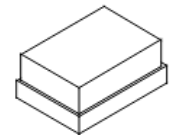


**MAXIMUM RATING:**

- Input Power Level: 10 dBm
- DC Voltage : 3 V
- Operating Temperature: -40°C to +105°C
- Storage Temperature: -40°C to +85°C
- Moisture Sensitivity Level: Level 2a(**MSL 2a**)

**1278.75 MHz  
SAW Filter**

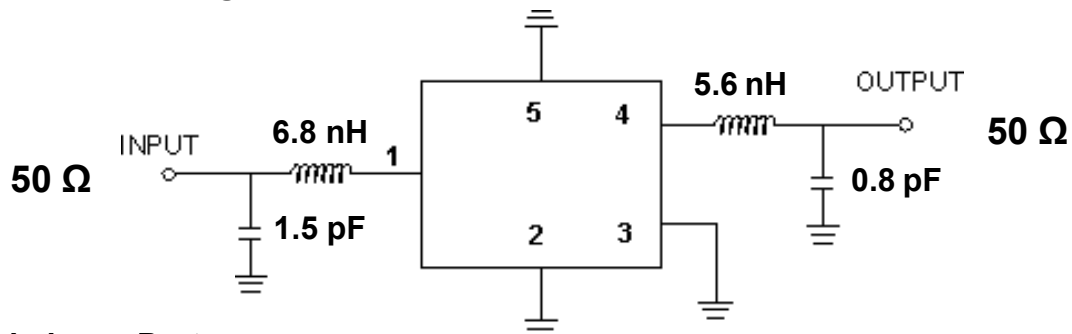


SM1411-5

**ELECTRICAL CHARACTERISTICS:**

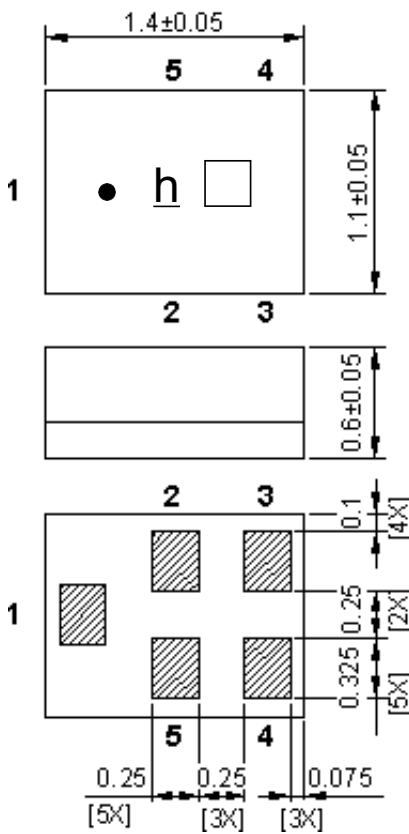
Item	Unit	Min.	Typ.	Max.	
<b>Center frequency</b>	<b>Fc</b>	MHz	-	1278.75	-
<b>Insertion loss (1273.75~1283.75 MHz)</b>	<b>IL</b>	dB	-	2.0	2.5
<b>Amplitude ripple (1273.75~1283.75 MHz)</b>		dB	-	0.5	1
<b>Group delay ripple (1273.75~1283.75 MHz)</b>		ns	-	13	50
<b>Return loss (1273.75~1283.75 MHz)</b>		dB	7	11	-
<b>Attenuation (Reference level from 0 dB)</b>					
10 ~ 1200 MHz	dB	20	34	-	
1500~2100 MHz	dB	25	30	-	
2100 ~ 3000 MHz	dB	30	35	-	
<b>Temperature coefficient of frequency</b>	ppm/k	-	-36	-	

