

# 1582.47 MHz SMD SAW Filter

ABSTS5A2-2HMM01MM

Request Samples



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1.1 x 0.9 x 0.55 mm  
RoHS/RoHS II Compliant  
MSL Level = 3

## Features

- Low Insertion Loss
- High Out of Band Attenuation
- SMD Mount

## Applications

- GNSS, GPS, GLONASS, BeiDou Filter
- Navigational and Positioning applications
- GPS Receivers, Mobile Phones

## Electrical Specifications

Parameters		Specifications		
		Min	Typ	Max
Nominal Center Frequency (Fc) (MHz)			1582.47	
Insertion Loss (dB)	1574.42 ~ 1576.42 MHz		1.2	1.7
	1597.55 ~ 1605.89 MHz		2.0	2.5
	1559.05 ~ 1563.14 MHz		1.7	2.5
Amplitude Ripple (dB <sub>p-p</sub> )	1574.42 ~ 1576.42 MHz		0.1	0.8
	1597.55 ~ 1605.89 MHz		0.55	1.4
	1559.05 ~ 1563.14 MHz		0.2	1.2
Group Delay Ripple (nsec)	1574.42 ~ 1576.42 MHz		1.0	6.0
	1597.55 ~ 1605.89 MHz		6.0	12.5
	1559.05 ~ 1563.14 MHz		5.0	16.0
VSWR	1574.42 ~ 1576.42 MHz		1.5	2.1
	1597.55 ~ 1605.89 MHz		1.4	2.0
	1559.05 ~ 1563.14 MHz		1.5	2.0
Attenuation (dB) (Reference level from 0dB)	699 ~ 716 MHz	37	42	
	777 ~ 787 MHz	37	42	
	814 ~ 849 MHz	37	42	
	880 ~ 915 MHz	37	42	
	1427.9 ~ 1446.9 MHz	43	48	
	1447.9 ~ 1462.9 MHz	45	50	
	1710 ~ 1785 MHz	40	47	
	1850 ~ 1915 MHz	40	46	
	1920 ~ 1980 MHz	40	46	
	2400 ~ 2500 MHz	37	42	
2500 ~ 2570 MHz	37	42		
Terminating Source & Load Impedance (Ω)			50	
Maximum Input Power (dBm)				15
DC Voltage (V)				3

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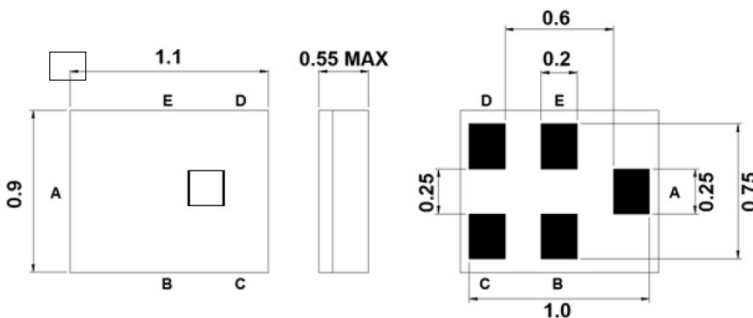
## Mechanical Specifications

Parameters	Specifications
Filter Dimension	1.1 x 0.9 x 0.55 mm
Mounting Type	SMD Mount

## Environmental Specifications

Parameters	Specifications
Operating Temperature Range	-30°C ~ +85°C
Storage Temperature Range	-40°C ~ +85°C
MSL level	3
ESD	50V (MM), 100V (HBM)

## Package Dimensions



Pin No.	Symbol	Function
A	IN	Input
B	GND	Ground
C	GND	Ground
D	OUT	Output
E	GND	Ground

All tolerances are +/-0.1 mm unless otherwise specified.  
 Unit: mm

## Marking Description

: Year/Month Code (Follow the table)

YEAR/Month	1	2	3	4	5	6	7	8	9	10	11	12
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
2025	<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>
2026	<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>

