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SF1059A

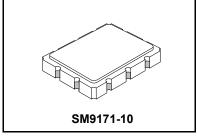
- · Low Loss UHF SAW Filter
- 9.1 x 7.1 mm Version of SF1059A-1
- Single-ended or Balanced Operation
- · Complies with Directive 2002/95/EC (RoHS)



### **Absolute Maximum Ratings**

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage Between any 2 Terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for lead-free soldering - Maximum Soldering Profile	260 °C for 30 s	

## 350.0 MHz **SAW Filter**



#### **Electrical Characteristics**

Characteristic	Sym	Notes	Min	Тур	Max	Units
Nominal Center Frequency	f <sub>C</sub>	1		350.00		MHz
Passband:	IL	·		8	10.0	dB
Insertion Loss at fc						
3 dB Passband	BW <sub>3</sub>	1, 2	±400	±600		kHz
Amplitude Variation over fc ±250 kHz				0.5	1.0	dB <sub>P-P</sub>
Group Delay Variation over fc ±400 kHz	GDV			200	250	ns <sub>P-P</sub>
Rejection referenced to IL:		1, 2, 3	35	40		
(fc - 8.0) to (fc - 2.0) and (fc + 2.0) to (fc + 8.0) MHz						dB
(fc - 50) to (fc - 8.0) and (fc + 8.0) to (fc + 50) MHz			40	45		uБ
Ultimate Rejection				50		
Operating Temperature Range	T <sub>A</sub>	1	-20		+70	°C

Impedance Matching to 50 $\Omega$ unbalanced	External L-C
Case Style	SM9171-10 9.1 x 7.1 mm Nominal Footprint
Lid Symbolization (YY=year, WW=week, S=shift, ##=sequence code)	RFM SF1059A <u>YYWWS##</u>



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

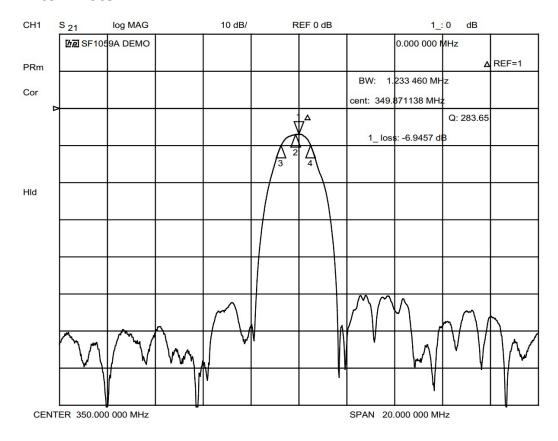
#### NOTES:

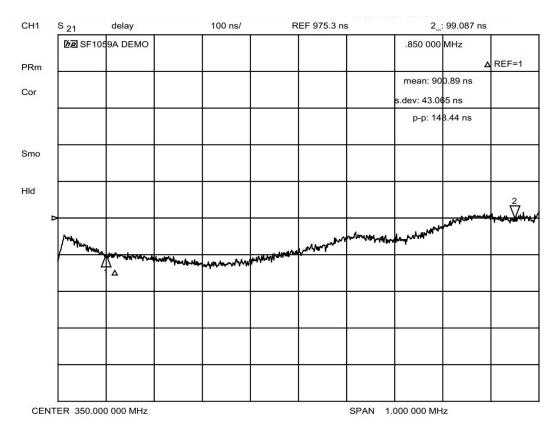
- Unless noted otherwise, all specification apply over the operating temperature range with filter soldered to the specified demonstration board with impedanced matching to 50  $\Omega$  network analyzer.
- Unless noted otherwise, all frequency specitications are referenced to the nominal center frequency, fc.

  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. 3.
- "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
- 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.

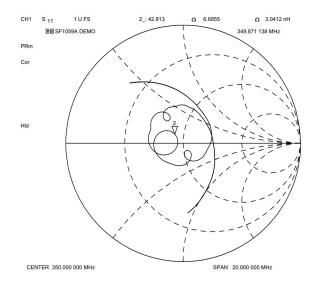
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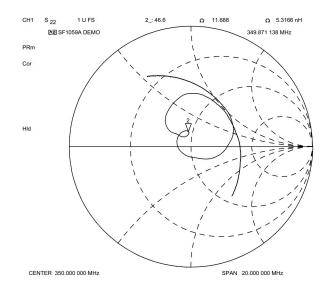
### SF1059A Filter Plots



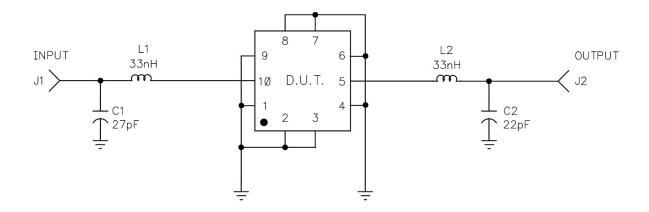


## **SF1059A Impedance Plots**



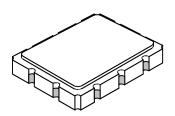


## SF1059A Typical Tuning Network



## **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
Α	8.86	9.09	9.40	0.349	0.358	0.370
В	6.88	7.11	7.40	0.271	0.280	0.291
С		1.91	2.00		0.075	0.079
D		0.99			0.039	
E		0.79			0.031	
Н		1.0			0.039	
Р		2.54			0.100	

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 <sub>2</sub> O <sub>3</sub> Ceramic			
Pb Free				

Electrical Connections				
	Connection	Terminals		
Port 1	Input or Return	5		
	Return or Input	6		
Port 2	Output or Return	10		
	Return or Output	1		
	Ground	All others		
For Single-ended Operation Gro		Ground 1, 6		

