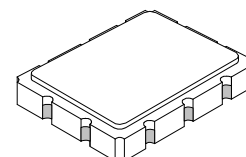


**SF1059A**

**350.0 MHz  
SAW Filter**



**SM9171-10**

- **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)**
- **Moisture Sensitivity Level: 1**

**Tape and Reel Standard ANS/EIA-481 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	

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	$f_c$		350.00			MHz
Passband:	IL			8	10.0	dB
Insertion Loss at $f_c$						
3 dB Passband	$BW_3$		$\pm 400$	$\pm 600$		kHz
Amplitude Variation over $f_c \pm 250$ kHz				0.5	1.0	dB <sub>P-P</sub>
Group Delay Variation over $f_c \pm 400$ kHz	GDV			200	250	ns <sub>P-P</sub>
Rejection referenced to IL:			35	40		dB
( $f_c - 8.0$ ) to ( $f_c - 2.0$ ) and ( $f_c + 2.0$ ) to ( $f_c + 8.0$ ) MHz						
( $f_c - 50$ ) to ( $f_c - 8.0$ ) and ( $f_c + 8.0$ ) to ( $f_c + 50$ ) MHz			40	45		
Ultimate Rejection				50		
Operating Temperature Range	$T_A$		-20		+70	°C
Impedance Matching to 50 $\Omega$ unbalanced	External L-C					
Lid Symbolization (YY=year, WW=week, S=shift, ##=sequence code)	RFM, SF1059A, YYWWS##					
Case Style: SM9171-10 9.1 x 7.1 mm Nominal Footprint	Reel Count: 7" = 500, 13" = 1000					

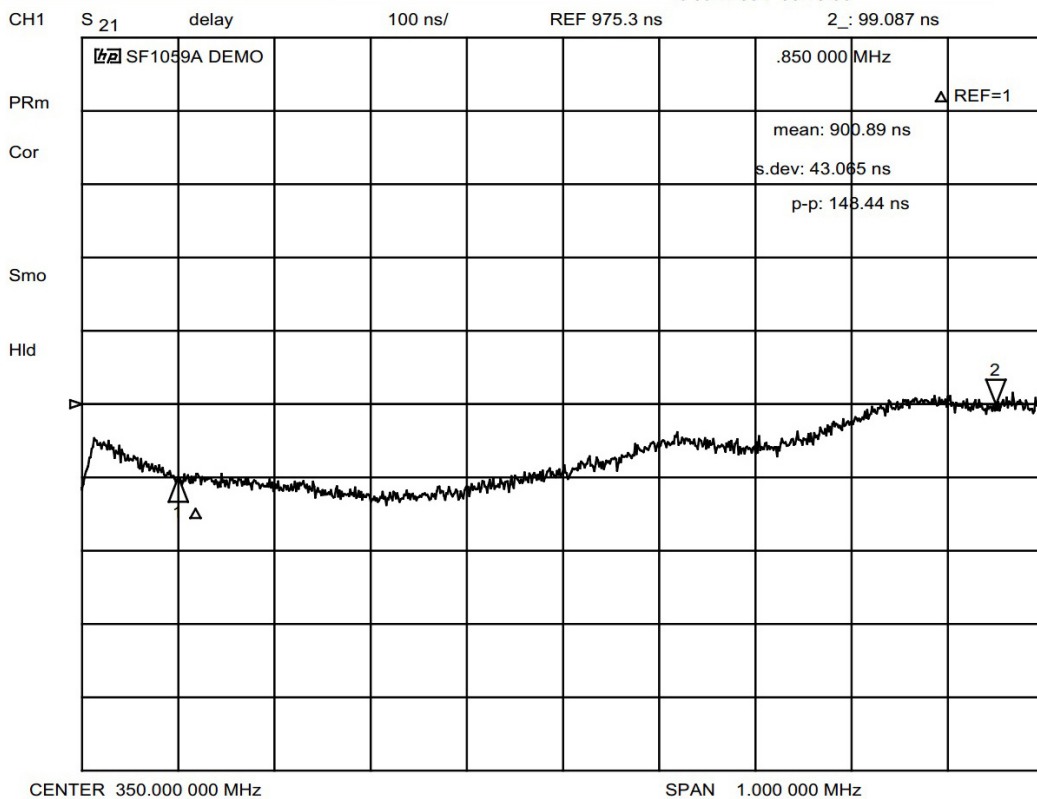
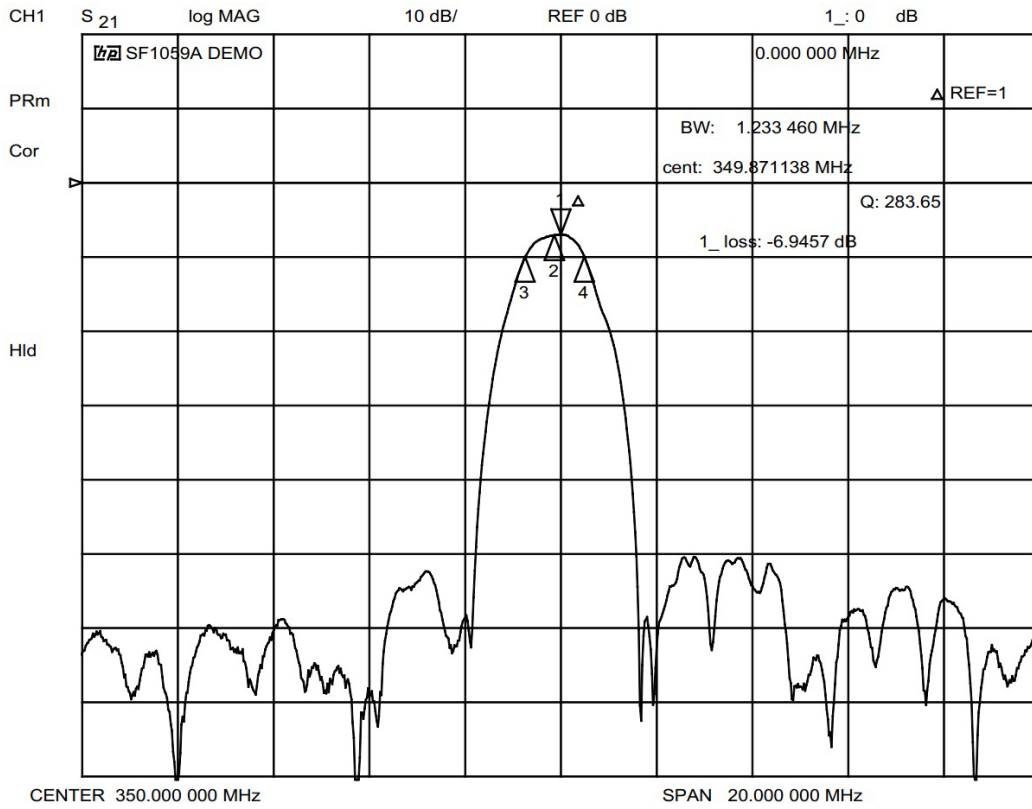


