

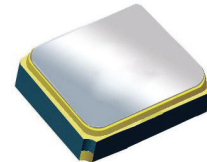
# Surface Mount 1575.42MHz SAW Filter

AFS14A04-1575.42-T3

Moisture Sensitivity Level (MSL) = 3



RoHS  
Compliant



1.4 x 1.1 x 0.7 mm

## APPLICATIONS:

- 1.4 x 1.1 x 0.7 mm low profile SMT package
- Low Insertion loss
- Excellent selectivity with high out-of-band rejection

- Wireless Communication
- Remote Control
- Cellular Phones

## ELECTRICAL SPECIFICATIONS:

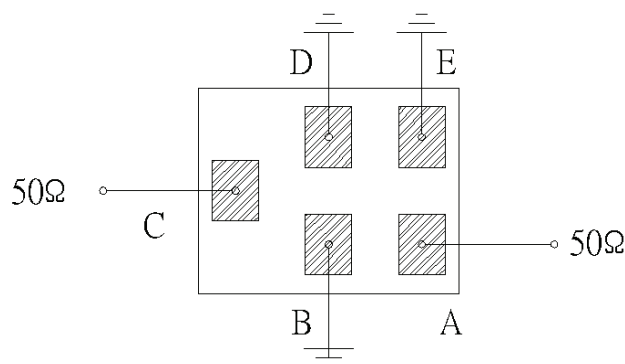
### Maximum Ratings

Item	Value
Input Power Level	+15 dBm max.
DC Permissive Voltage	3.0V DC max.
Operating Temperature Range	-40°C to + 85°C
Storage Temperature Range	-40°C to + 85°C

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency ( $f_c$ )		1575.42		MHz	
Insertion Loss (IL)		0.90	1.50	dB	(1574.42~1576.42 MHz)
Effective Bandwidth		40		MHz	
Amplitude Ripple		0.1	0.75	dB	(1574.42~1576.42 MHz)
Worst-Case Input / Output Return Loss		23	12.7	dB	(1574.42~1576.42 MHz)
Stop-band Attenuation (Referenced to 0.0 dB)	35	38		dB	D.C~1450 MHz
	30	45			1450~1520 MHz
	45	48			1625~1640 MHz
	38	40			1640~1805 MHz
	38	40			1805~1910 MHz
	38	43			1910~2000 MHz
	30	45			2000~4000 MHz
	20	22			4000~6000 MHz
Source Impedance ( $Z_S$ )		50		$\Omega$	See note # 1
Load Impedance ( $Z_L$ )		50		$\Omega$	See note # 1

**Note #1:** No matching network required for operation into 50 $\Omega$ 's

## TEST CIRCUIT:



Bottom View

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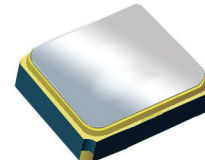
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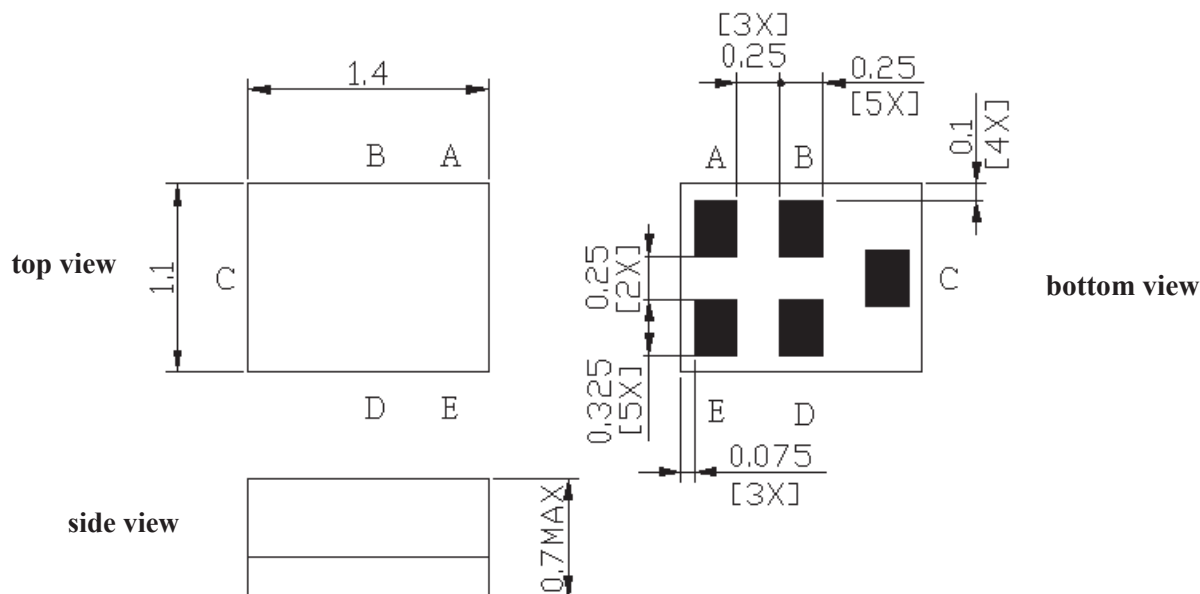


