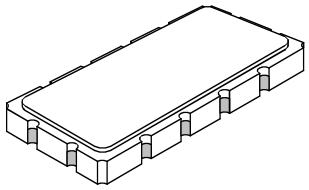
Preliminary

SF2257A

70 MHz SAW Filter

- ***Precision IF SAW Filter***
- ***Hermetic 13.3 x 6.5 mm Surface-mount Case***
- ***Complies with Directive 2002/95/EC (RoHS)***



Case

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage on any Non-ground Terminal	10	VDC
Storage Temperature Range in Tape and Reel	-55 to +90	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260 °C for 30 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C	1	69.9	70.0	70.1	MHz
1 dB Bandwidth	BW_1	1	0.80	0.92		
3 dB Bandwidth	BW_3	1	1.1	1.2		
40 dB Bandwidth	BW_{40}	1		2.2	2.3	
Insertion Loss	IL	1		9.2	11.5	dB
Amplitude Ripple, f_C ± 0.3 MHz		1, 2, 3		0.7	1.0	dB_{P-P}
Group Delay Ripple, f_C ± 0.3 MHz				350	400	ns_{P-P}
Relative Attenuation:						dB
DC to 65 MHz			45	55		
75 to 200 MHz			45	55		
Operating Temperature Range		1	-55		+90	°C

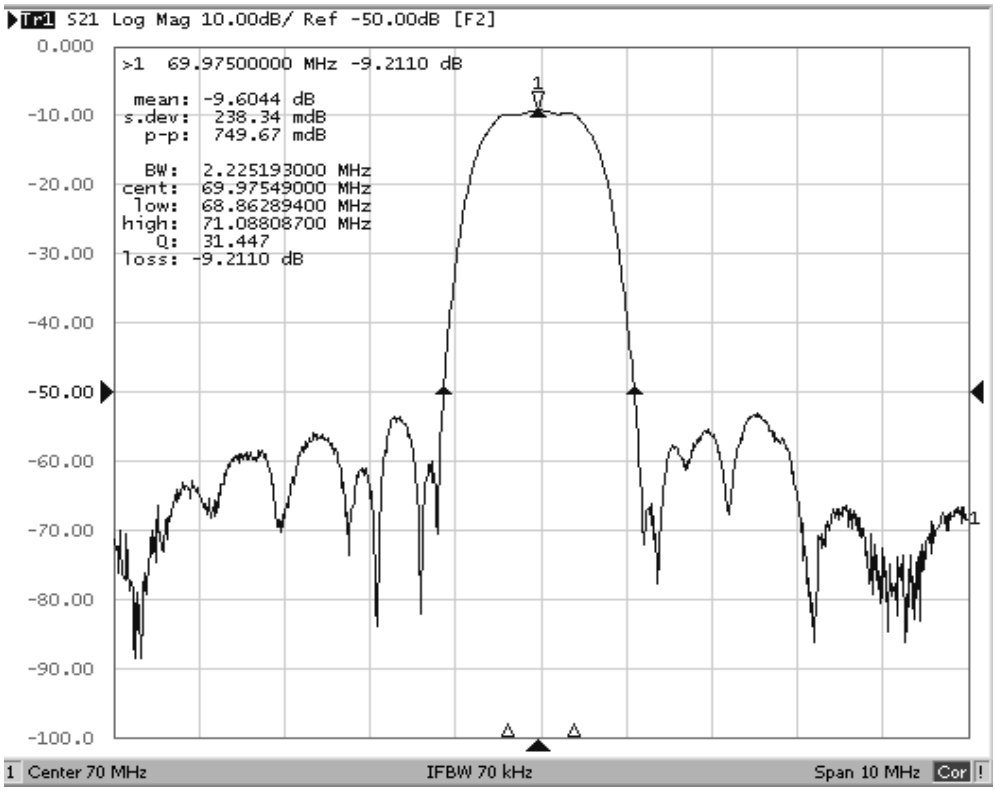
Impedance Matching to 50 Ω Unbalanced Source/Load	External L-C
Case Style	13.3 x 6.5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week)	RFM/SF2257A/YYWW