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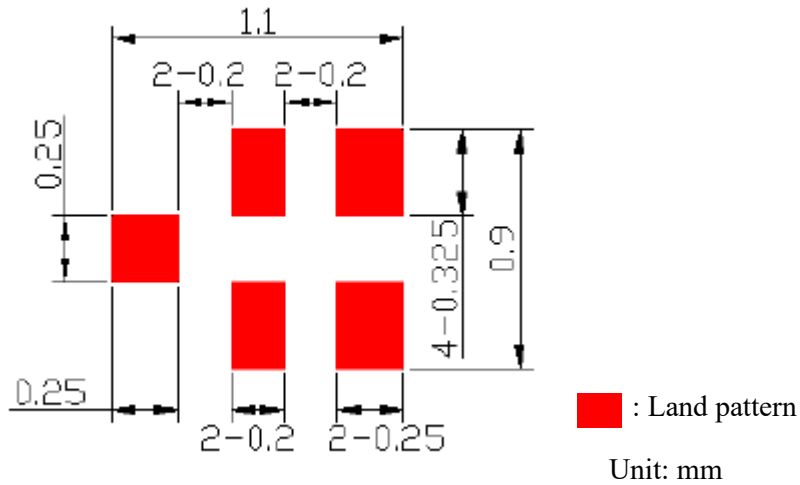


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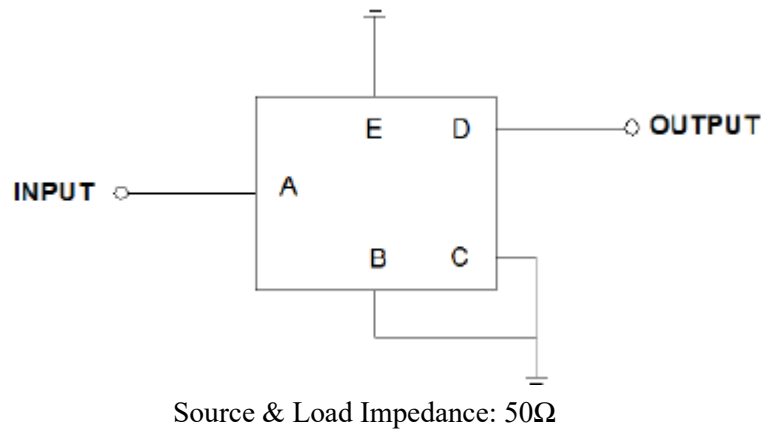


