

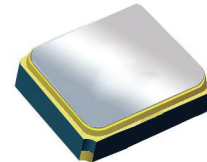
# Surface Mount 1591.5 MHz SAW Filter

AFS14A35-1591.5-T3

Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive - MSL = N/A: Not Applicable



RoHS  
Compliant



1.4 x 1.1 x 0.7 mm

## FEATURES:

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

## APPLICATIONS:

- Wireless Communication
- Remote Control
- Cellular Phones

## ELECTRICAL SPECIFICATIONS:

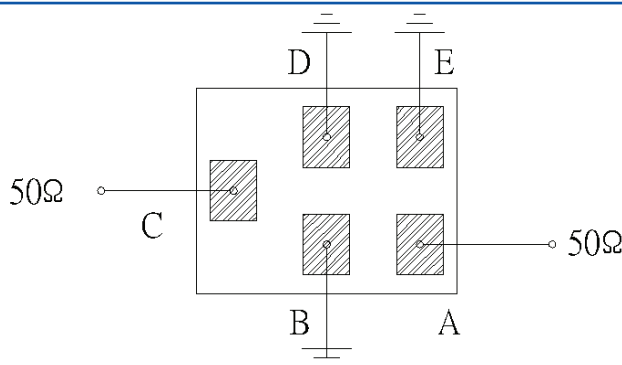
### Maximum Ratings

Item	Value
Input Power Level	+10 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 ( $f_c$ )		1591.5		MHz	
Insertion Loss (IL)		2.4	3.7	dB	1574~1609 MHz
Effective Bandwidth		35		MHz	
Amplitude Ripple		1.3	2.6	dB	1574~1609 MHz
Worst-Case Input / Output Return Loss	7.7	9.5		dB	1574~1609 MHz
Group Delay Variation		17	50	ns	1574~1609 MHz
Stop-band Attenuation (Referenced to 0.0 dB)	28	34		dB	10 ~1200 MHz
	28	34			1200~1450 MHz
	20	37			1450~1540 MHz
	9	31			1626~1710 MHz
	30	37			1710~2000 MHz
	30	37			2000~2500 MHz
Temperature Coefficient of frequency		-36		ppm/°C	
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:

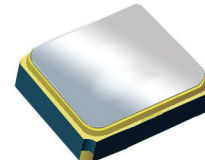


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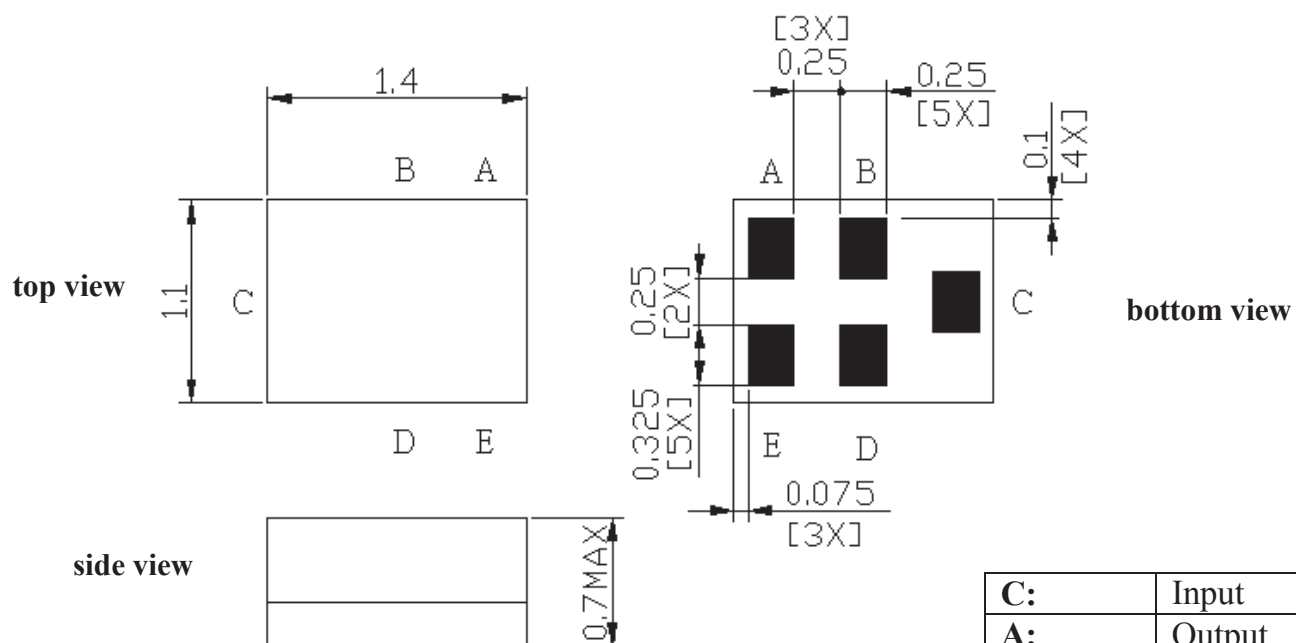