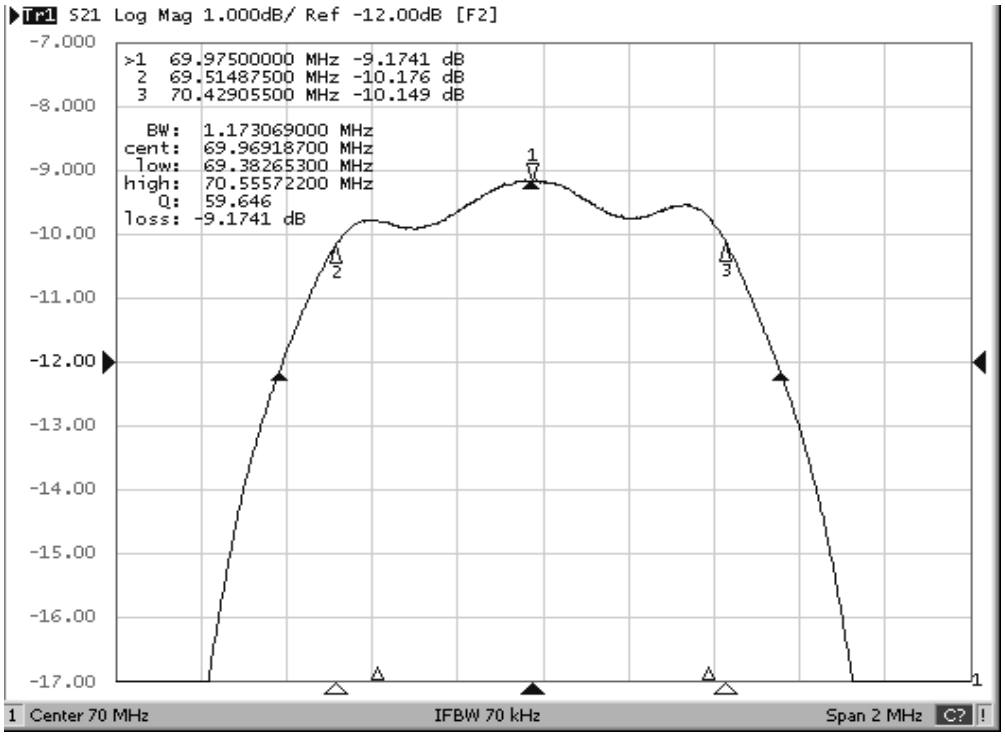
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

Notes:

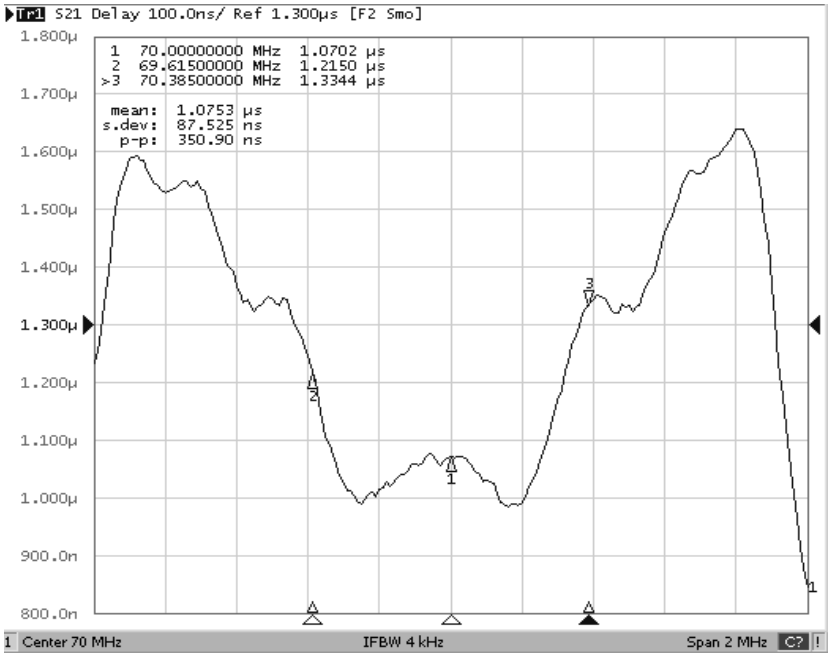
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.
3. Rejection is measured as attenuation 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.
4. Part to part absolute delay measurement records the absolute delay mean across 1 dB passband.
5. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
6. The design, manufacturing process, and specifications of this filter are subject to change.
7. 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.
8. US and international patents may apply.

