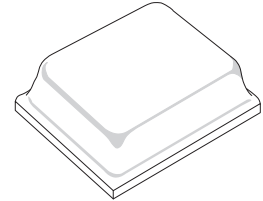


- **Miniature High Performance SAW Filter**
- **Low Passband Loss**
- **1.4 x 1.1 mm Surface-mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**



SF2316K

**1588 MHz
SAW Filter**



SM1411-5H

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	10	dBm
Maximum DC Voltage On any Non-ground Terminal	3	VDC
Component Operating Temperature Range	-40 to +105	°C
Storage Temperature Range in Tape and Reel	-40 to +105	°C

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_c		1588.655			MHz
Insertion Loss, 1573.42 to 1577.42 MHz	IL_{MAX}			1.25	2.2	dB
Insertion Loss, 1571.42 to 1605.89 MHz				1.85	2.7	
Amplitude Ripple, 1573.42 to 1577.42 MHz				0.25	1.2	dB
Amplitude Ripple, 1571.42 to 1605.89 MHz				0.8	1.5	
I/O VSWR (1573.42 to 1577.42 MHz)				1.2	2	
I/O VSWR (1571.42 to 1605.89 MHz)				1.6	2	
Attenuation						
DC to 824 MHz			30	32		dB
824 to 849 MHz			30	32		
849 to 880 MHz			30	32		
880 to 915 MHz			30	31.5		
915 to 1452 MHz			28	30.5		
1452 to 1525 MHz			32	35		
1710 to 1785 MHz			28	31		
1785 to 1850 MHz			28	31		
1850 to 6000 MHz			25	31		
Terminating Source impedance	Z_S			50		Ω
Terminating Load impedance	Z_L			50		Ω
Temperature Coefficient of Frequency	ppm/°C		-36			
Lid Symbolization, □ = week character, A-Z and a-z, 52 total characters			P□			



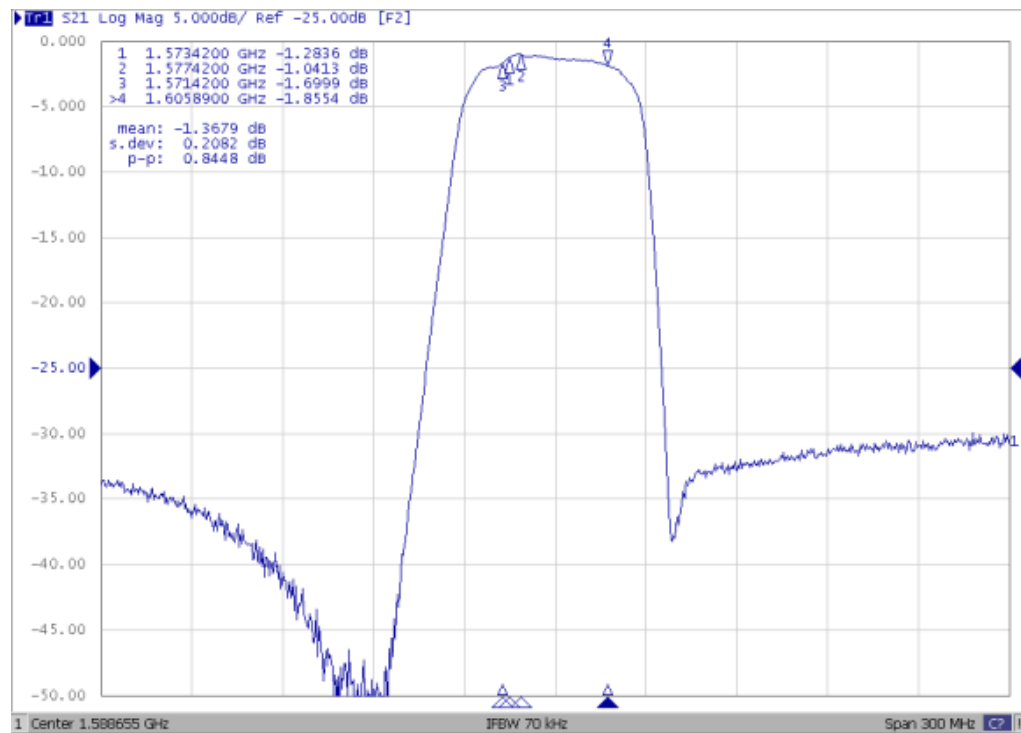
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

Notes:

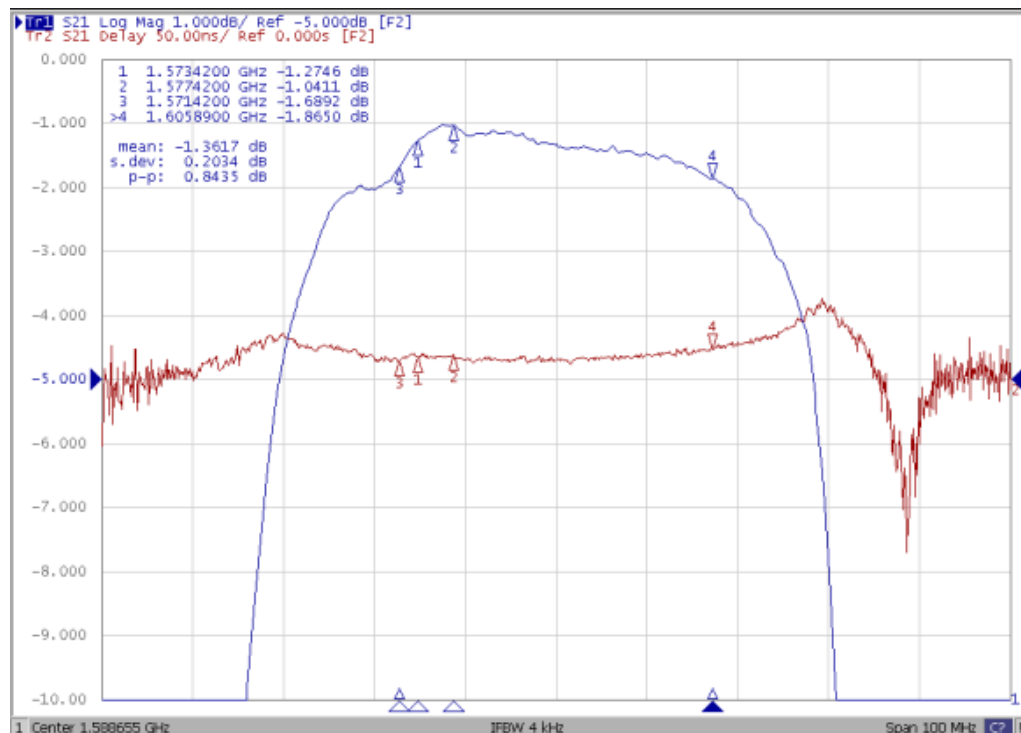
1. US and international patents may apply.
2. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Company, LTD.

Frequency Response Plots

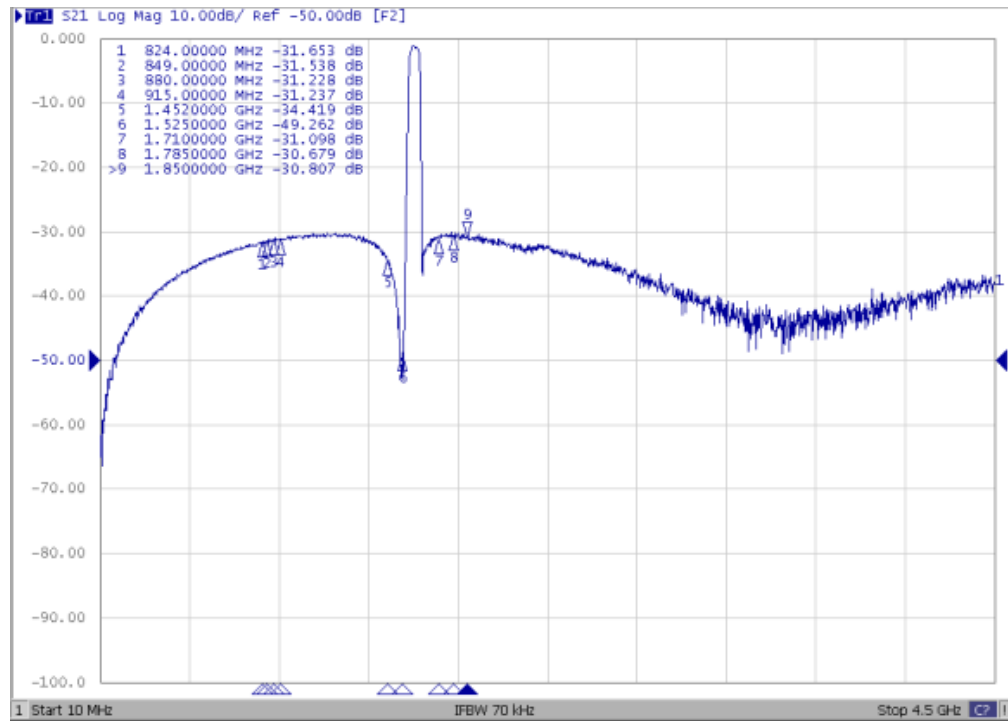
S21 Response (span 300MHz)



