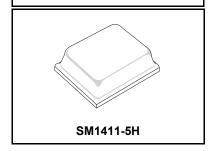




SF1219K

2338.75 MHz **SAW Filter**



- RF SAW Filter with Single-ended input and Balanced Output
- 1.4 x 1.1 x 0.6 mm Surface-Mount Case
- $Z_S = 50$ ohm, $Z_L = 100$ ohm
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 3
- AEC-Q200 Qualified

Absolute Maximum Ratings

Aboolato maximum ratingo				
Rating	Value	Units		
Maximum Input Power	+15	dBm		
Maximum DC Voltage Between any Two Terminals 3				
Operating Temperature Range	-40 to +85	°C		
torage Temperature Range in Tape and Reel -40 to +85 °C		°C		
Maximum Soldering Profile	265 °C	265 °C for 10 s		

Electrical Characteristics

Characteristic	Sym Not		Min	Тур	Max	Units
Center Frequency	f _C			2338.75	•	MHz
Maximum Insertion Loss, 2332.5 to 2345.0 MHz	IL _{MAX}			2.6	3.2	dB
Amplitude Ripple, 2332.5 to 2345.0 MHz				0.2	1.0	dB _{P-P}
Group Delay Ripple, 2332.5 to 2345.0 MHz				6.5		ns _{P-P}
Group Delay, 2338.75 MHz				12		ns
Return Loss, 2332.5 to 2345.0 MHz			6.5	9.6		dB
Source Impedance, Single Ended				50		Ω
Load Impedance, Balanced				100		Ω
Rejection:						
DC to 2224 MHz			35	41		
2453 to 2600 MHz			35	40		-10
2600 to 3000 MHz			40	44		dB
3000 to 6000 MHz			35	44		

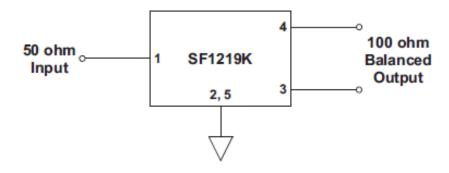
Case Style	1.4 x 1.1 x 0.7 mm
Lid Symbolization: 3, <u>YW</u> (Y = Year, W = Week)	

Connection	Terminal		
Input	1		
Output	3, 4		
Ground	2, 5		

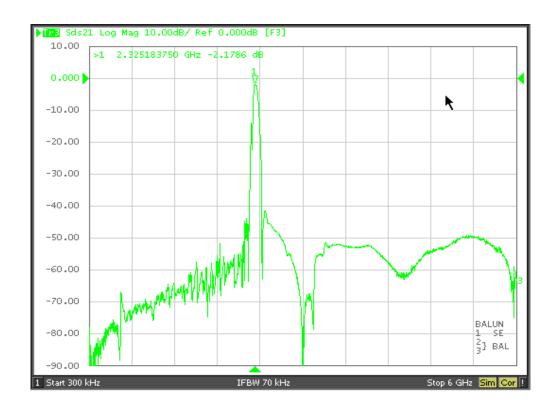
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling. NOTES:

- 1. The design, manufacturing process, and specifications of this device are subject to change.
- 2. US or International patents may apply.
- 3. RoHS compliant from the first date of manufacture.

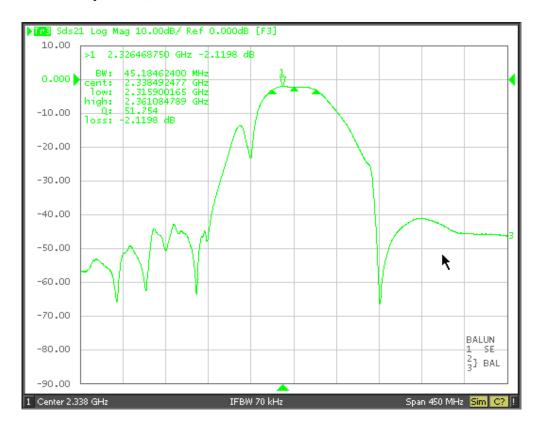
Filter Performance without Input Matching



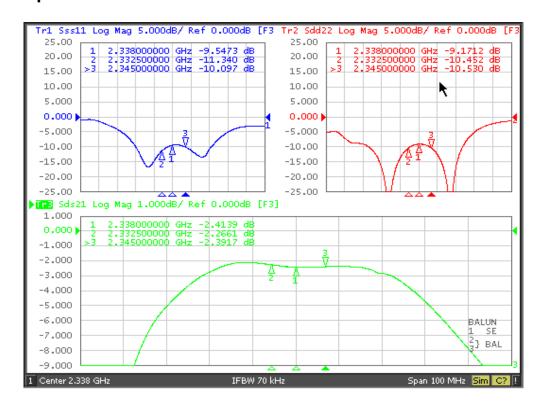
Filter Amplitude Response, 300 kHz to 6000 MHz:



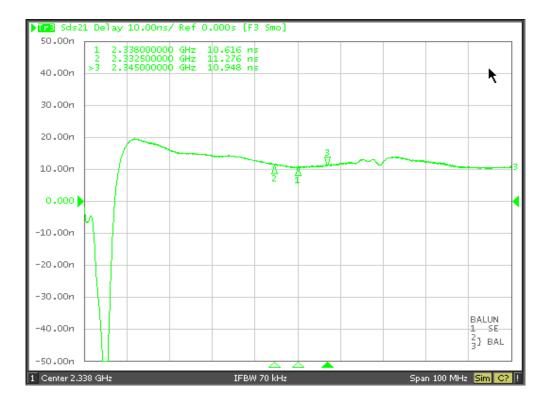
Filter Amplitude Response, 2113 to 2563 MHz:



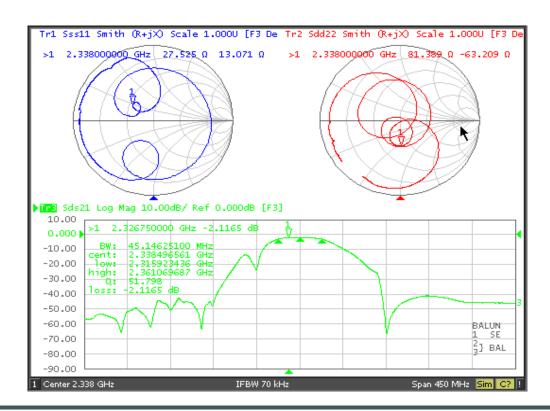
Passband Amplitude and Return Loss:



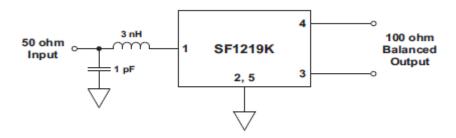
Passband Group Delay:



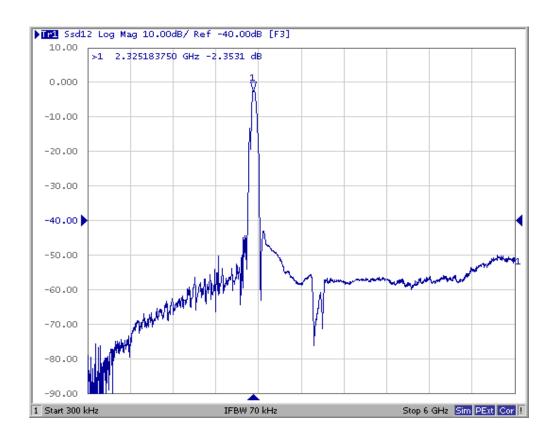
Passband Smith Chart Plots:



Filter Performance with Input Matching



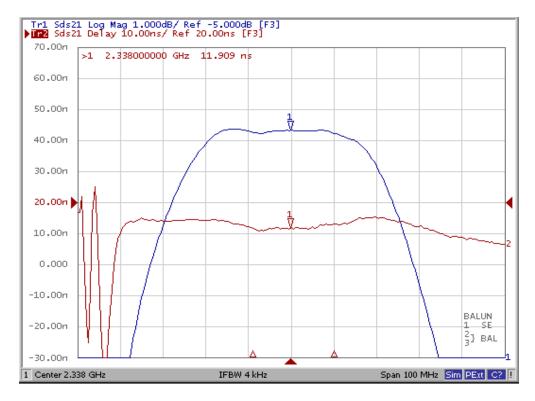
Filter Amplitude Response, 300 kHz to 6000 MHz:



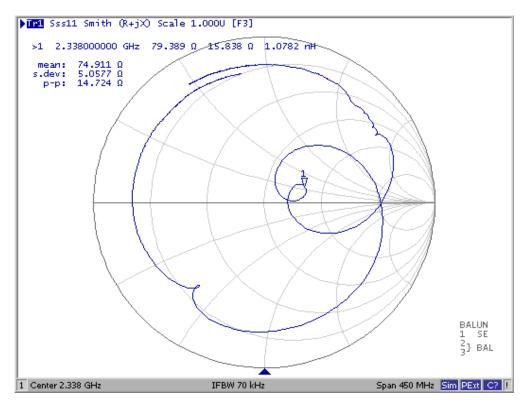
Filter Amplitude Response, 2113 to 2563 MHz:



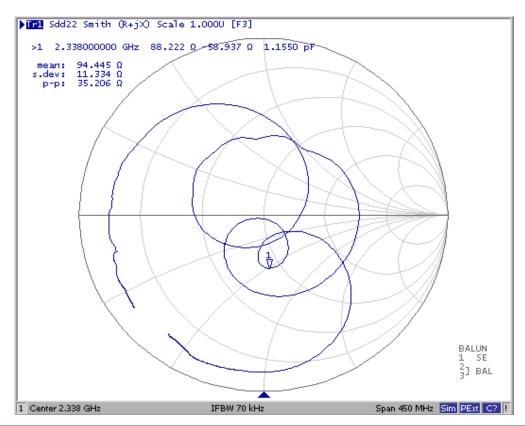
Passband Amplitude and Group Delay Response:



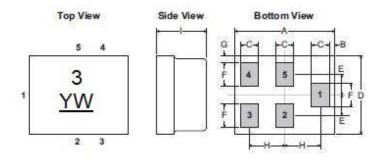
S₁₁ Smith Chart Plot:

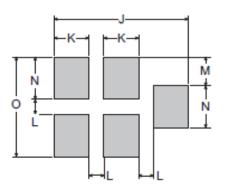


S₂₂ Smith Chart Plot:



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

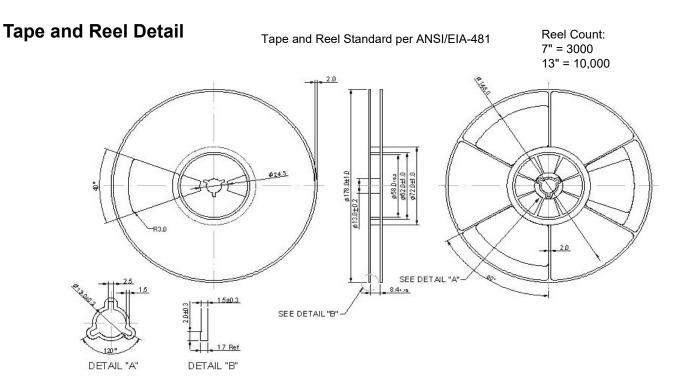


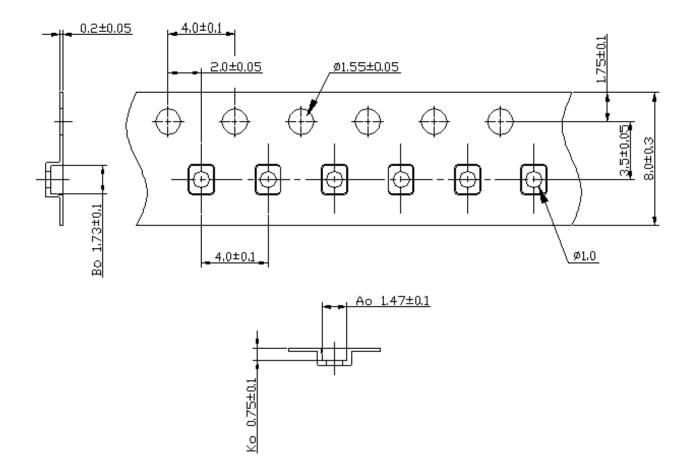


PCB Footprint

Dimension	Dimension mm		Inches			
Dillielision	Min	Nom	Max	Min	Nom	Max
Α	1.3500	1.4000	1.4500	0.0531	0.0551	0.0571
В	-	0.0750	-	-	0.0030	-
С	0.1700	0.250	0.3300	0.0067	0.0098	0.0130
D	1.0500	1.1000	1.1500	0.0413	0.0433	0.0453
E	-	0.2875	-	-	0.0113	-
F	0.2450	0.3250	0.4050	0.0096	0.0128	0.0159
G	-	0.100	-	-	0.0039	-
Н	-	0.5000	-	-	0.0197	-
I	0.6000	0.6500	0.700	0.0236	0.0256	0.0276
J	-	1.3500	-	-	0.0531	-
K	-	0.3500	-	-	0.0138	-
L	-	0.1500	-	-	0.0059	-
M	-	0.2875	-	-	0.0113	-
N	-	0.4250	-	-	0.0167	-
0	-	1.0000	-	-	0.0394	-

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





Recommended Reflow Profile

- 1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
- 2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
- 3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
- 4. Time: 5 times maximum.