**MEASUREMENT CIRCUIT:**



**(1): Unbalance Port**  
**(4): Unbalance Port**  
**Others: Ground**

**OUTLINE DRAWING:**

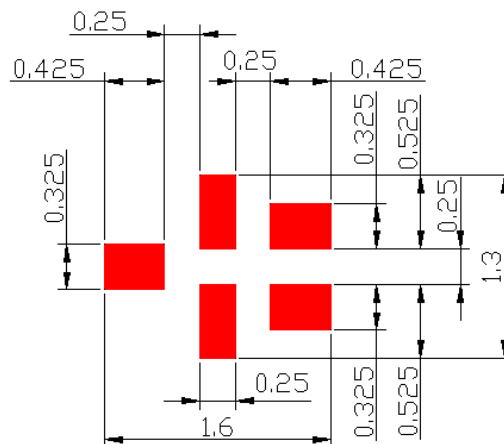


All tolerances are +/-0.05 mm unless otherwise specified  
 Coplanarity : 0.1 mm max.  
 1 to 5 : Pin No.  
 Unit : mm

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

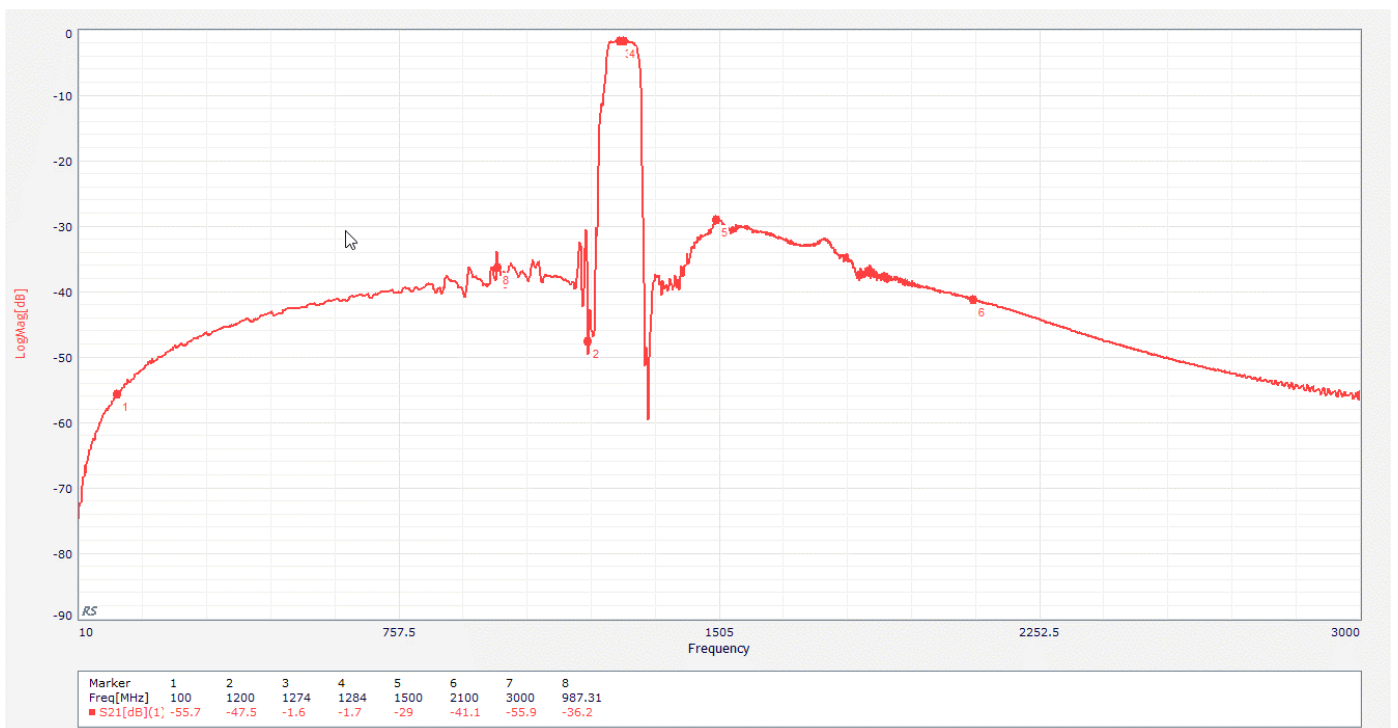
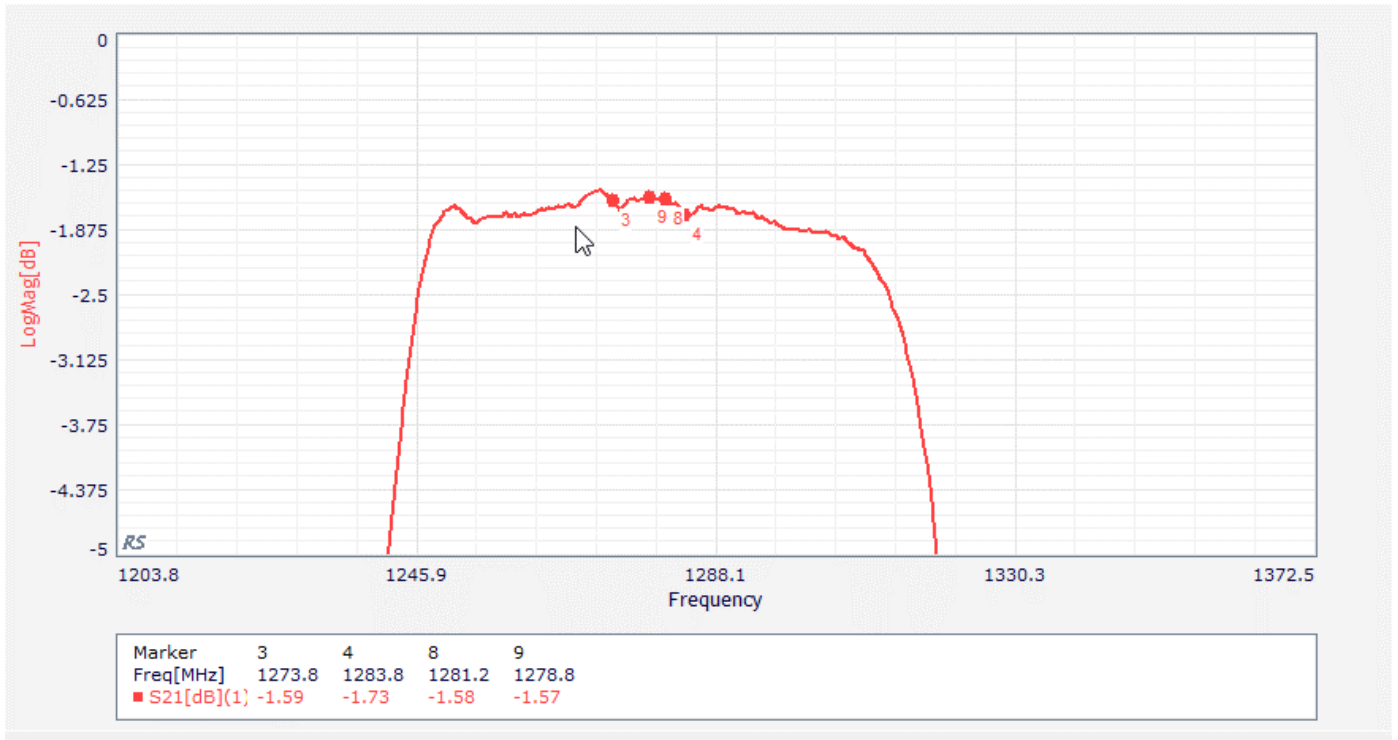
Date Code: Follow below table (4 year cycle)												
Year	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec
2021/2025	a	b	c	d	e	f	g	h	j	k	l	m
2022/2026	n	p	q	r	s	t	u	v	w	x	y	z
2023/2027	A	B	C	D	E	F	G	H	J	K	L	M
2024/2028	N	P	Q	R	S	T	U	V	W	X	Y	Z

