

# 2140 MHz SMD SAW Filter

ABSTS5A2-3H4M02CM

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1.1 x 0.9 x 0.5 mm  
RoHS/RoHS II Compliant  
MSL Level = 3

## Features

- Low Insertion Loss
- SMD Mount Filter
- Compact Package Size of 1.1 x 0.9 x 0.5mm

## Applications

- Mobile Phones
- Cellular 4G LTE/ UMTS/ W-CDMA systems
- Low loss RF Filter for Receive path

## Electrical Specifications

Parameters		Specifications		
		Min	Typ	Max
Nominal Center Frequency (Fc) (MHz)			2140	
Insertion Loss (2110 ~ 2170 MHz) (dB)			1.9	2.5
Amplitude Ripple (2110 ~ 2170 MHz) (dB)			0.6	1.5
Input VSWR (2110 ~ 2170 MHz)			1.8	2.3
Output VSWR (2110 ~ 2155 MHz)			1.8	2.3
Attenuation (dB)	50 ~ 1710 MHz	35	40	
	1710 ~ 1755 MHz	40	42	
	1920 ~ 1980 MHz	42	45	
	4220 ~ 4340 MHz	30	42	
Terminating Source & Load Impedance ( $\Omega$ )			50	
Maximum Input Power (dBm)			10	
DC Voltage (V)			0	

## Mechanical Specifications

Parameters	Specifications
Filter Dimension	1.1 x 0.9 x 0.5 mm
Mounting Type	SMD Mount

## Environmental Specifications

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



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REVISED: 08-09-19

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ISO9001-2015  
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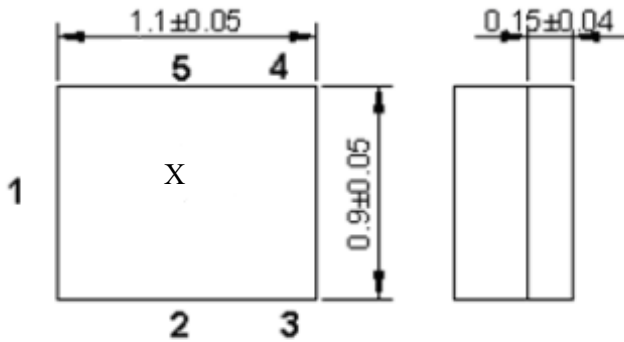


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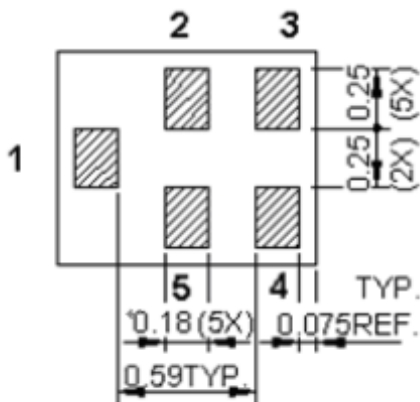


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## Package Dimensions



All tolerances are +/-0.05 mm unless otherwise specified  
Coplanarity: 0.1mm max  
1 to 5: Pin numbers  
Unit: mm



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

Marking Description:

