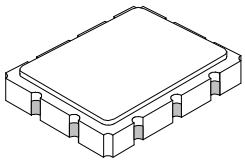
SF1054A-1

254.5 MHz SAW Filter

- ***Designed for WLAN IF Applications***
- ***Low Insertion Loss***
- ***9.1 x 7.1 mm Surface-mount Case***
- ***Unbalanced Input and Output***
- ***Complies with Directive 2002/95/EC (RoHS)***



SM9171-10

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	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
Nominal Center Frequency		f_C	1		254.500		MHz
Passband	Insertion Loss at fc	IL			8.5	10.0	dB
	3 dB Passband	BW_3	1, 2	±750	±1000		kHz
	Amplitude Ripple over fc ±80 kHz				0.5	2.0	dB_{P-P}
	Group Delay Variation over fc ±50 kHz	GDV			<200	250	ns_{P-P}
Rejection	90 MHz to fc-50 MHz and fc+50 to 1000 MHz		1, 2, 3	60			dB
	Spurious Rej. at 0.33, 0.528, 0.594, 1.66, and 1.8 x fc			40			
Operating Temperature Range		T_A	1	-10		+60	°C

Impedance Matching to 50 Ω unbalanced	External L-C
Case Style	SM9171-10 9.1 x 7.1 mm Nominal Footprint
Lid Symbolization (XX = 2 character date code)	RFM 1054A-1 XX

Electrical Connections

Connection	Terminals
Input	10
Ground	1
Output	5
Ground	6
Case Ground	All others

Notes:

1. Unless noted otherwise, all specitication apply over the operating temperature range with filter soldered to the specified demonstration board with impedanced matching to 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specitications 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 oon PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
5. The design, manufacturing process, and specifications of this filter are subject to change.
6. 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.
7. US and international patents may apply.
8. Electrostatic Sensitive Device. Observe precautions for handling.

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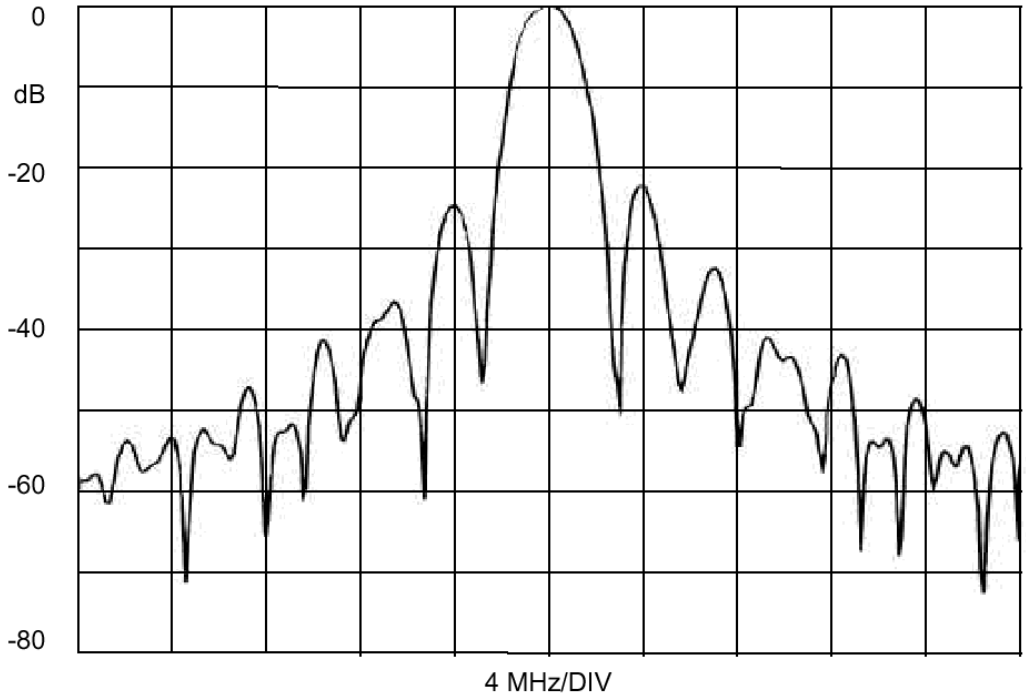
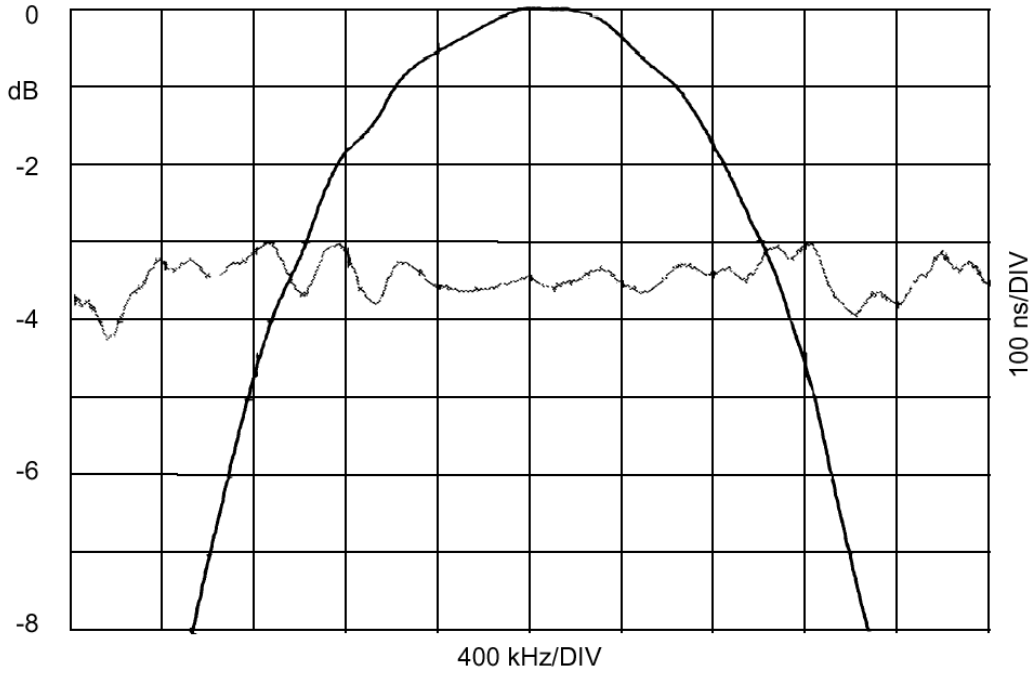
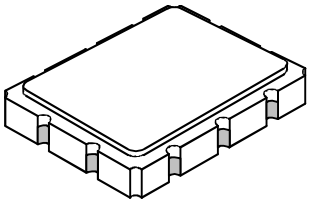




SM9171-10 Case

10-Terminal Ceramic Surface-Mount Case
9.1 x 7.1 mm Nominal Footprint



Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	8.86	9.09	9.40	0.349	0.358	0.370
B	6.88	7.11	7.40	0.271	0.280	0.291
C		1.91	2.00		0.075	0.079
D		0.99			0.039	
E		0.79			0.031	
H		1.0			0.039	
P		2.54			0.100	

Materials	
Solder Pad Termination	Au plating 30 - 60 uInches (76.2-152 uM) over 80-200 uInches (203-508 uM) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 uInches Thick
Body	Al_2O_3 Ceramic
Pb Free	

Electrical Connections	
Connection	**Terminals**
Input	10
Ground	1
Output	5
Ground	6
Case Ground	All others
Single Ended Operation	**Return is ground**
Differential Operation	**Return is hot**