

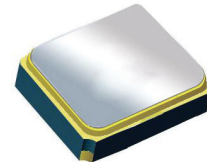
Surface Mount 2017.50MHz SAW Filter

AFS14A15-2017.50-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

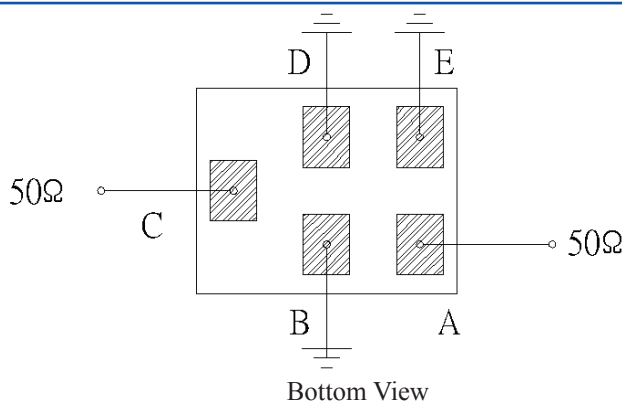
ELECTRICAL SPECIFICATIONS:

Maximum Ratings

Item	Value
Input Power Level	+13 dBm max.
DC Permissive Voltage	3.0V DC max.
Operating Temperature Range	-30°C to + 85°C
Storage Temperature Range	-40°C to + 85°C

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency (f_c)		2017.50		MHz	
Insertion Loss (IL)		2.0	2.8	dB	(2010.00~2025.00MHz)
Effective Bandwidth		15		MHz	
Amplitude Ripple		0.25	1.00	dB	(2010.00~2025.00MHz)
Worst-Case Input / Output Return Loss		20.8	10.88	dB	(2010.00~2025.00MHz)
Stop-band Attenuation (Referenced to 0.0 dB)	41	45		dB	DC~1850 MHz
	34	36			1850~1950 MHz
	15	19			1950~1980 MHz
	6	13			2050~2075 MHz
	23	37			2075~2110 MHz
	37	40			2110~3500 MHz
	34	40			3500~4060 MHz
	29	37			4060~5000 MHz
	25	35			5000~5500 MHz
	23	33			5500~6000 MHz
Terminating Source Impedance (Z_S)		50		Ω	
Temperature Coefficient of Frequency		-36		ppm/°C	

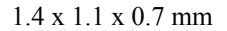
TEST CIRCUIT:



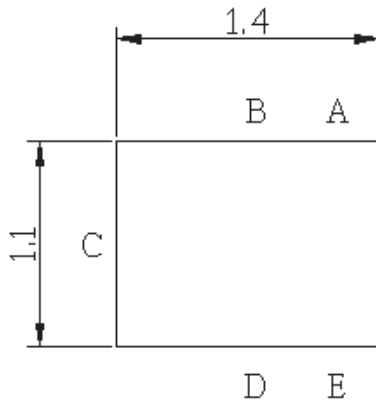
Bottom View



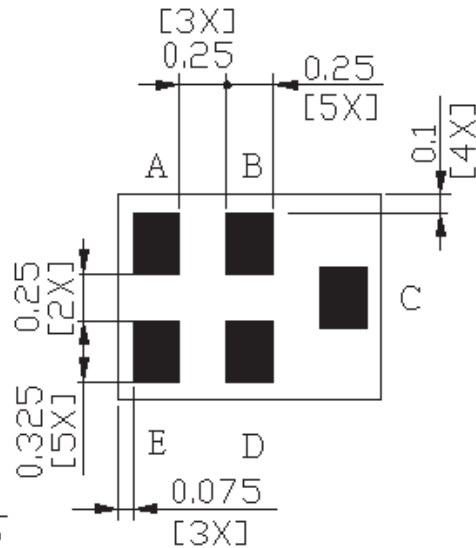
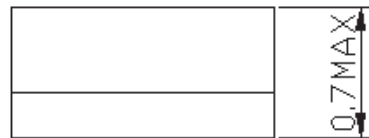
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top view