X: 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>

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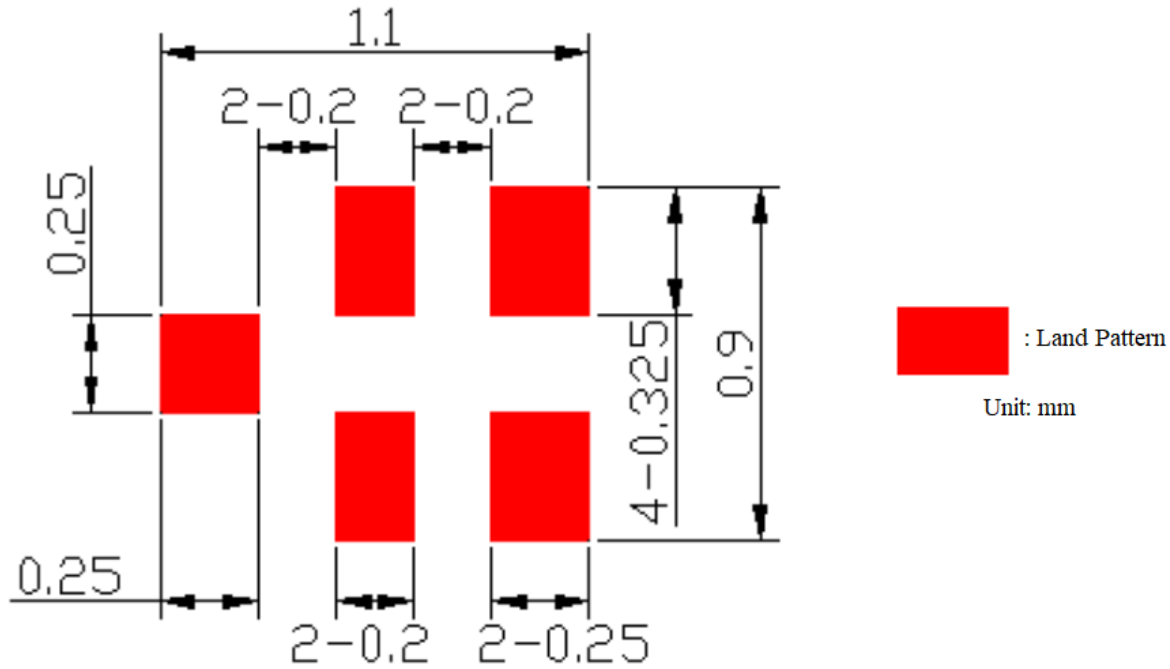