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## PCB Footprint



## Measurement Circuit



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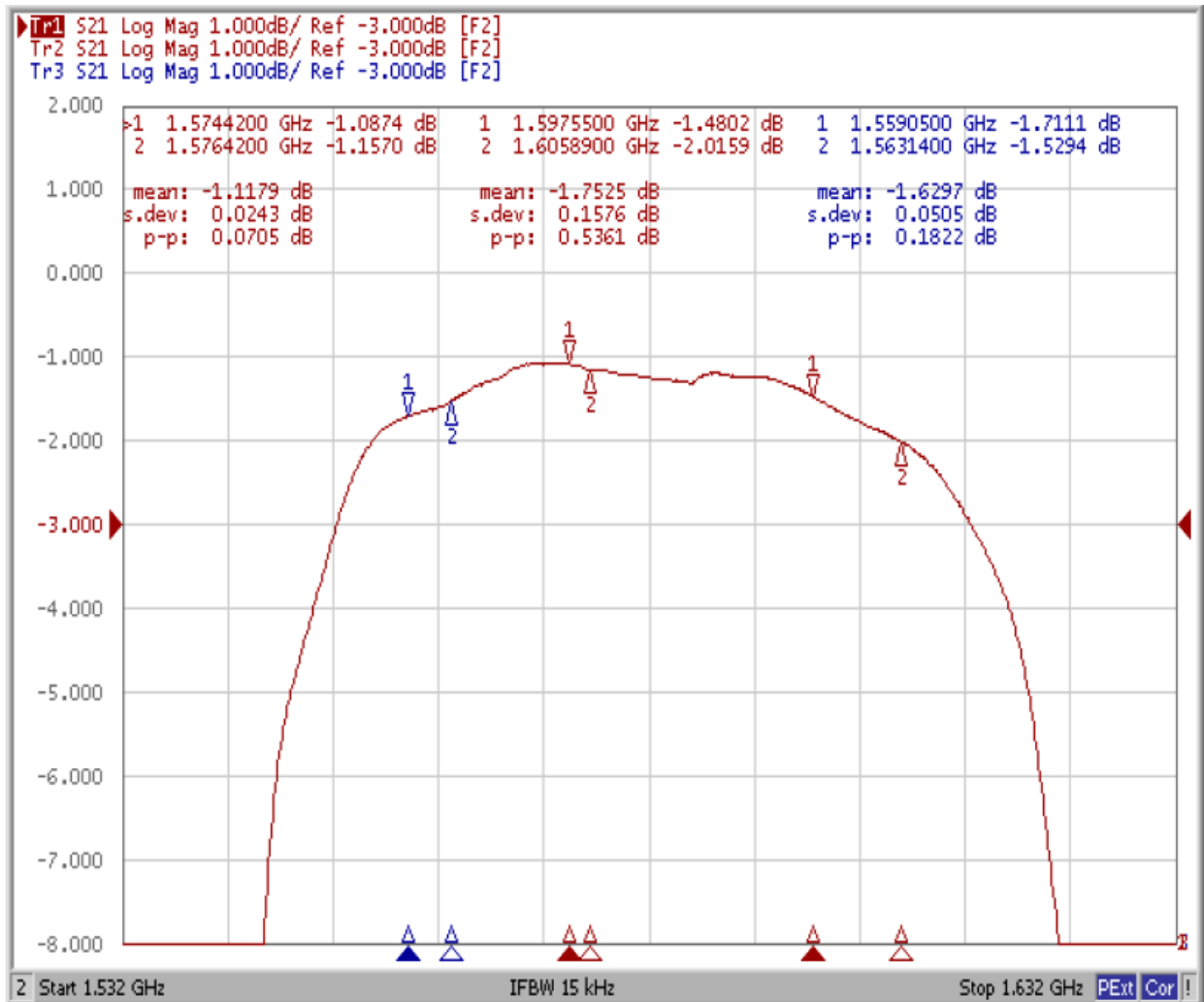
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## Transmission Characteristics

S21 Response (Narrowband)