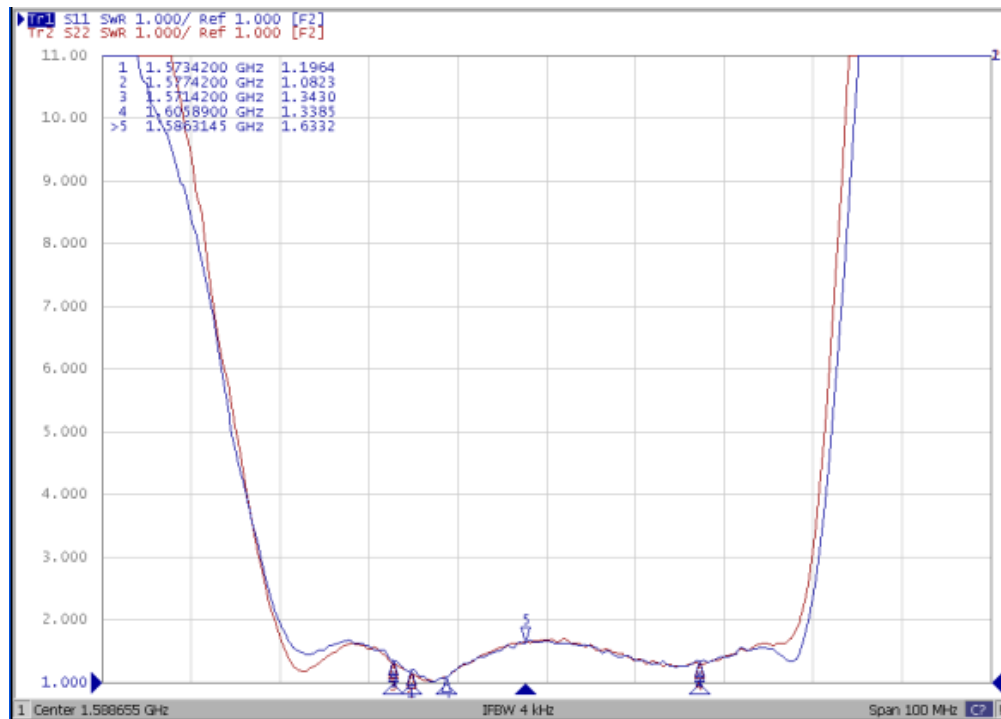
S21 Response (span 100MHz)



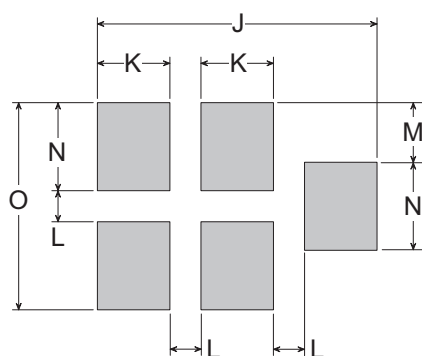
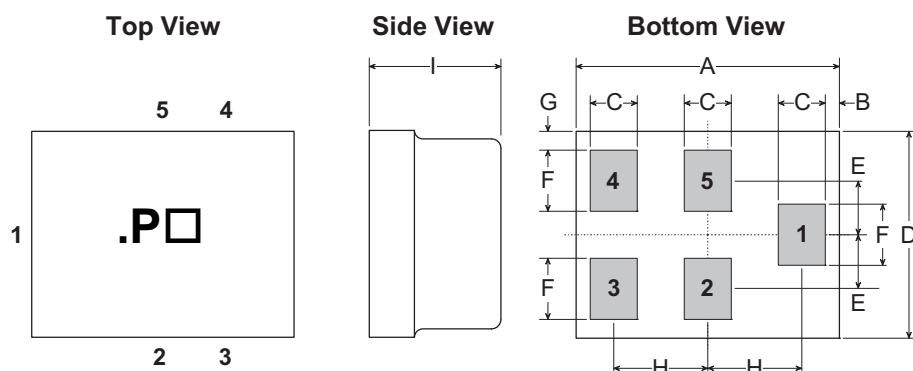
S21 Response (span 4.5GHz)