Check Inventory

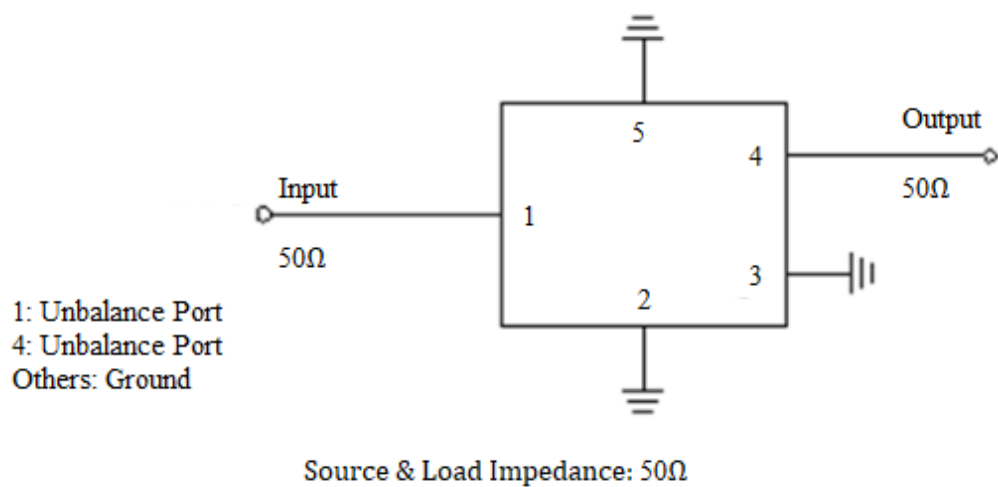


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## PCB Footprint



## Measurement Circuit



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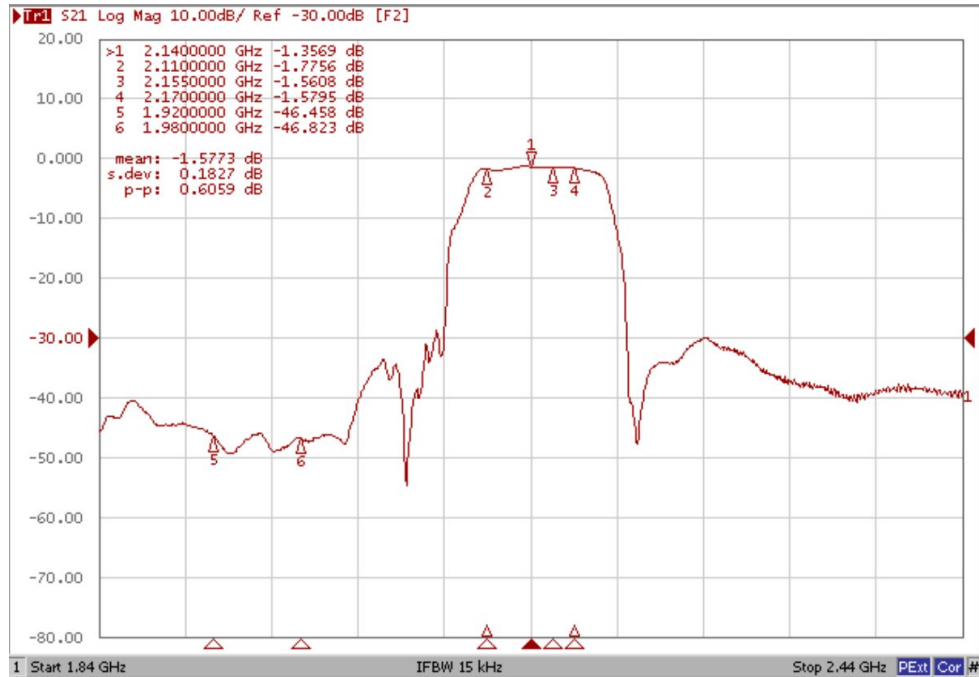
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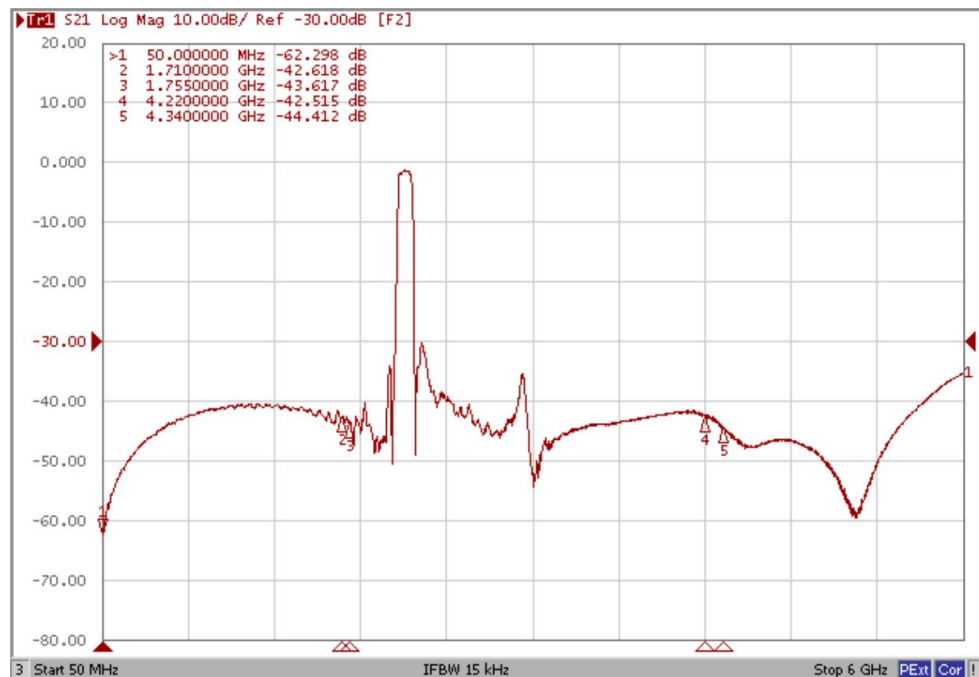
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## Transmission Characteristics