**PCB Footprint:**



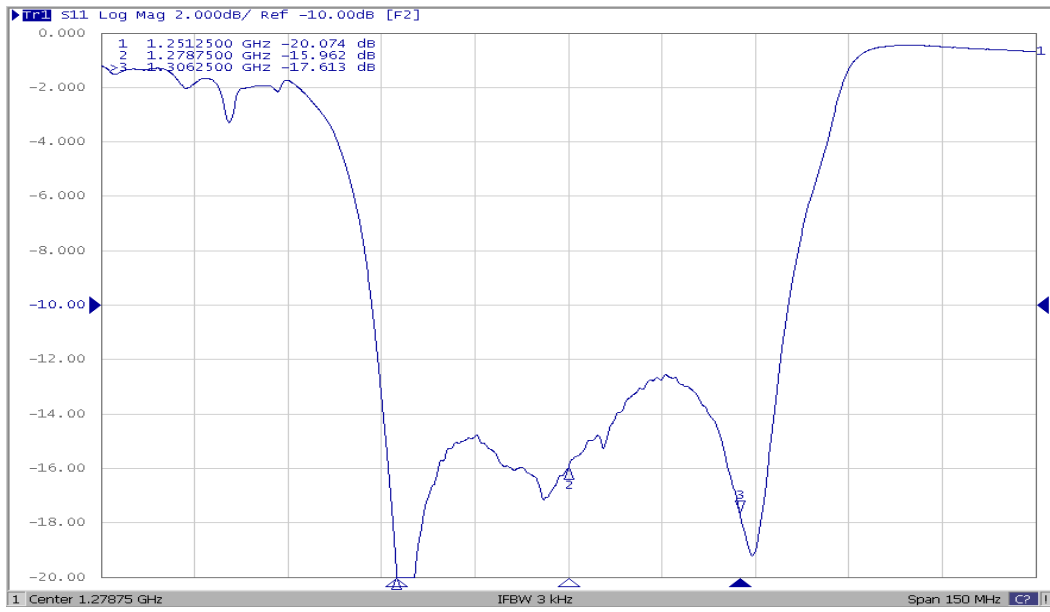
■ : Land Pattern  
 Unit : mm

## Frequency Characteristics:

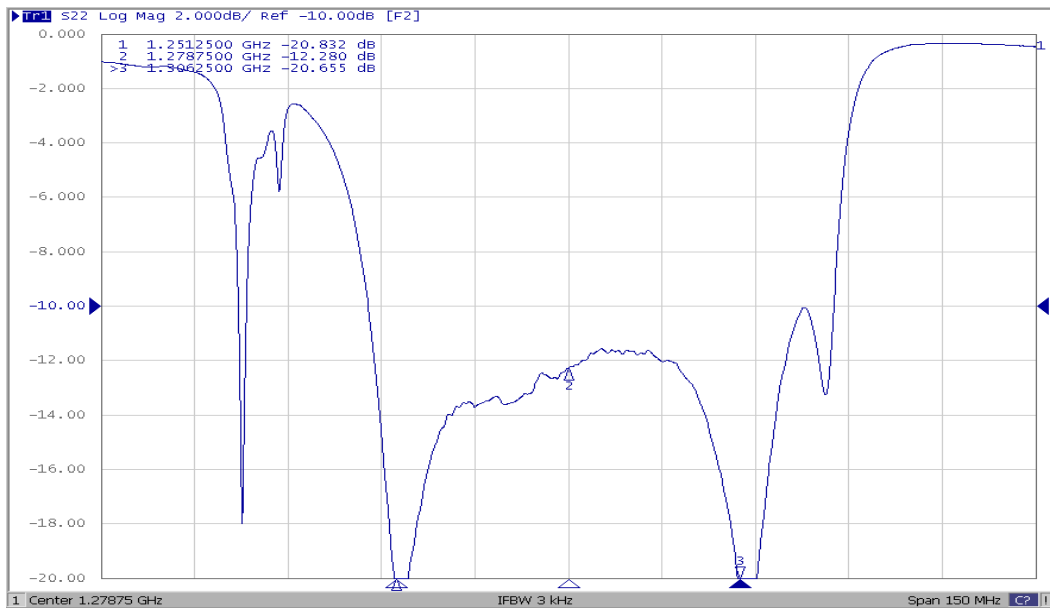


