

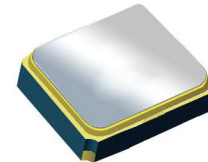
# Surface Mount 1575.42MHz SAW Filter

AFS20A53-1575.42-T3

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



RoHS  
Compliant



2.0 x 1.6 x 0.9 mm

## FEATURES:

- 2.0 x 1.6 x 0.9 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:

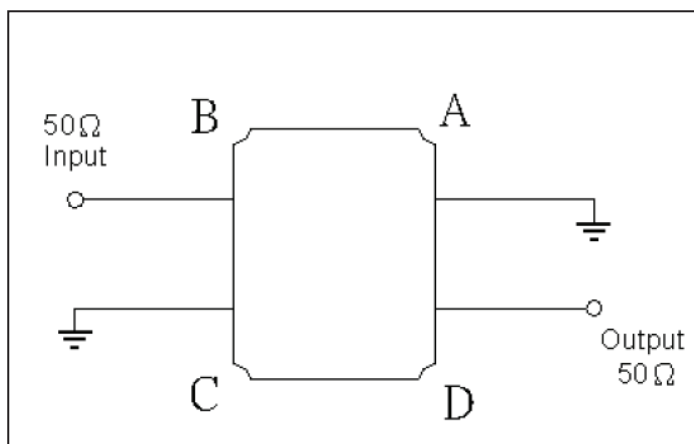
### Maximum Ratings

Item	Value
Input Power Level	+20 dBm max.
DC Permissive Voltage	3.0V DC max.
Operating Temperature Range	-55°C to + 105°C
Storage Temperature Range	-55°C to + 105°C

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency ( $f_c$ )		1575.42		MHz	
Insertion Loss (IL)		2.1	3.0	dB	1565.42 ~ 1585.42MHz
Effective Bandwidth	20	53		MHz	
Amplitude Ripple		1.3	2.0	dB	1565.42 ~ 1585.42MHz
Worst-Case Input / Output Return Loss	8	11		dB	1565.42 ~ 1585.42MHz
Group Delay		4	26		1565.42 ~ 1585.42MHz
Stop-band Attenuation (Referenced to 0.0 dB)	15	19		dB	300 ~ 1500MHz
	15	21			1650MHz ~ 1900MHz
	15	21			1900MHz ~ 3000MHz
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:

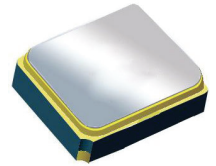


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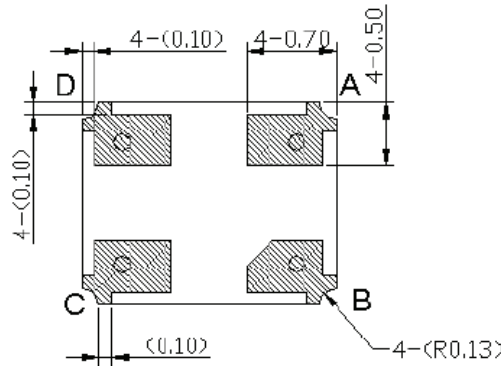
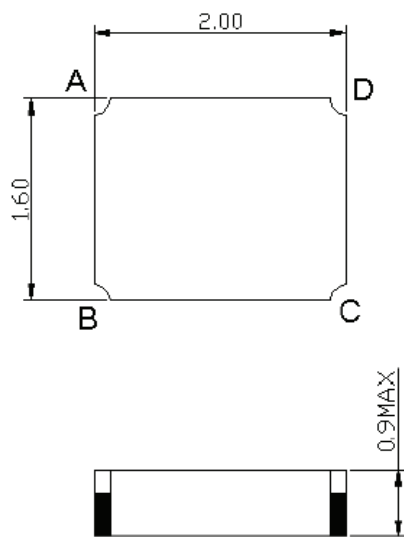


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2.0 x 1.6 x 0.9 mm

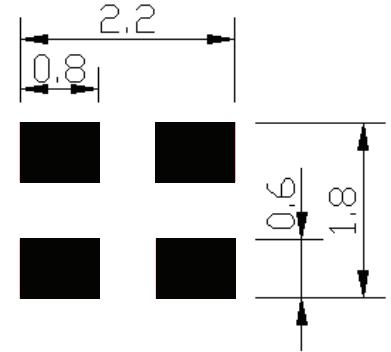
## OUTLINE DIMENSIONS:



#B:	Input
#D:	Output
#A,C:	Ground

\* All Dimensions are in mm

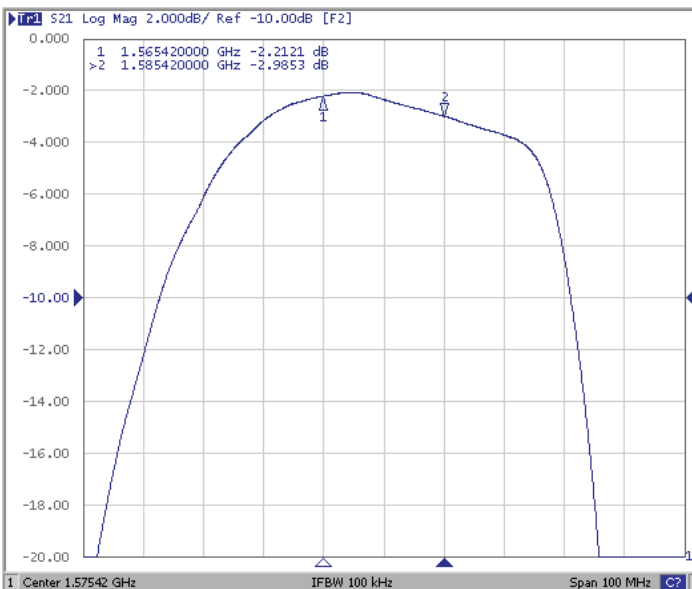
## Recommended Land Pattern:



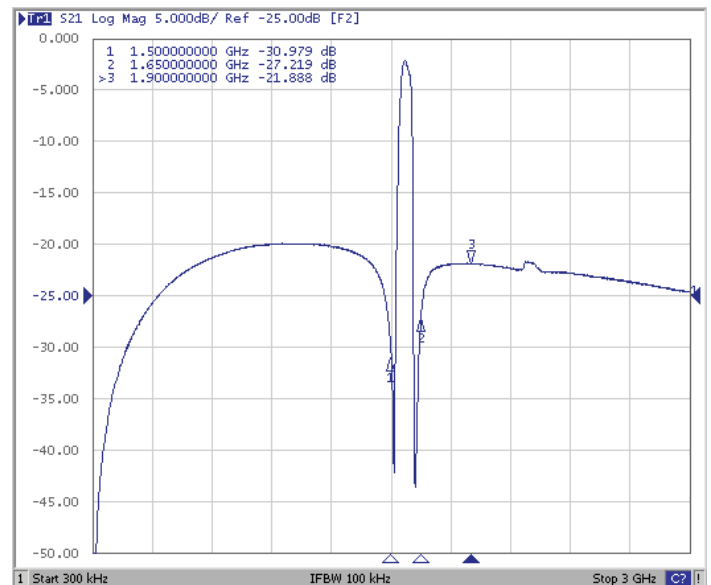
\*All Dimensions are in mm

## FREQUENCY CHARACTERISTICS:

### Filter Frequency Response (Narrowband)



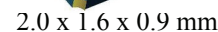
### Filter Frequency Response (Wideband)



Detail S-parameter information (.s2p file) available upon request



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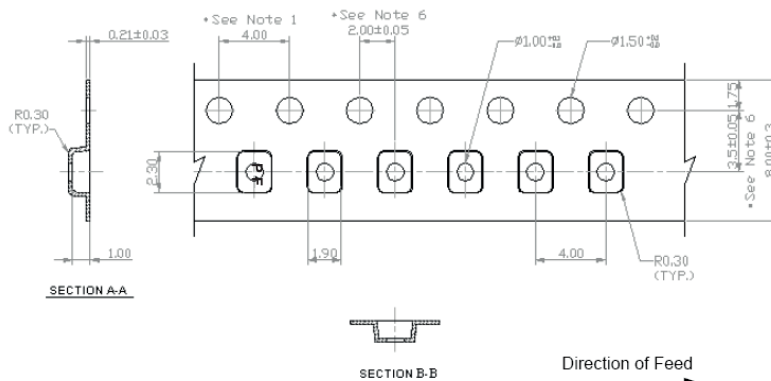


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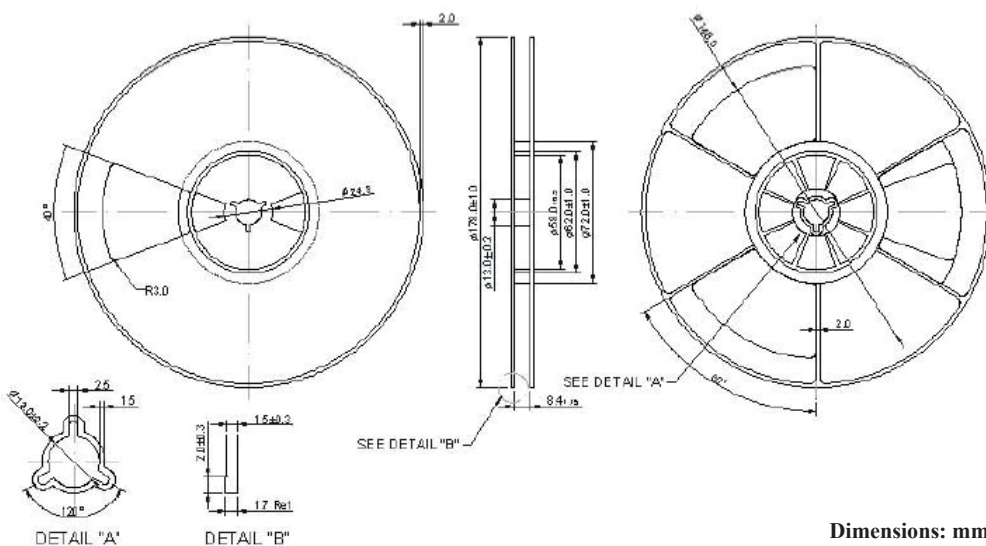
The graph shows the temperature of a 100W lamp over a 360-second period. The temperature starts at 25°C, rises to a peak of 260°C at 220 seconds, and then decreases to 105°C at 360 seconds.

Time (Sec)	Temp (Deg C)
0	25
20	25
40	145
60	148
80	155
100	155
120	165
140	175
160	185
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**



**Dimensions: mm**



**Dimensions: mm**

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CERTIFIED



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