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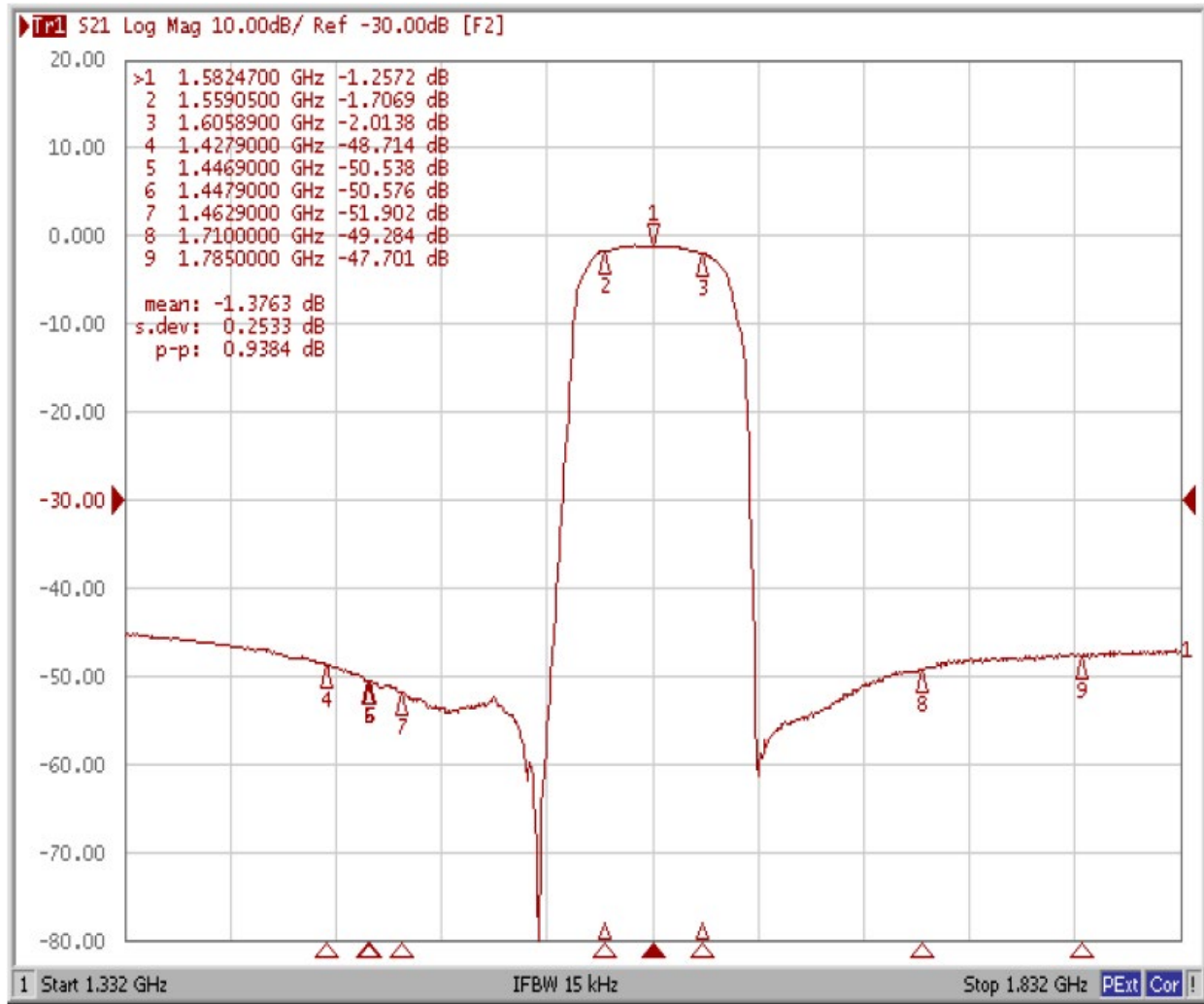