side view



bottom view

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

*All Dimensions are in mm

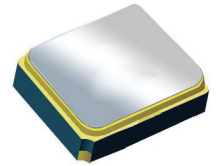
 : Land Pattern
 Unit : mm

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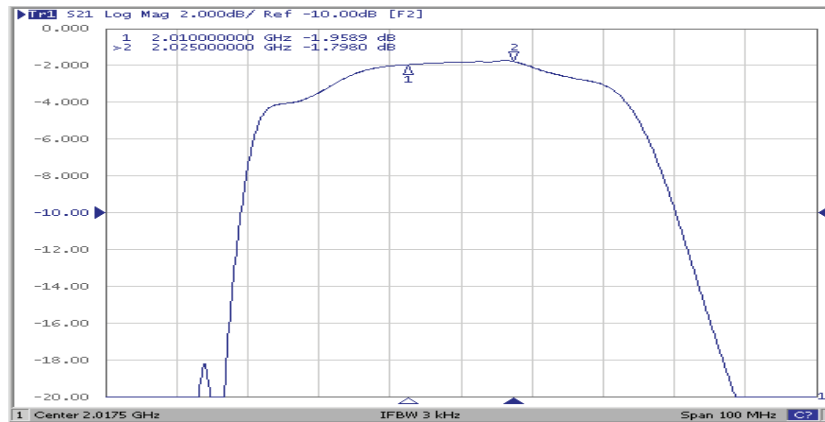
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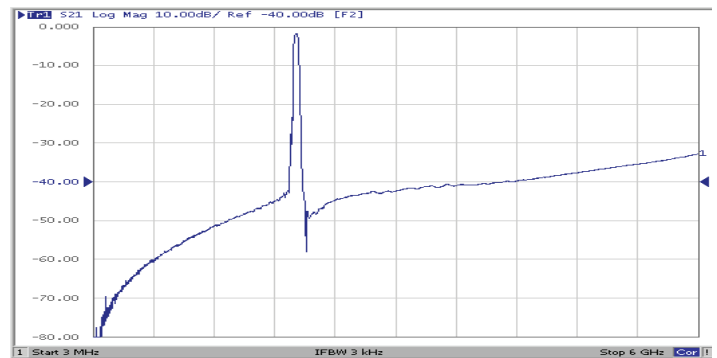
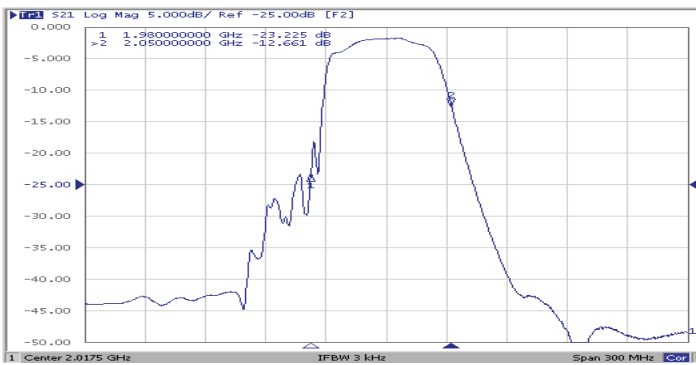
1.4 x 1.1 x 0.7 mm

FREQUENCY CHARACTERISTICS:

Filter Frequency Response (Narrowband)

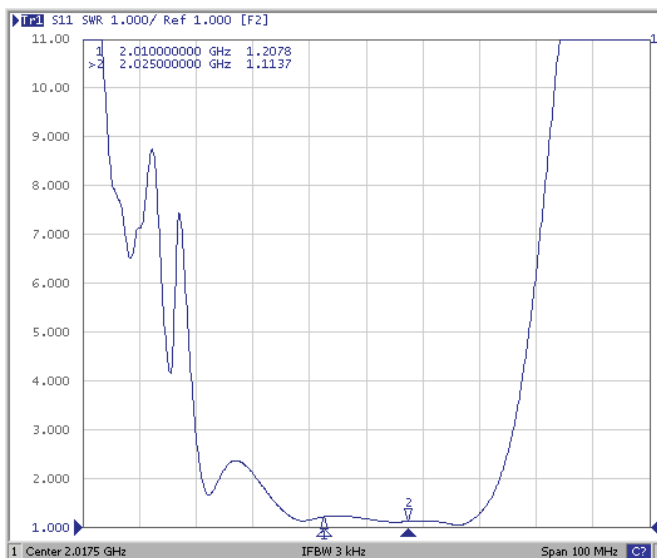


Filter Frequency Response (Wideband)