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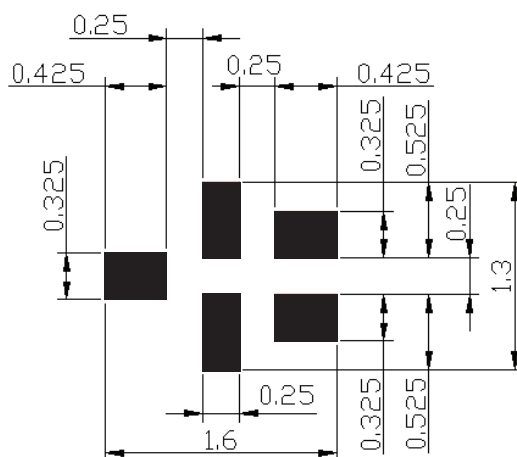
1.4 x 1.1 x 0.7 mm

## OUTLINE DIMENSIONS:



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

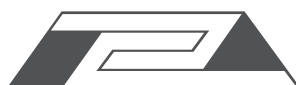
## Recommended Land Pattern:



■ : Land Pattern

Unit : mm

\*All Dimensions are in mm

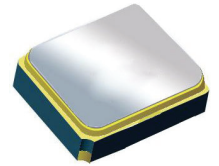


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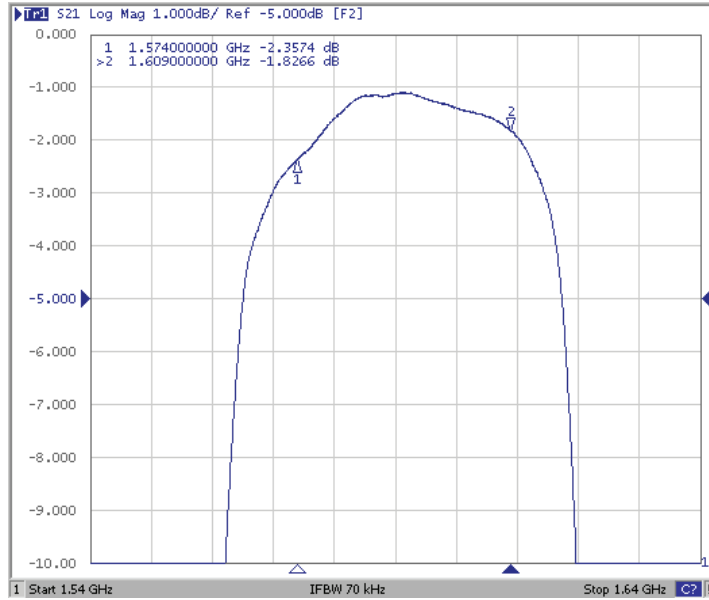
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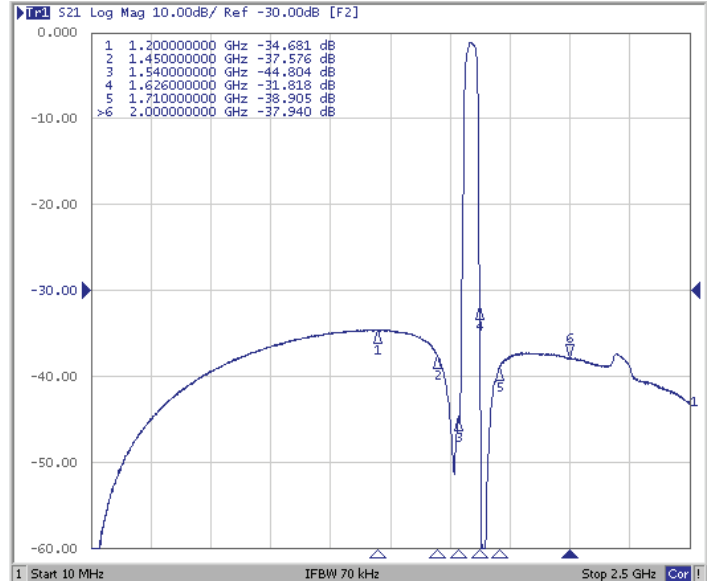
1.4 x 1.1 x 0.7 mm