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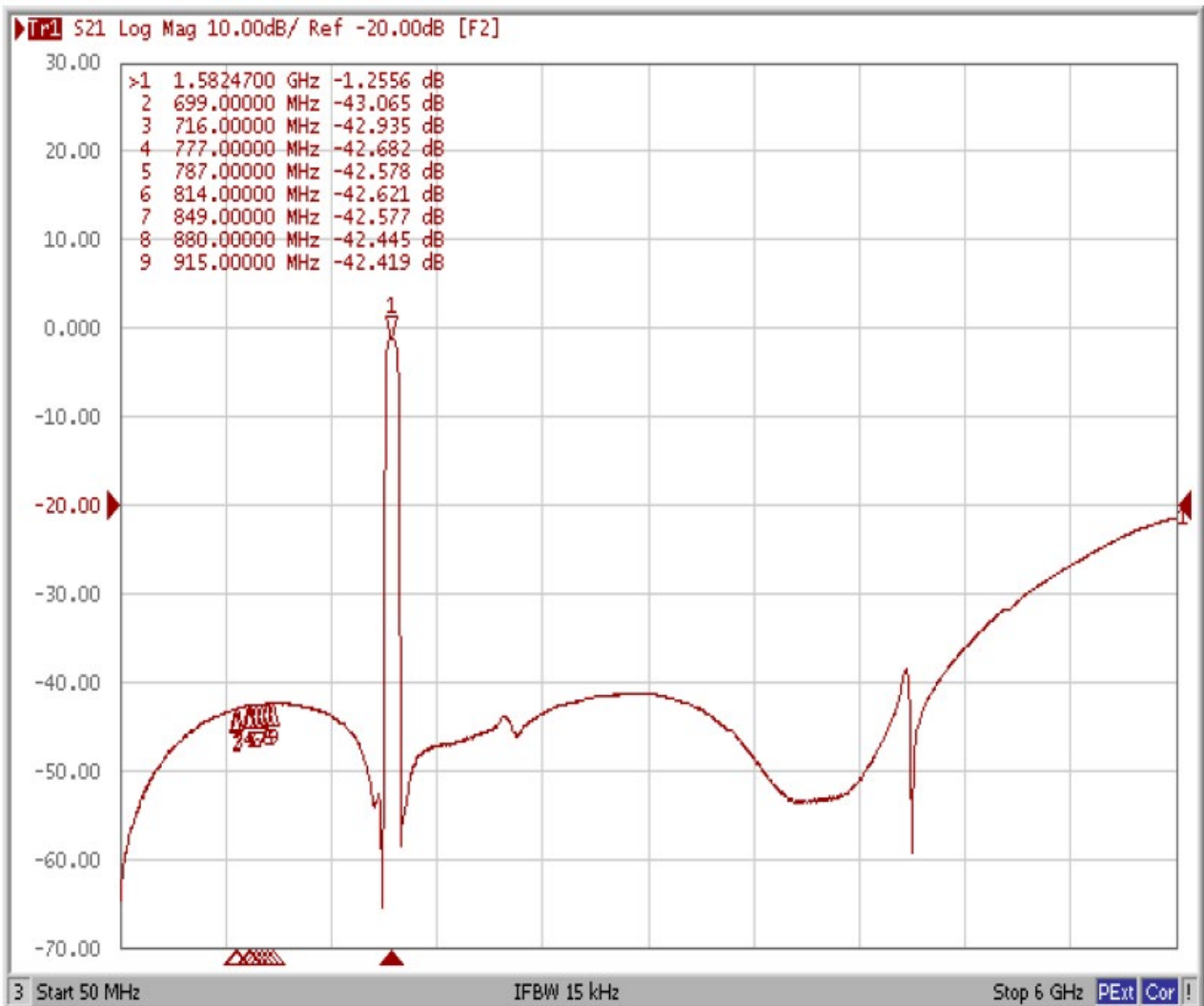