S21 (Narrowband)



S21 (Broadband)



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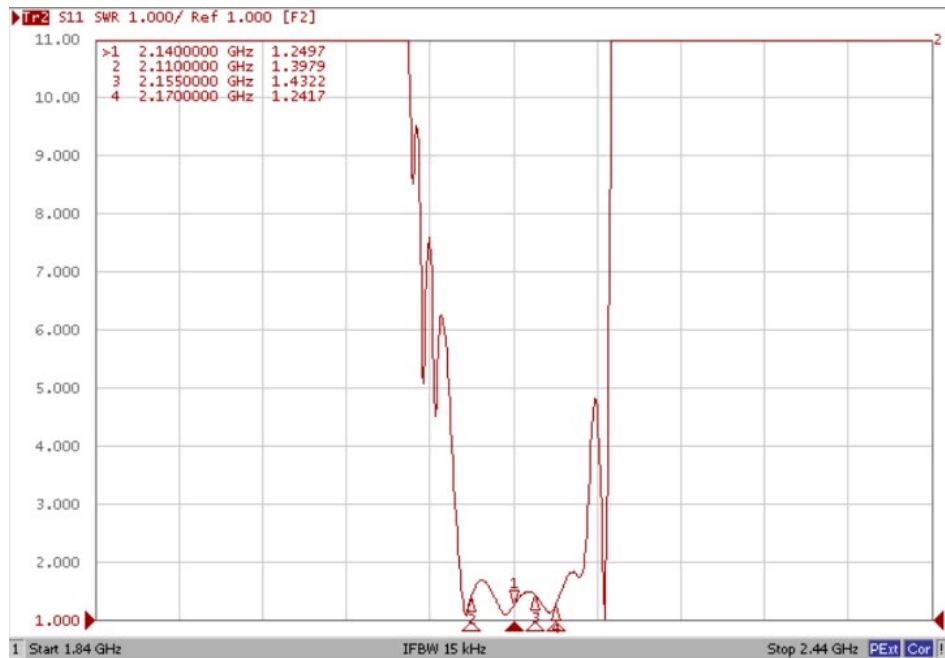
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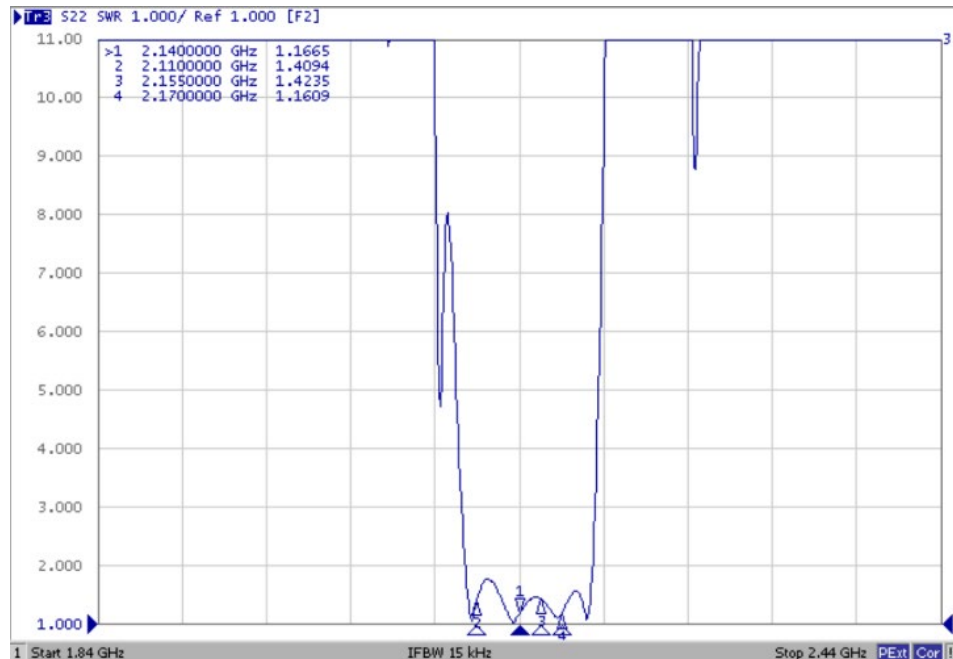
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## VSWR Graphs