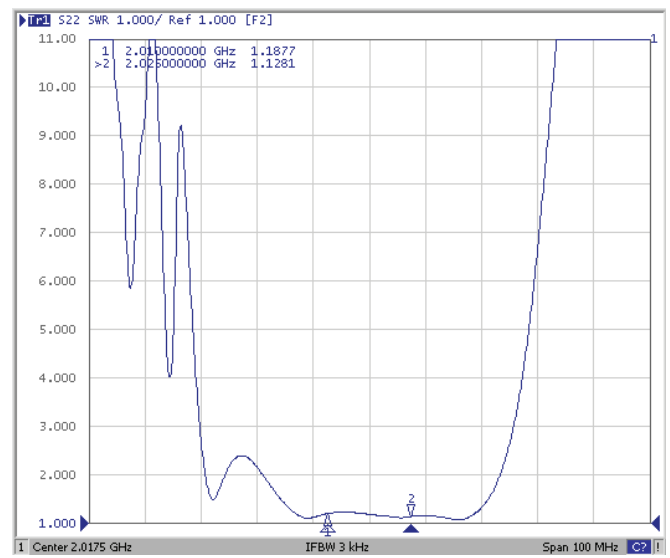


REFLECTION FUNCTIONS:

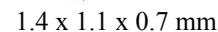
S11



S22



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The graph plots Temperature (Deg C) on the y-axis (0 to 280) against Time (Sec) on the x-axis (0 to 360). The curve shows a rapid initial rise from 20°C at 0s to about 140°C at 20s. It then levels off slightly around 150°C between 40s and 80s. After 80s, it rises steadily to a peak of approximately 260°C at 220s. Following the peak, the temperature drops sharply to about 150°C at 260s, then more gradually to approximately 100°C at 360s.

Time (Sec)	Temp (Deg C)
0	20
20	140
40	150
60	150
80	160
100	155
120	170
140	180
160	200
180	220
200	250
220	260
240	250
260	150
280	145
300	150
320	135
340	115
360	100

Technical drawing of a circular mechanical part, showing multiple views and dimensions:

- Top View (Left):** Shows a circular part with a central hole. Dimensions include a radius of $R3.0$, a central hole diameter of $\phi 24.5$, and a sector angle of 40° .
- Top View (Right):** Shows a circular part with a central hole and radial spokes. Dimensions include a radius of $R3.0$, a central hole diameter of $\phi 24.5$, and a sector angle of 60° .
- Side View (Top):** Shows a cross-section of the part. Dimensions include a total width of 2.0 , a central hole diameter of $\phi 178 \pm 0.10$, a hole diameter of $\phi 110 \pm 0.2$, a hole diameter of $\phi 68 \pm 0.2$, a hole diameter of $\phi 62.0 \pm 0.10$, and a hole diameter of $\phi 72.0 \pm 0.10$.
- Side View (Bottom):** Shows a cross-section of the part. Dimensions include a total width of 84.19 , a hole diameter of $\phi 178 \pm 0.10$, a hole diameter of $\phi 110 \pm 0.2$, a hole diameter of $\phi 68 \pm 0.2$, a hole diameter of $\phi 62.0 \pm 0.10$, and a hole diameter of $\phi 72.0 \pm 0.10$.
- Detail "A":** A cross-section of a small part. Dimensions include a total width of 26 , a hole diameter of $\phi 1.9 \pm 0.2$, a hole diameter of 15 , and a sector angle of 120° .
- Detail "B":** A cross-section of a small part. Dimensions include a total width of 15 ± 0.2 , a hole diameter of 2.0 ± 0.3 , and a hole diameter of 1.7 Re1.
- Bottom View:** Shows a rectangular part with a central hole. Dimensions include a total width of 0.2 ± 0.05 , a hole diameter of $\phi 4.0 \pm 0.1$, a hole diameter of 2.0 ± 0.05 , a hole diameter of $\phi 1.55 \pm 0.05$, a hole diameter of $\phi 1.0$, a hole diameter of 1.75 ± 0.1 , a hole diameter of 3.5 ± 0.05 , and a hole diameter of 8.0 ± 0.3 .
- Bottom View (Right):** Shows a cross-section of a small part. Dimensions include a total width of 1.47 ± 0.1 , a hole diameter of $\phi 0.75 \pm 0.1$, and a hole diameter of $\phi 1.0$.

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