

Preliminary



SF2050A

**44.00 MHz
SAW Filter**

- **Designed for 802.16 and WIMAX Receiver IF Application**
- **Low Insertion Loss**
- **5.0 X 9.0 mm Surface-Mount Case**
- **Differential Input and Output**
- **Complies with Directive 2002/95/EC (RoHS)**

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+13	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for lead-free soldering - Max Soldering Profile	260°C for 30 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_c	1		44.00		MHz
Insertion Loss			18.00			dB
Rejection		1dB min, Frequency lower			42.3	MHz
		1dB min, Frequency upper	45.7			
		Bandwidth, 38dB min	10.70	10		
		38dB min, Frequency lower	39.00			
		38dB min, Frequency upper			49.00	
		15 to 39MHz	38	40		dB
		49 to 75MHz	38	42		dB
Group Delay (Across 1 dB frequencies)				100	150	nsec pk-pk
Amplitude Ripple (Across 1 dB frequencies)				0.5	1	dBpk-pk
Reflected Wave Signal Suppression		1 usec after main pulse	20	30		
		2 usec after main pulse	30	40		
		3 usec after main pulse	40	50		
Input Impedance (Differential)				1000		Ohms
Output Impedance (Differential)				1000		Ohms
Temperature	Operating		-40		85	°C
		Storage	-40		85	
Case Style	9 x 5 mm Nominal Footprint					
Lid Symbolization (YY=year, WW=week, S=shift) See note 4	RFM SF2050A YYWWS					

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, f_c .
3. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
4. The design, manufacturing process, and specifications of this filter are subject to change.
5. 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.
6. US and international patents may apply.
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9. Electrostatic Sensitive Device. Observe precautions for handling.

Case

**10-Terminal Ceramic Surface-Mount Case
9 x 5 mm Nominal Footprint**

Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	8.80	9.00	9.20			
B	4.80	5.00	5.20			
C						
D						
E						
H						
J						
K						
P						

Materials	
Solder Pad Termination	Au plating 30 - 60 ulnches (76.2-152 uM) over 80-200 ulnches (203-508 uM) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 ulnches Thick
Body	Al ₂ O ₃ Ceramic
Pb Free	

Electrical Connections		
	Connection	Terminals
Port 1		
Port 2		