### S11 (Narrowband)



### S22 (Narrowband)



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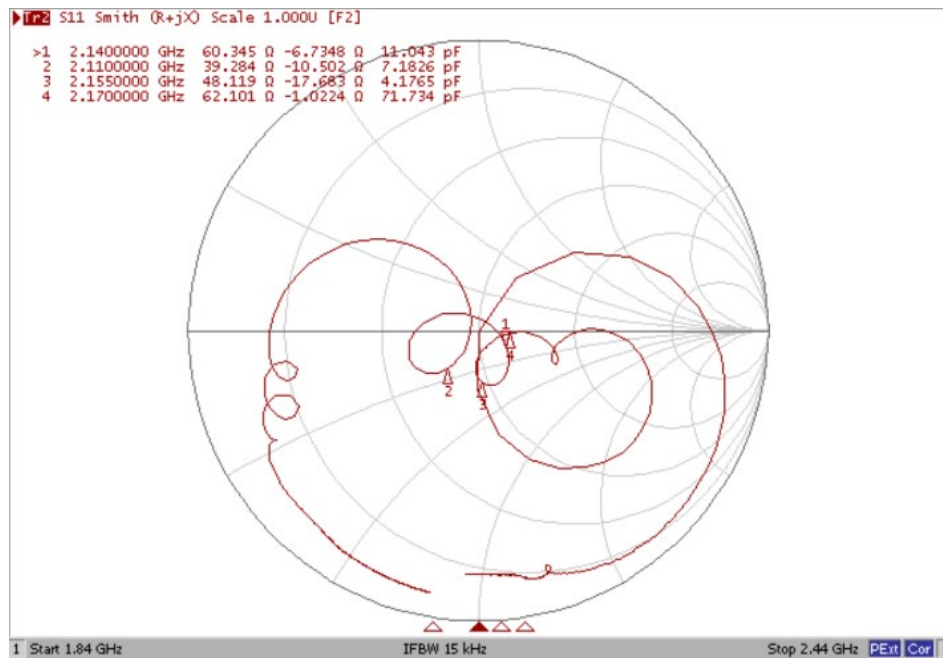
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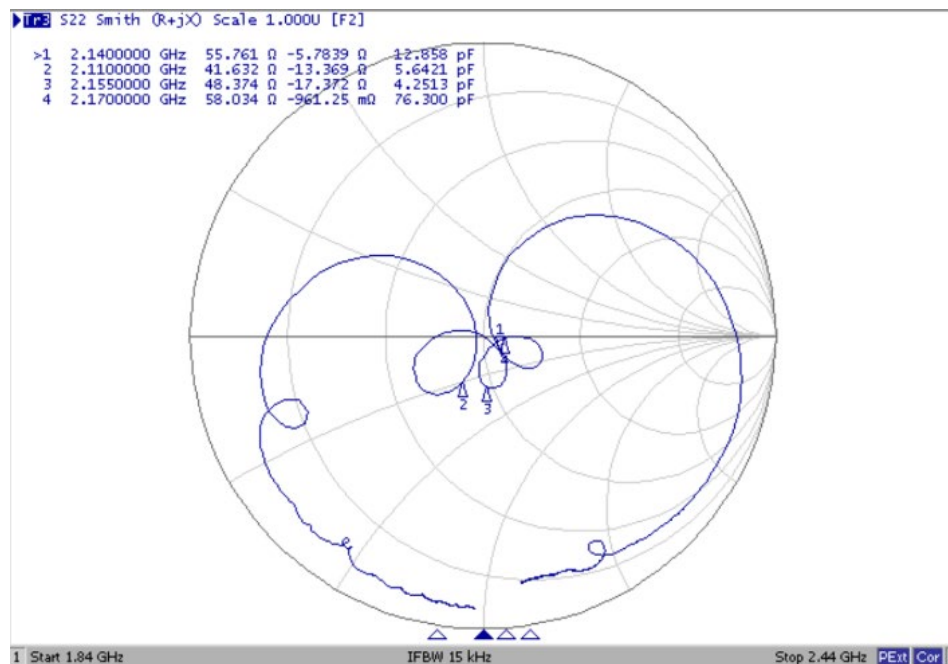
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## Smith Charts