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S21 Response (Wideband)



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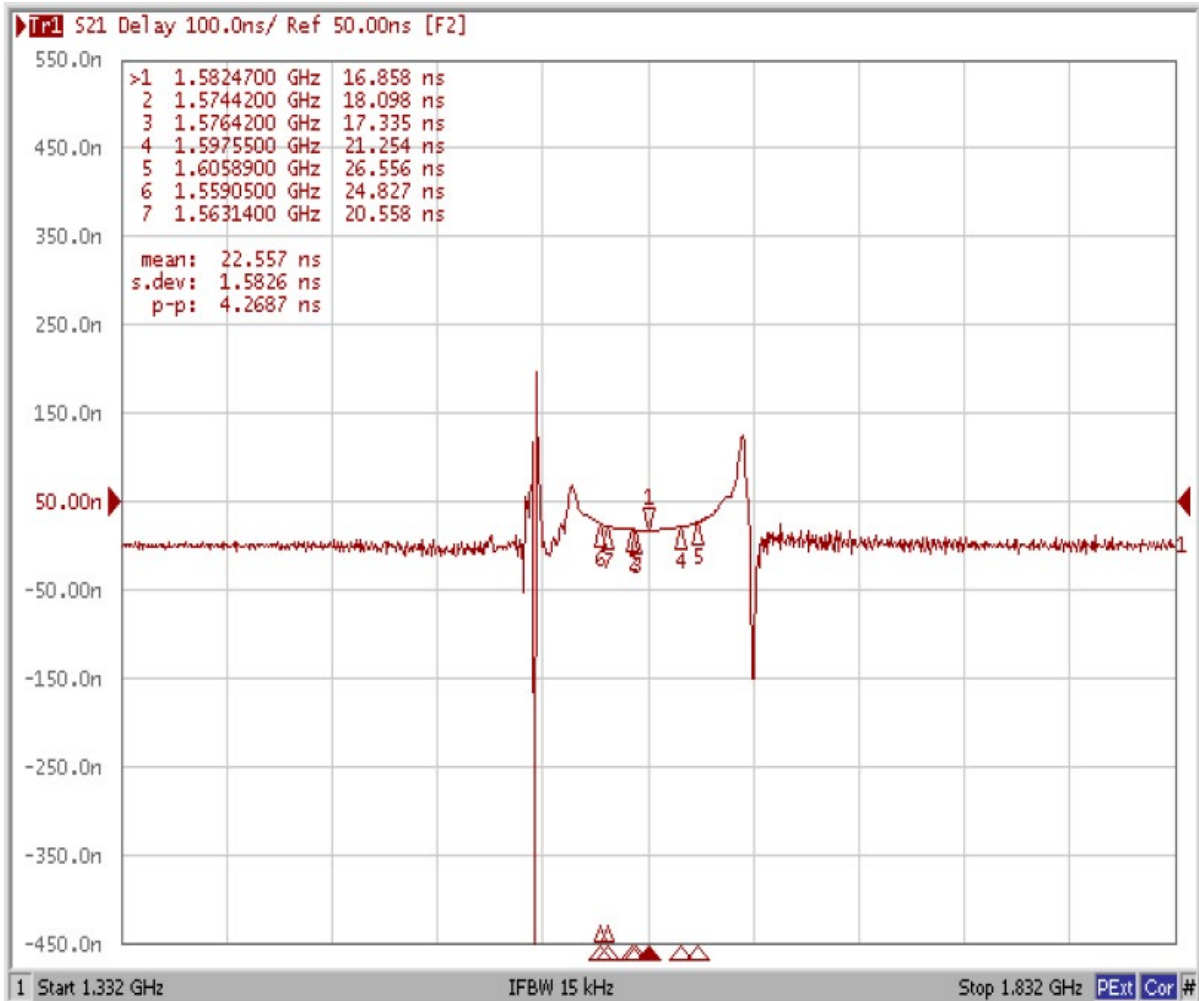