**RoHS**  
Compliant



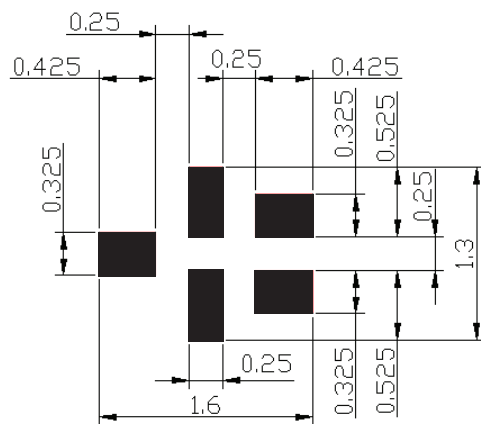
1.4 x 1.1 x 0.7 mm

## OUTLINE DIMENSIONS:



<b>C:</b>	Input
<b>A:</b>	Output
<b>B, D, E:</b>	Ground

### Recommended Land Pattern:



■ : Land Pattern  
Unit : mm

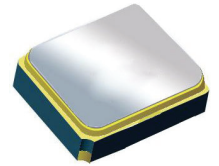
\*All Dimensions are in mm

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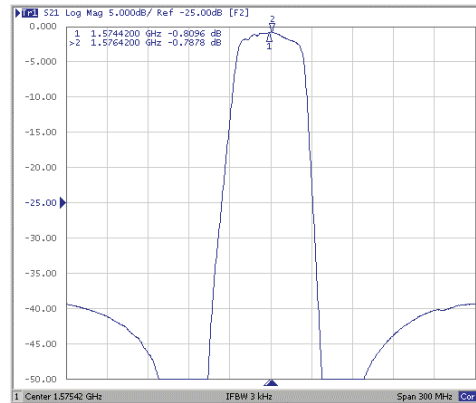
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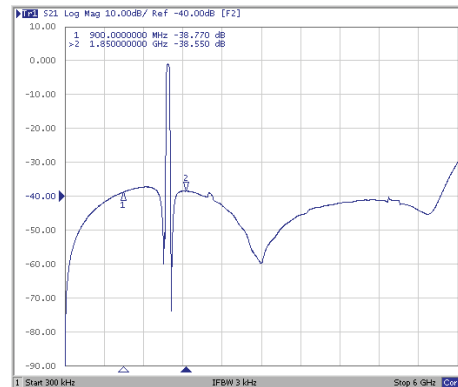
1.4 x 1.1 x 0.7 mm