### S11 (Narrowband)



### S22 (Narrowband)



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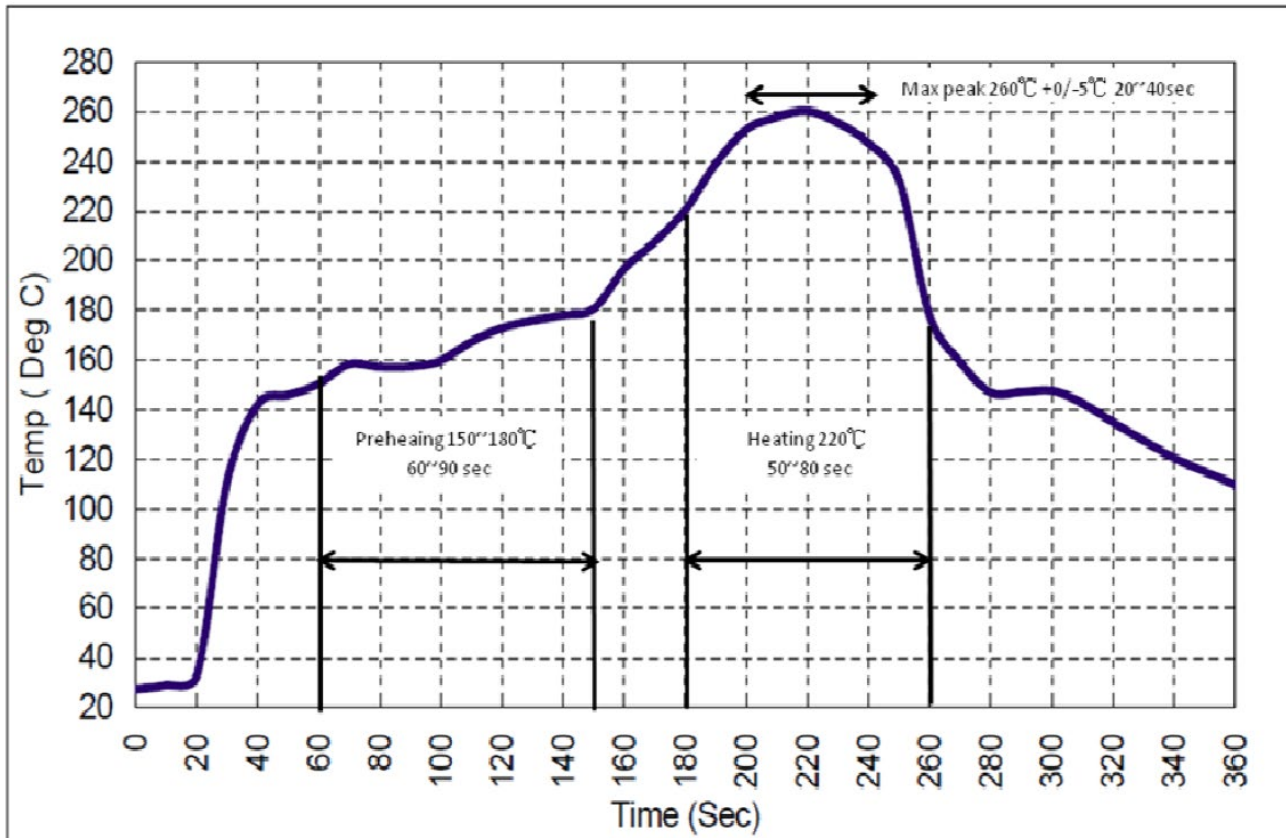
Check Inventory



1.1 x 0.9 x 0.5 mm  
RoHS/RoHS II Compliant  
MSL Level = 3

## Recommended Reflow Profile

1. Preheating shall be fixed at 150°C~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 50~80 seconds and at 260°C+0/-5°C peak (20~40sec.)
4. Time :2 times.



