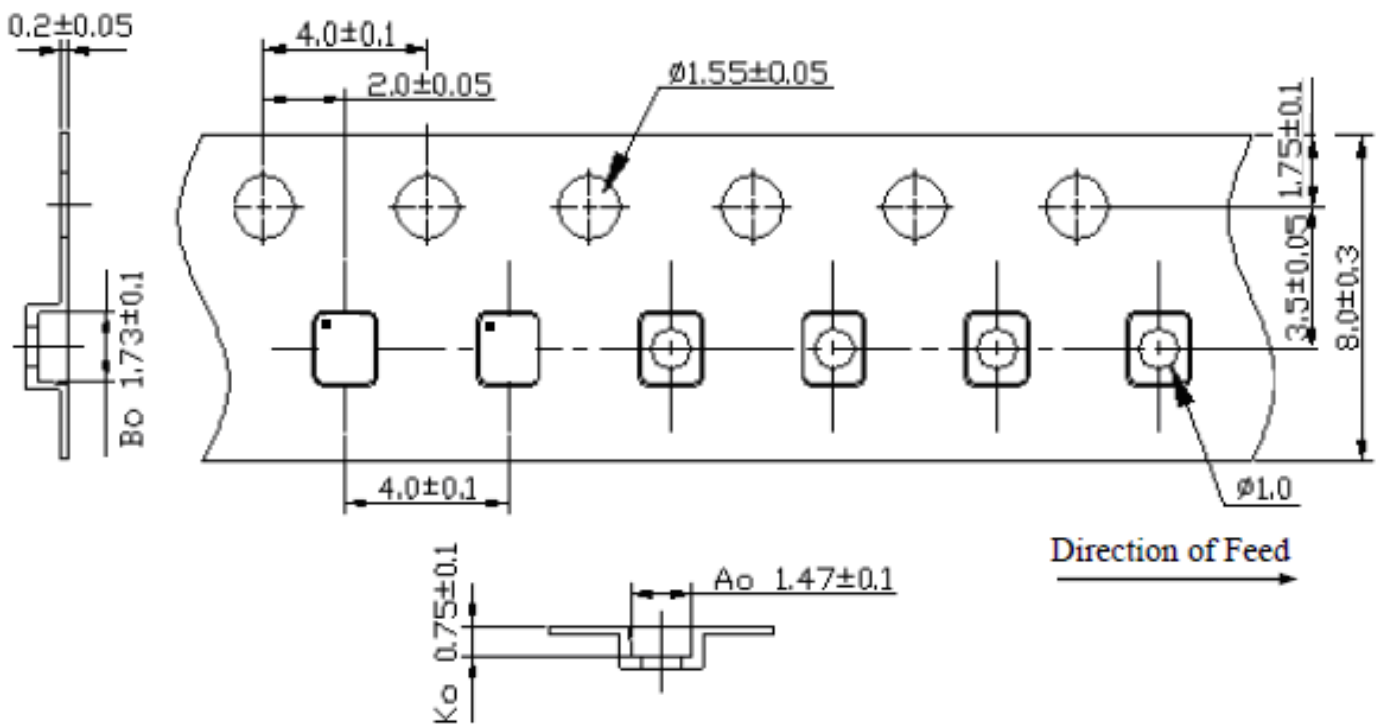
Reel Count:

7" = 5000

**1. REEL DIMENSION**



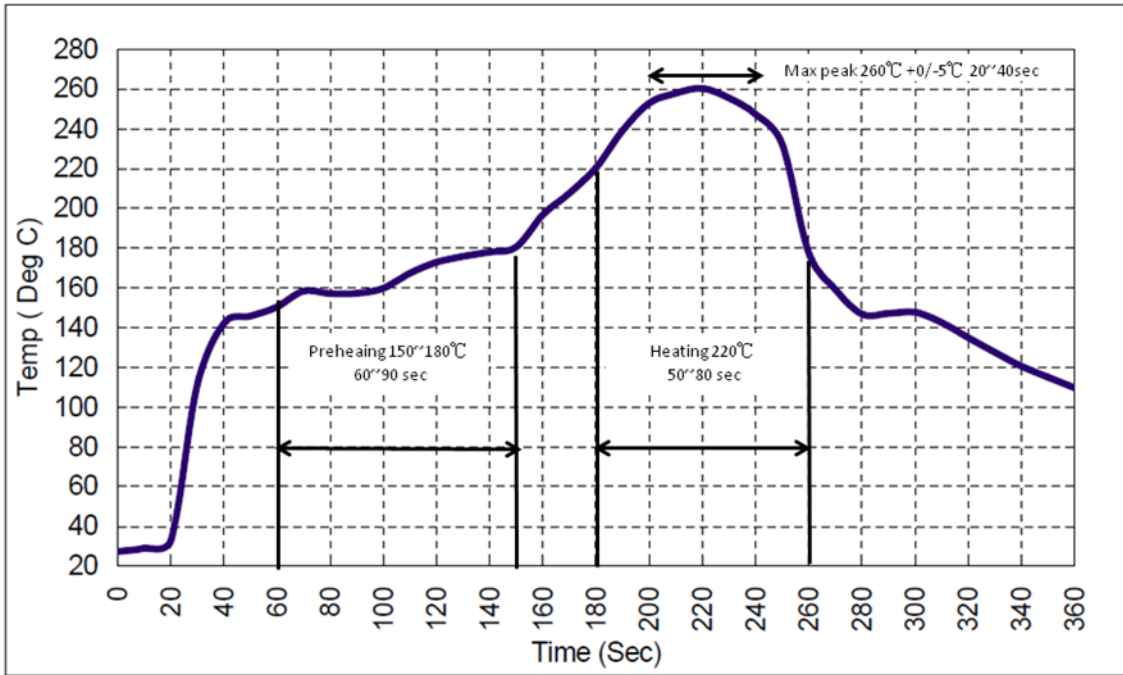
**2. TAPE DIMENSION**





## 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 245~260°C peak (min. 10sec).
4. Time : 3 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.