Filter Amplitude Response Plots

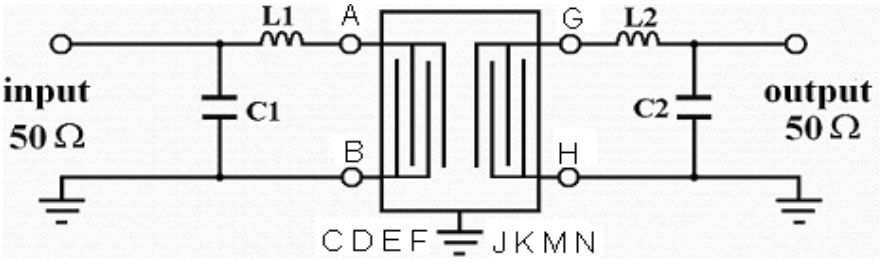




Filter Group Delay Plot

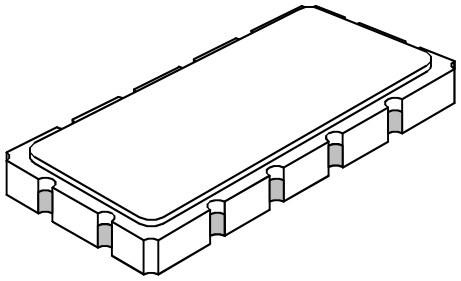


Tuning Component Values



L1 = 470 + 56 nH, C1 = 82 pF, L2 = 470 + 68 nH, C2 = 82 pF

Ceramic Surface-mount 12-Terminal Case
13.3 x 6.5 mm Nominal Footprint



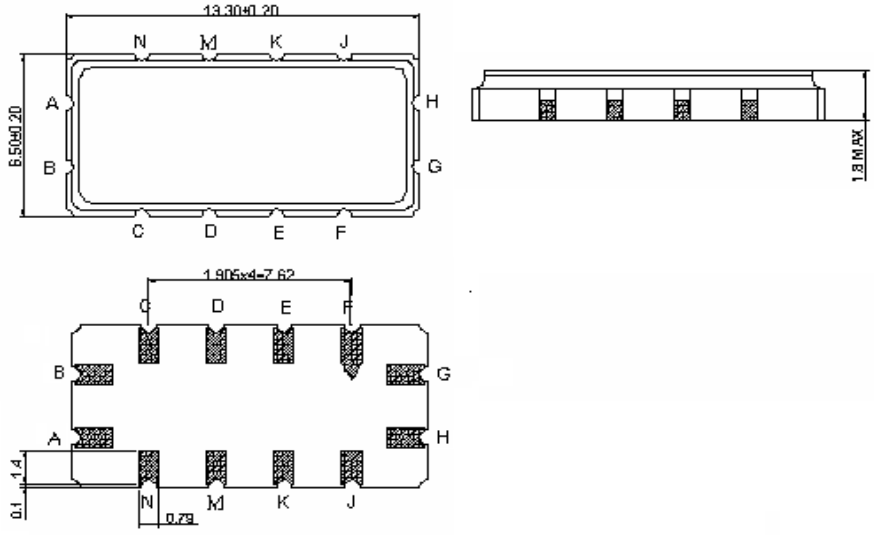
Case Material

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_2O_3 Ceramic
Pb Free	

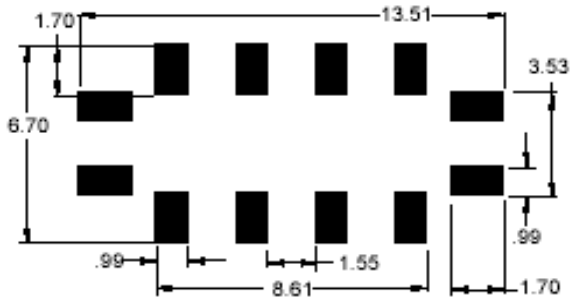
Electrical Connections

Connection	Terminals
Input	A
Output	G
Case Ground	All others

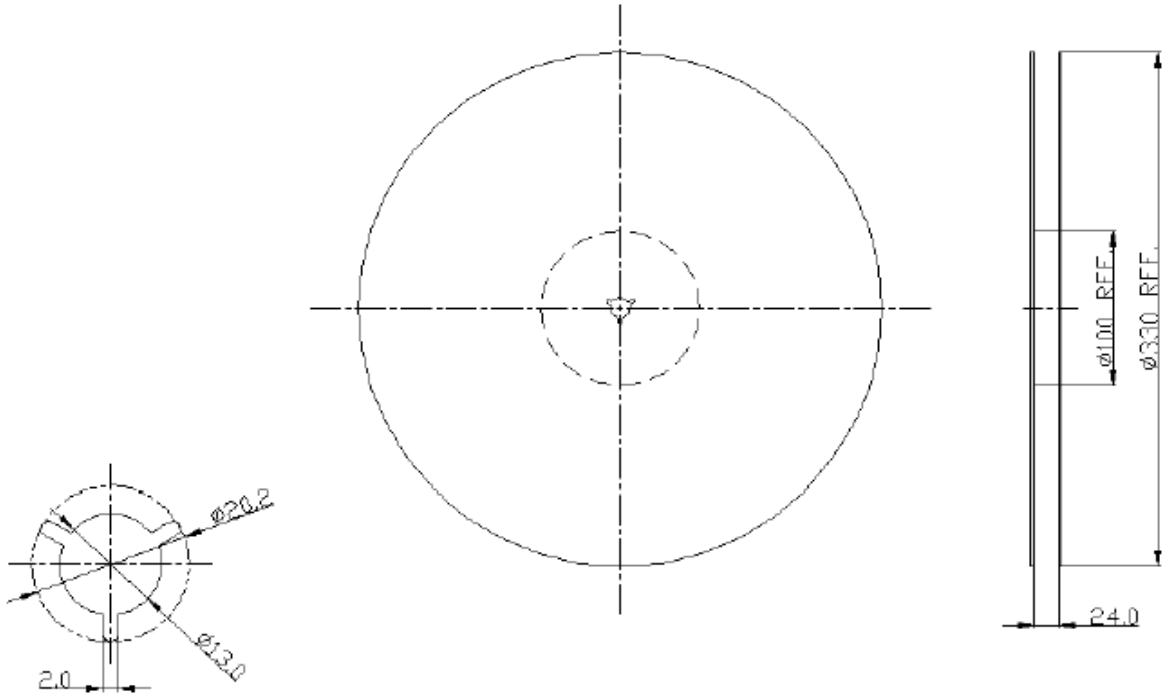
Case Outline Drawing



PCB Pad Layout



Tape and Reel Details



13.3X6.5