# Reflection Functions:

## S11



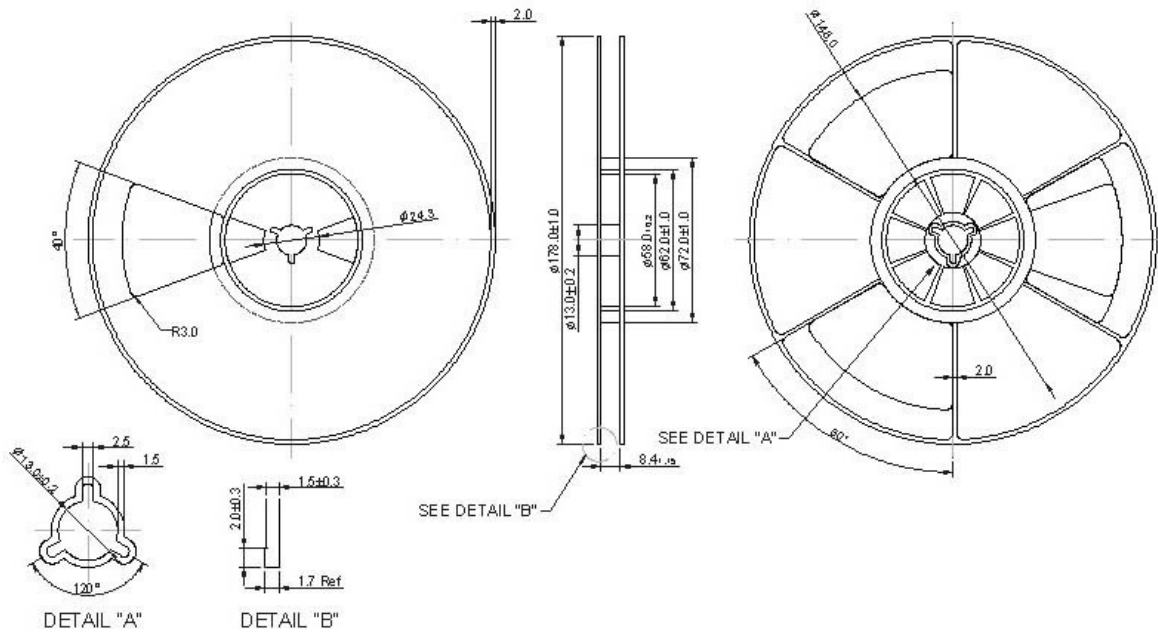
## S22



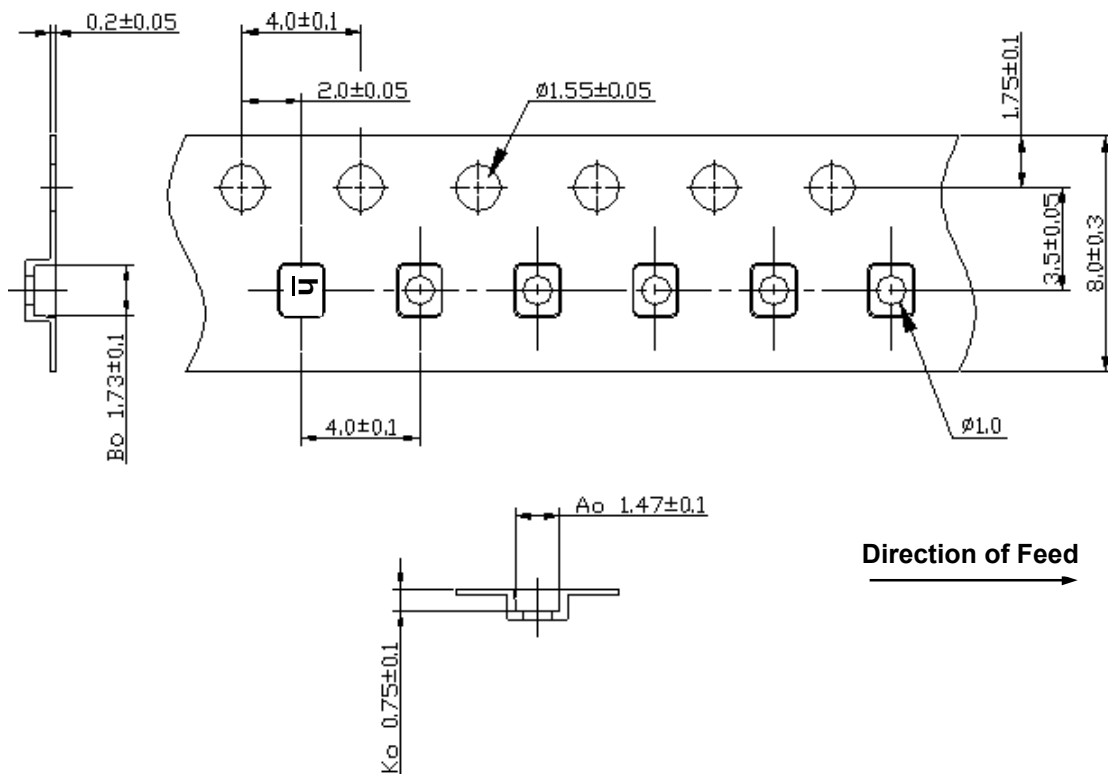
**PACKING:**

Reel Count: 7" = 3000

**1. REEL DIMENSION**

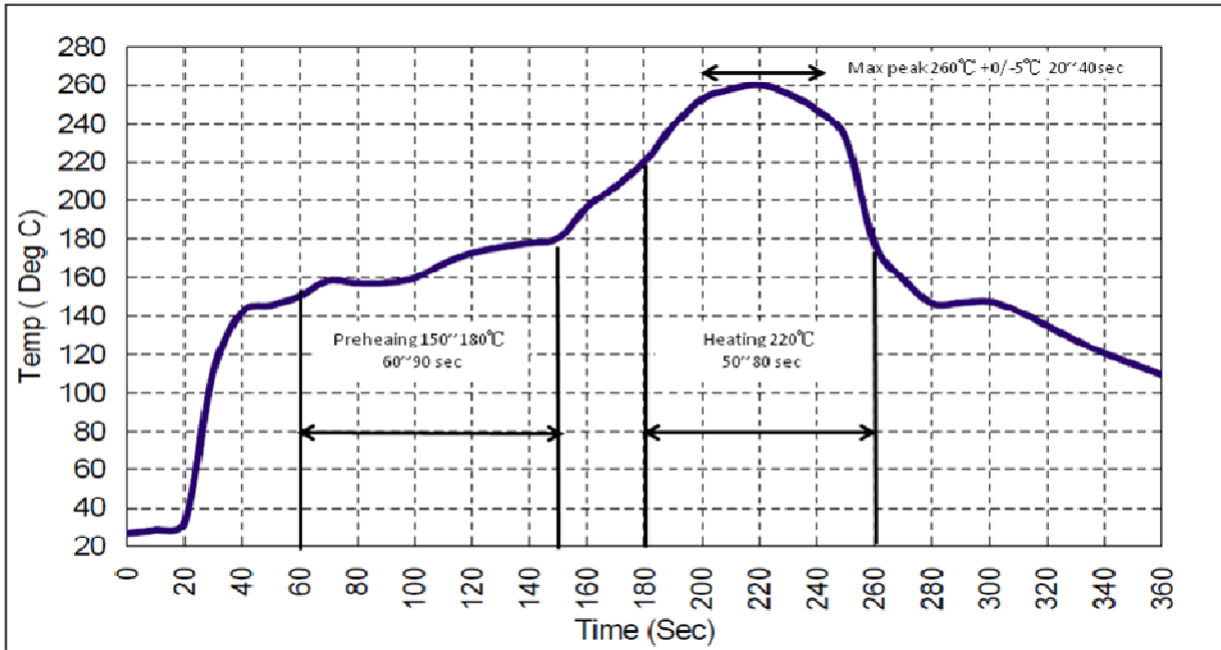


**2. TAPE DIMENSION**



### 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. This component was always RoHS compliant from the first date of manufacture.