## FREQUENCY CHARACTERISTICS:

### Filter Frequency Response (Narrowband)

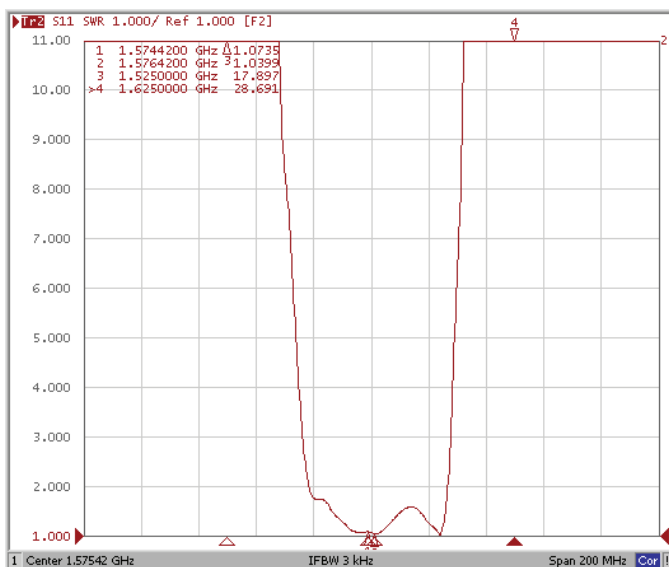


### Filter Frequency Response (Wideband)

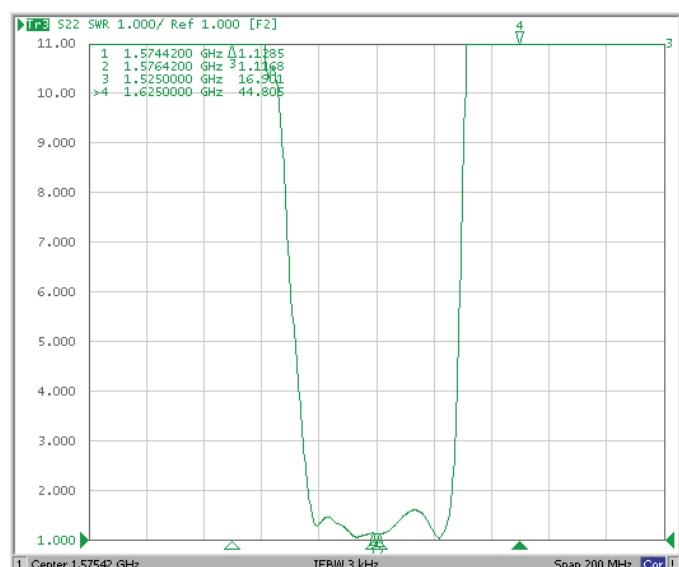


## REFLECTION FUNCTIONS:

### S11



### S22



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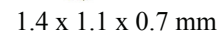


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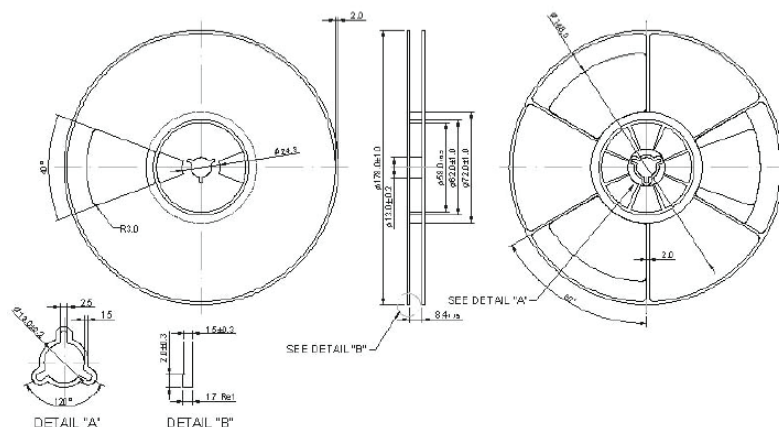
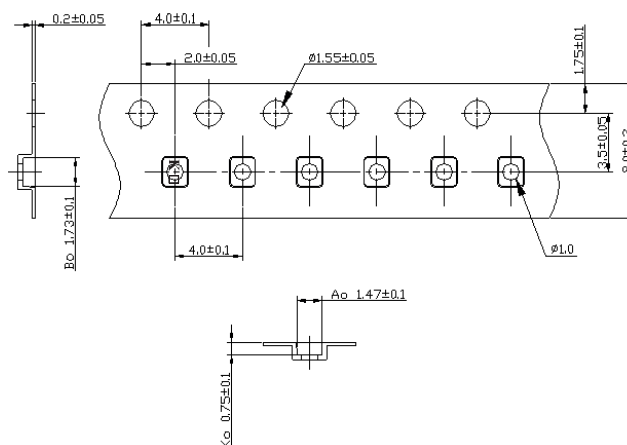


**RoHS**  
**Compliant**

The graph plots Temperature (Deg C) on the y-axis (ranging from 20 to 280 in increments of 20) against Time (Sec) on the x-axis (ranging from 0 to 360 in increments of 20). The curve shows a non-linear increase in temperature over time, with a significant plateau between 40 and 100 seconds, followed by a peak around 220 seconds and a subsequent decrease.

Time (Sec)	Temperature (Deg C)
0	20
20	20
40	145
60	145
80	155
100	155
120	170
140	175
160	195
180	220
200	250
220	260
240	245
260	175
280	145
300	145
320	130
340	115
360	105

**Reel Count : 7" = 3k units**



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