S11 & S12 VSWR (span 100MHz)



SM1411-5 1.4 X 1.1 mm 5-Terminal Surface-mount Case

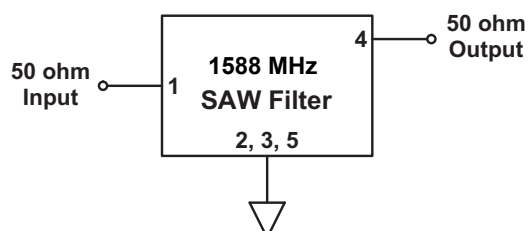


PCB Footprint

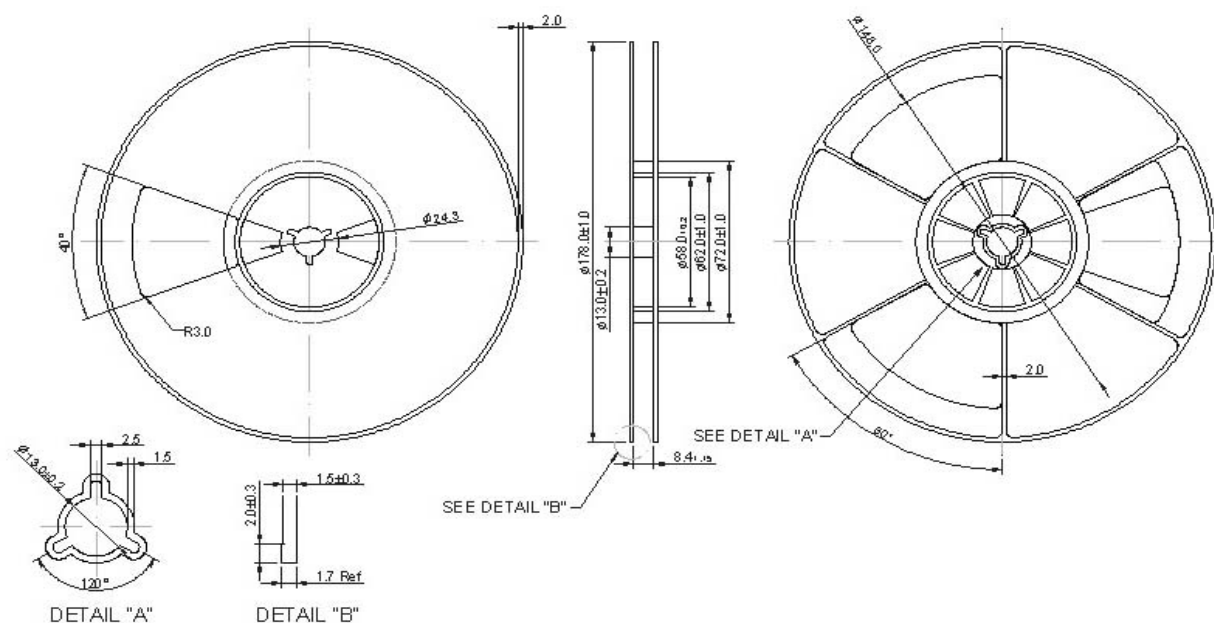
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	1.350	1.400	1.450	0.0531	0.0551	0.0571
B	-	0.075	-	-	0.0030	-
C	0.170	0.250	0.330	0.0067	0.0098	0.0130
D	1.050	1.100	1.150	0.0413	0.0433	0.0453
E	-	0.288	-	-	0.0113	-
F	0.245	0.325	0.405	0.0096	0.0128	0.0159
G	-	0.100	-	-	0.0039	-
H	-	0.500	-	-	0.0197	-
I	-	-	0.600	-	-	0.0236
J	-	1.350	-	-	0.0531	-
K	-	0.350	-	-	0.0138	-
L	-	0.150	-	-	0.0059	-
M	-	0.288	-	-	0.0113	-
N	-	0.425	-	-	0.0167	-
O	-	1.000	-	-	0.0394	-

Materials	
Solder Pad Plating	0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic
Pb Free	

Test Circuit



Reel Dimensions - 7 inch Reel, 3000 Filters



Tape Dimensions