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## Group Delay Ripple



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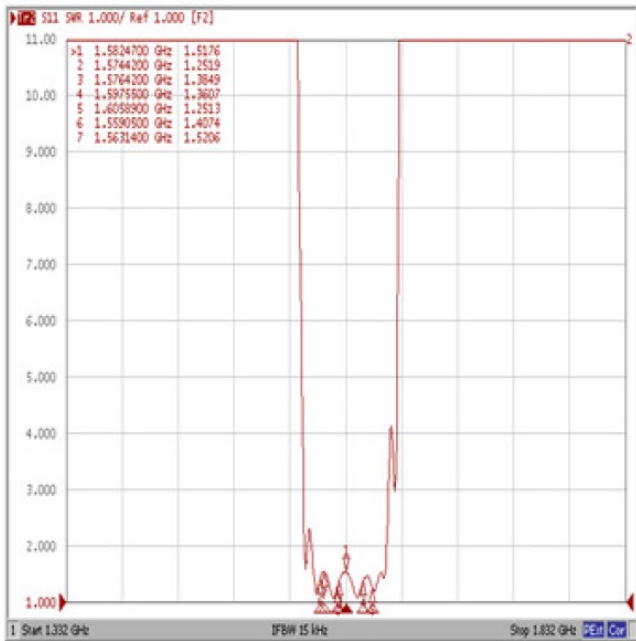
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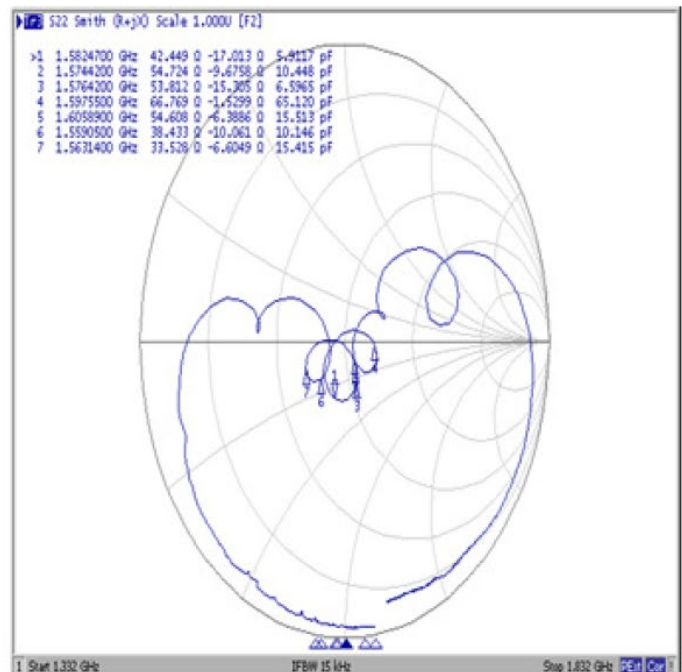
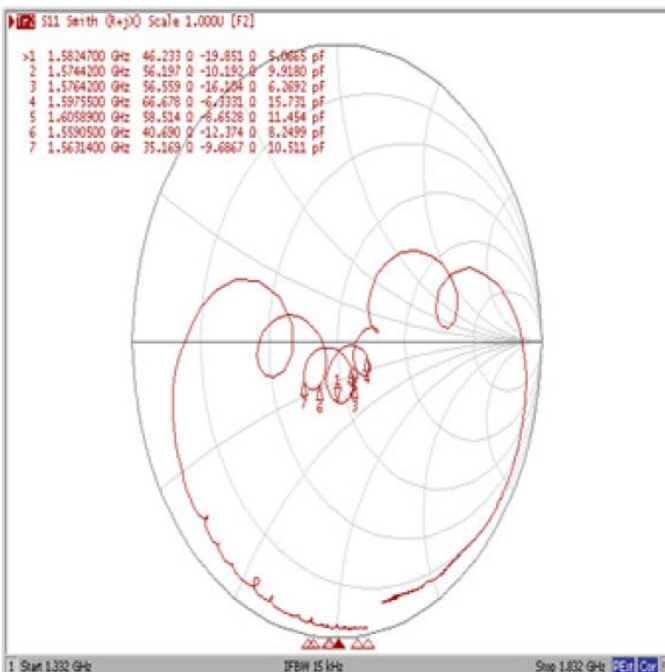
1.1 x 0.9 x 0.55 mm  
RoHS/RoHS II Compliant  
MSL Level = 3

## Reflection Characteristics

### S11 & S22 VSWR



### S11 & S22 Smith Chart



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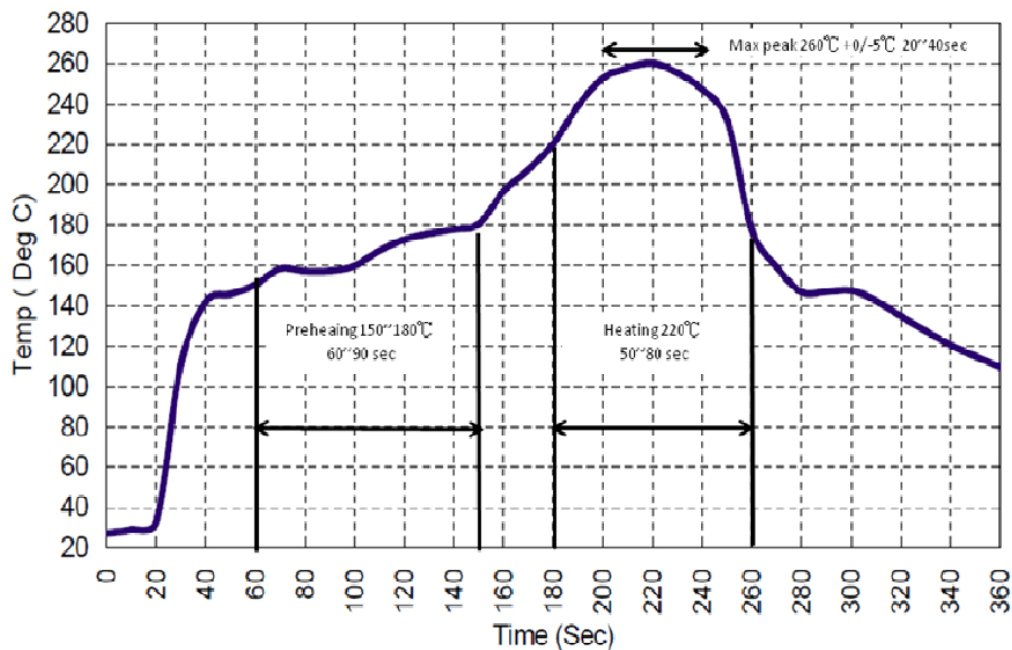
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## Recommended Reflow Profile