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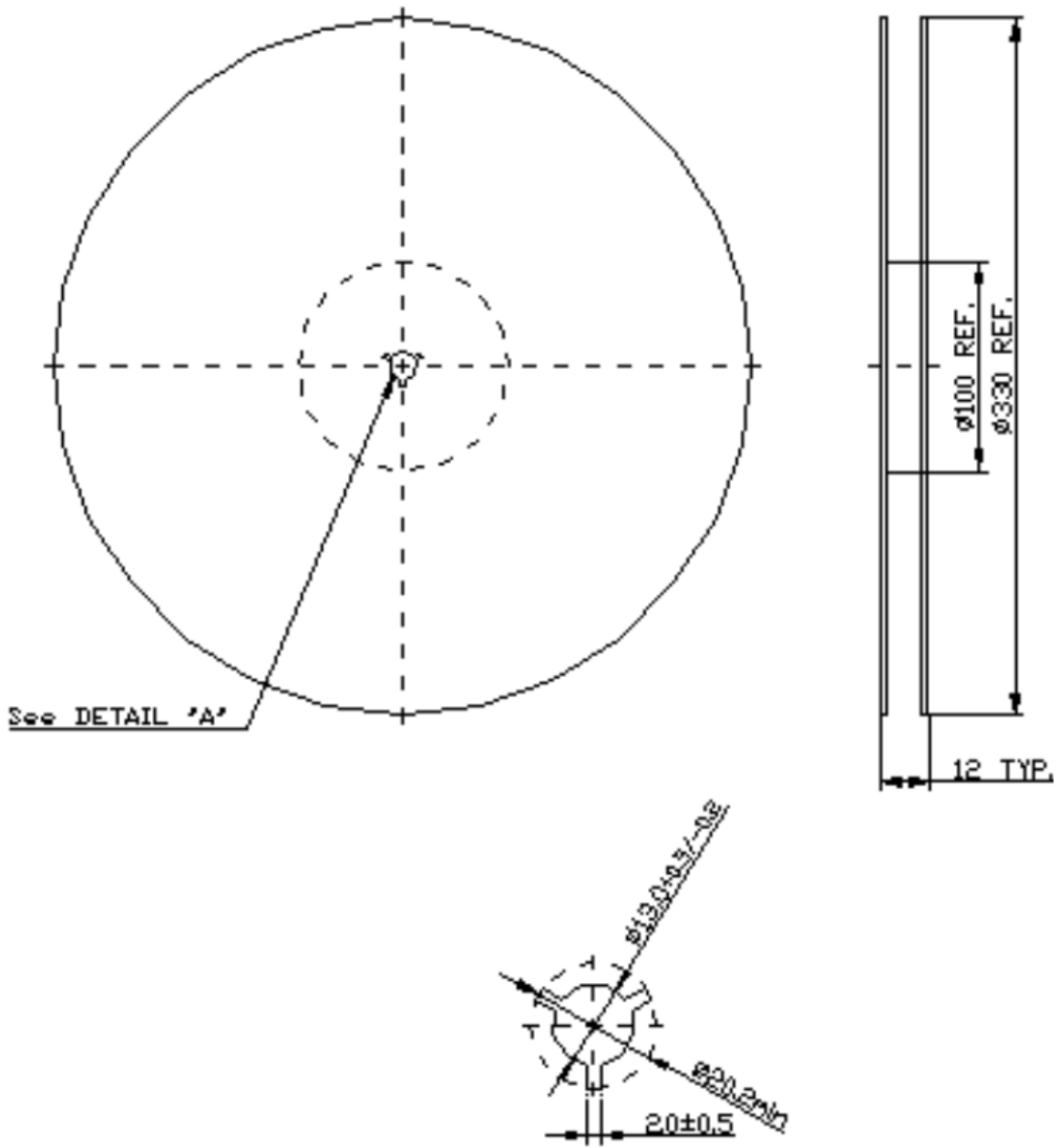


