

Preliminary

RFM products are now Murata products.

SF2233E

- Low-loss RF SAW Filter
- Miniature 3 x 3 mm SMD Package
- Complies with Directive 2002/95/EC (RoHS)



Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	+12	dBm
DC Voltage on any Non-grounded Terminal	3	V
Operating Temperature Range	-25 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile, 5 cycles/10 seconds maximum	265	°C



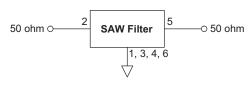


Electrical Characteristics

Characteristic	Sym	Notes	Min	Тур	Max	Units	
Center Frequency				1882.5		MHz	
Minimum Insertion Loss, 1850 to 1915 MHz				2.6	3.5	dB	
Amplitude Ripple, 1850 to 1915 MHz				1.5	2.2	dB _{P-P}	
Input/Output Return Loss, 1850 to 1915 MHz			8.5	10		dB	
Attenuation, Referenced to 0 dB:							
800 to 1400 MHz			24	30			
1400 to 1475 MHz			25	31	dB		
1930 to 1940 MHz			5	10.5			
1940 to 3000 MHz			20	35			
Temperature Coefficient of Frequency	TCf		-36 p		ppm/K		
Source Impedance	Z _S		50		Ω		
Load Impedance				50		Ω	
Case Style	SM3030-6 3.0 x 3.0 mm Nominal Footprint			<u> </u>			
Lid Symbolization, Y=year, WW=week, S=shift, dot=pin 1 indicator	968, YWWS						
Standard Reel Quantity Reel Size 7 inch Reel Size 13 inch		500 Pieces/Reel					
		3000 Pieces/Reel					

Electrical Connections

Connection	Terminals
Input	2
Output	5
Case Ground	All others



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

- Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50Ω and measured with 50Ω network analyzer.

 Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.

 Rejection is measured as alternation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching designs and as alternation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance

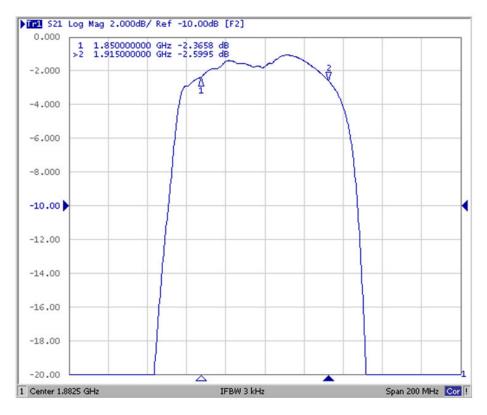
- matching design. See Application Note No. 42 for details.

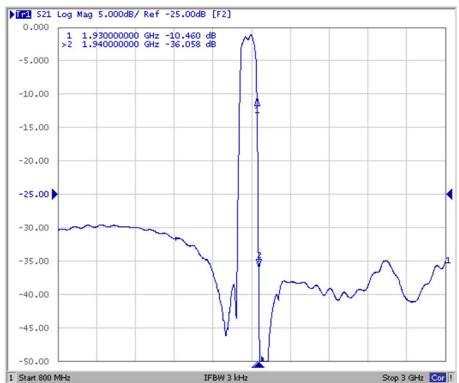
 The design, manufacturing process, and specifications of this filter are subject to change.

 Either Port 1 or Port 2 may be used for either input or output in the design. However, impedances and impedance matching may vary between Port 1 and Port 2, so that the filter must always be installed in one direction per the circuit design.
- US and international patents may apply.

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Frequency Characteristics

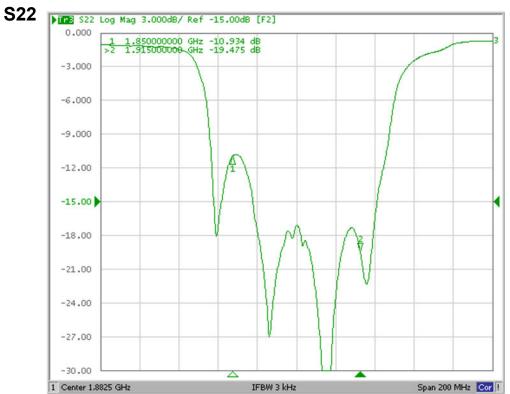




Reflection Functions

S11

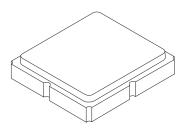


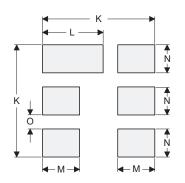


SM3030-6 Case

6-Terminal Ceramic Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint

Case and PCB Footprint Dimensions





PCB Footprint Top View

Di	Dimension mm			Inches			
Dimension	Min	Nom	Max	Min	Nom	Max	
Α	2.87	3.00	3.13	0.113	0.118	0.123	
В	2.87	3.00	3.13	0.113	0.118	0.123	
С	1.12	1.25	1.38	0.044	0.049	0.054	
D	0.77	0.90	1.03	0.030	0.035	0.040	
E	2.67	2.80	2.93	0.105	0.110	0.115	
F	1.47	1.60	1.73	0.058	0.063	0.068	
G	0.72	0.85	0.98	0.028	0.033	0.038	
Н	1.37	1.50	1.63	0.054	0.059	0.064	
I	0.47	0.60	0.73	0.019	0.024	0.029	
J	1.17	1.30	1.43	0.046	0.051	0.056	
K		3.20			0.126		
L		1.70			0.067		
М		1.05			0.041		
N		0.81			0.032		
0		0.38			0.015		

Case Materials

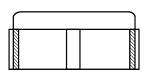
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Materials				
Solder Pad Plating	0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel			
Lid Plating	2.0 to 3.0 µm Nickel			
Body	Al ₂ O ₃ Ceramic			
Pb Free				

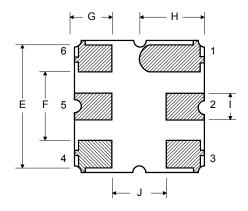
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TOP VIEW

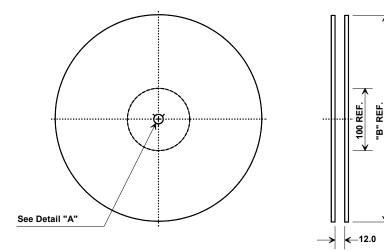
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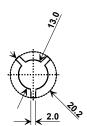
BOTTOM VIEW



Tape and Reel Specifications



•	'B"	Quantity Per Reel
Inches	millimeters	quantity : or recor
7	178	500
13	330	3000



COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions				
Ao	3.3 mm			
Во	3.3 mm			
Ko	1.6 mm			
Pitch	8.0 mm			
W	12.0 mm			