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 minimum.
3. Heating shall be fixed at 220°C for 50~80seconds and at 260°C+0/-5°C peak (20~40sec)
4. Time: 2 times



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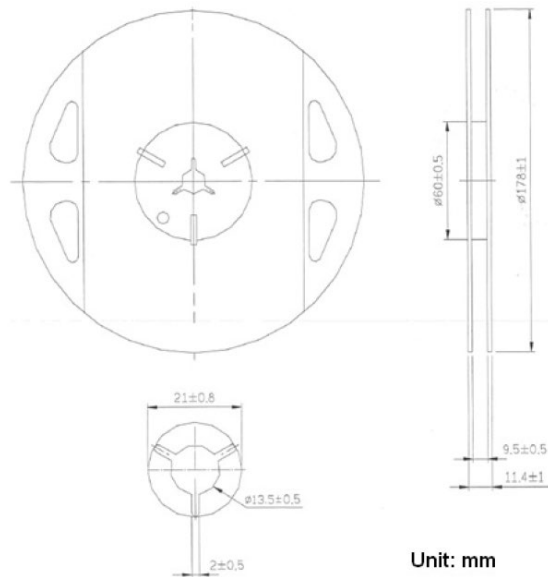


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RoHS/RoHS II Compliant  
MSL Level = 3

## Packaging

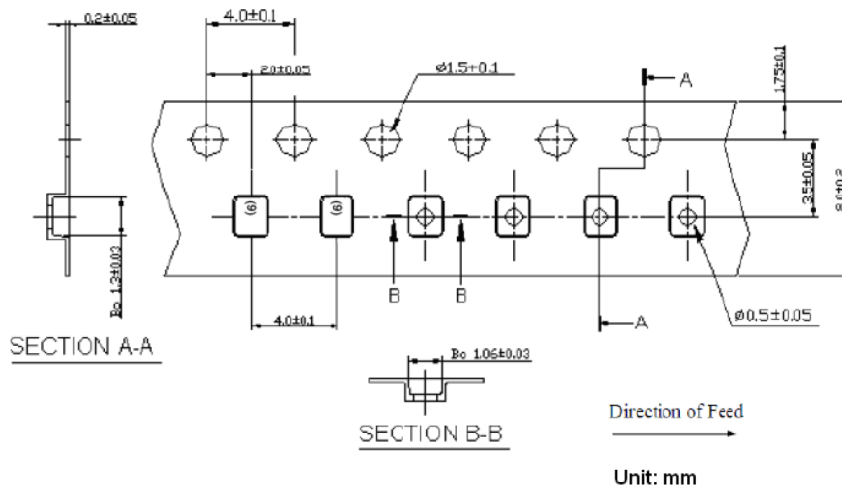
### 1. Reel Dimension

Number of pieces/reel:5k



Unit: mm

### 2. Tape Dimension



Unit: mm

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