1.1 x 0.9 x 0.5 mm  
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## Packaging

Packaging Type: Reel and Tape  
Pieces per Reel: 5k

Reel Dimension



Unit: mm



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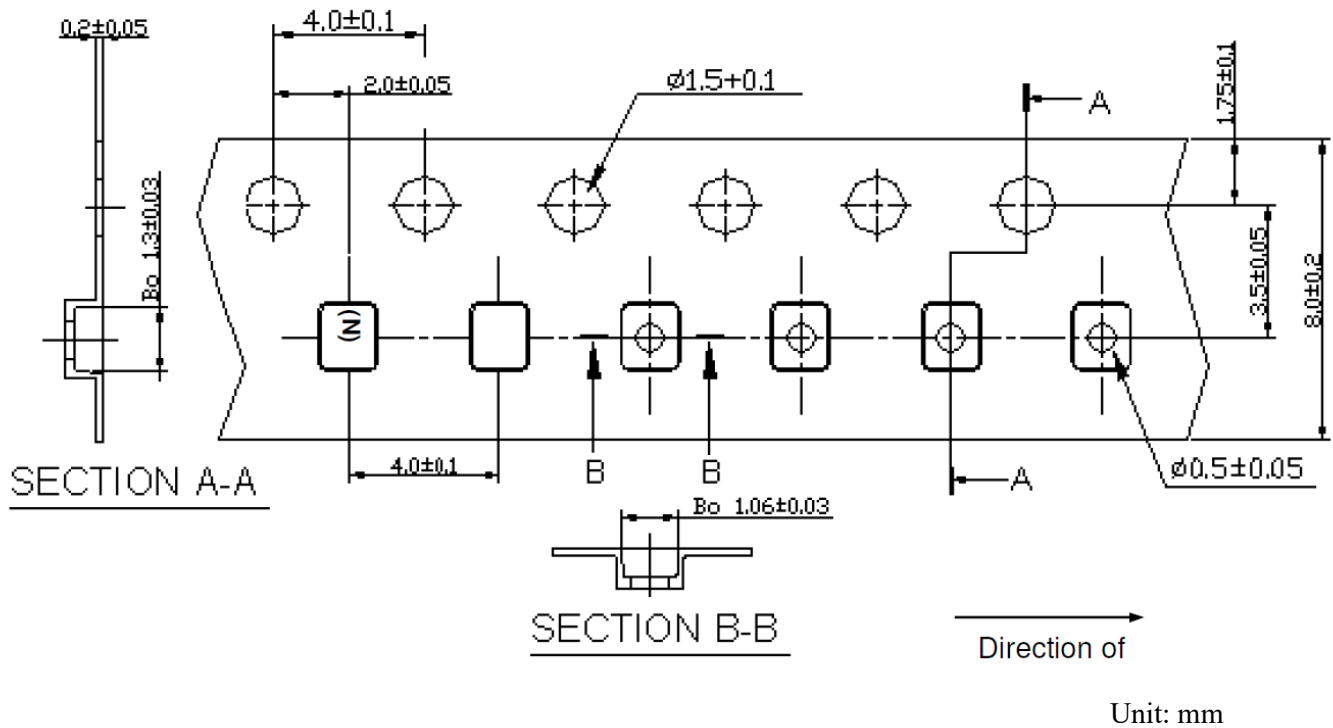


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1.1 x 0.9 x 0.5 mm  
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Tape Dimension



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