## FREQUENCY CHARACTERISTICS:

### Filter Frequency Response (Narrowband)

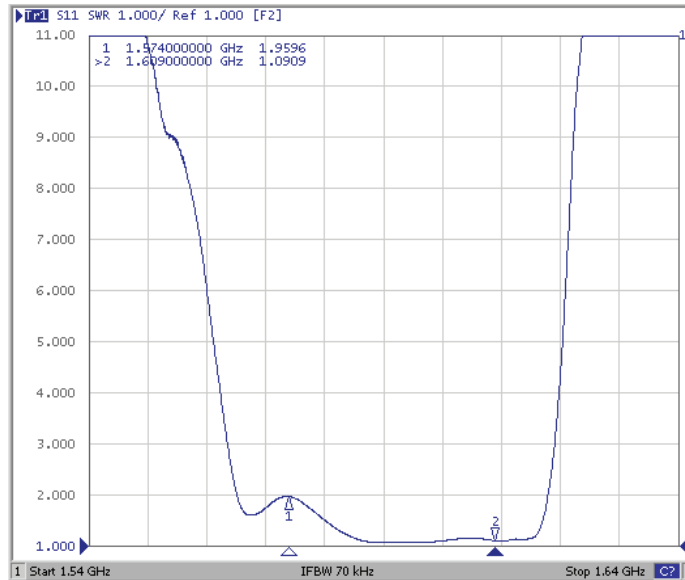


### Filter Frequency Response (Wideband)

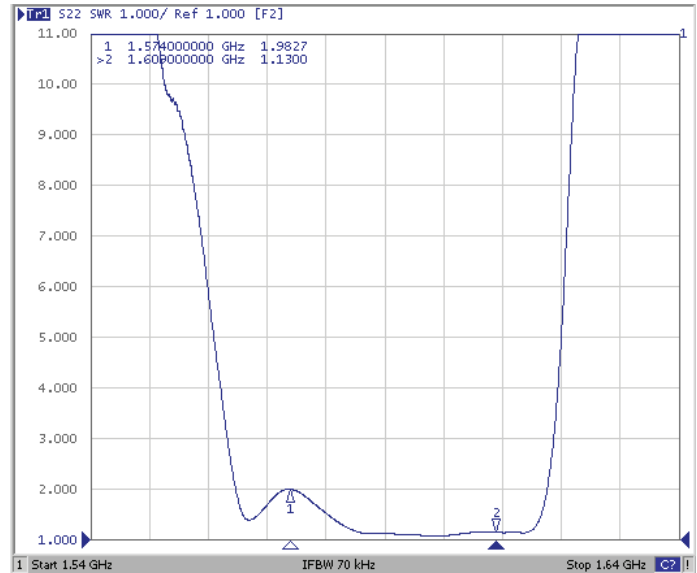


## REFLECTION FUNCTIONS:

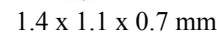
### S11



### S22



AFS14A35-1591.5-T3

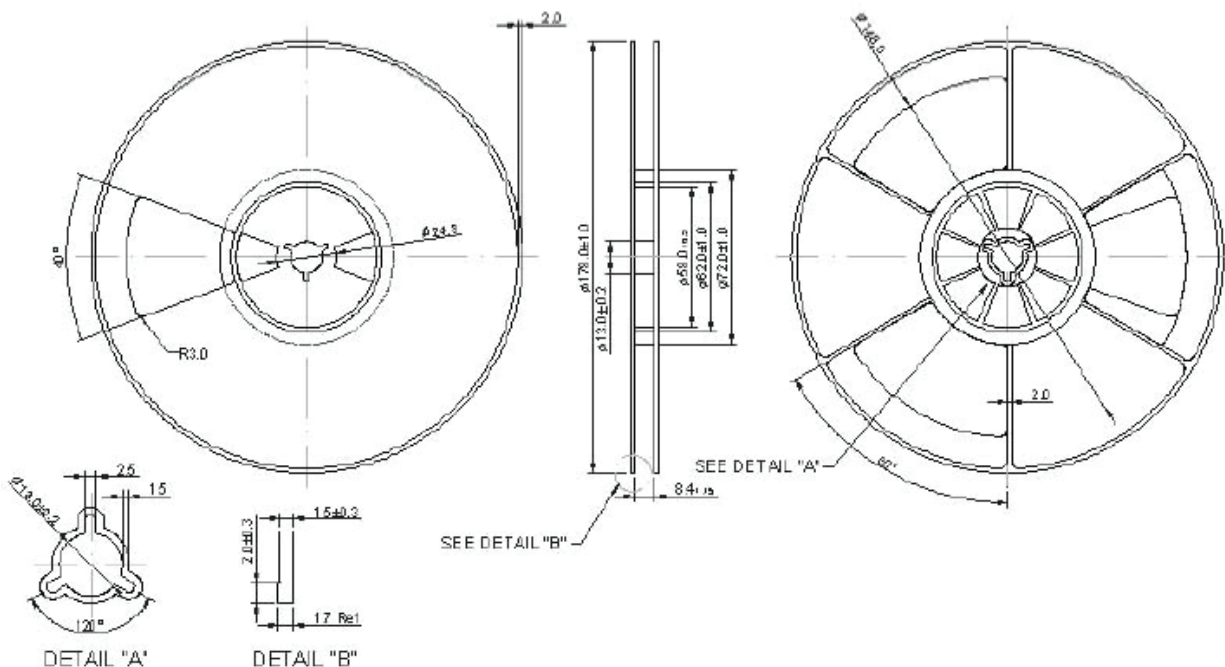


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Figure 1 is a line graph showing the temperature of water over time during a heating process. The x-axis represents Time in seconds (Sec), ranging from 0 to 360. The y-axis represents Temperature in degrees Celsius (Deg C), ranging from 20 to 280. The curve shows a rapid initial increase in temperature, followed by a period of relative stability (boiling) around 145°C, and then a final rise to a peak of approximately 260°C at 220 seconds, after which the temperature begins to decrease.

Time (Sec)	Temp (Deg C)
0	20
20	20
40	145
60	145
80	155
100	155
120	170
140	175
160	190
180	215
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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