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

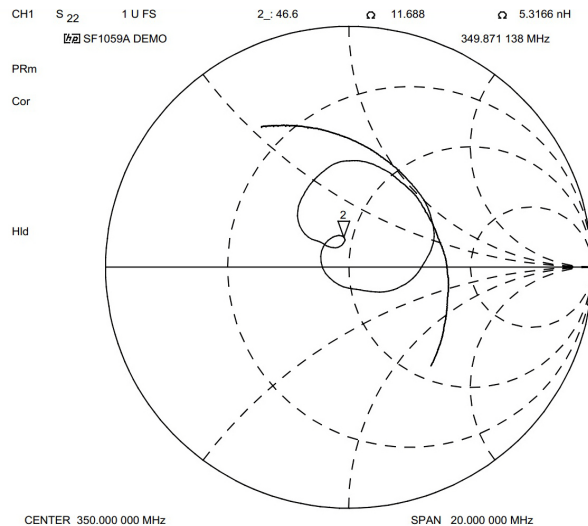
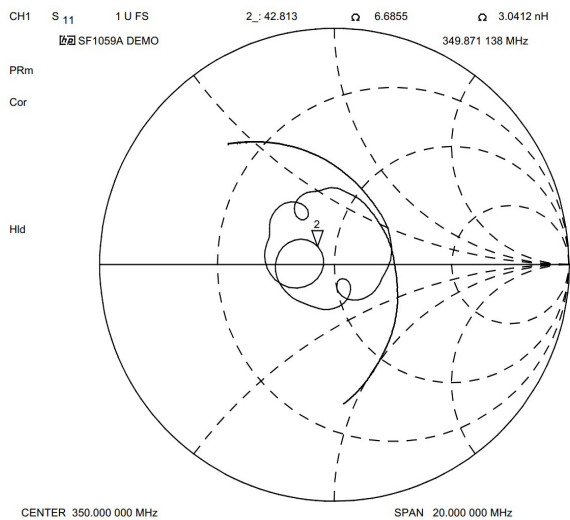
**NOTES:**

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

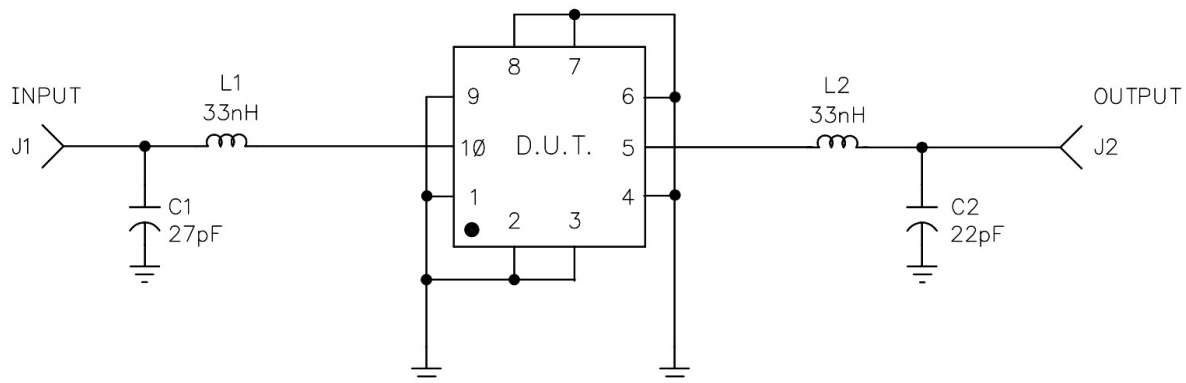
# SF1059A Filter Plots



## SF1059A Impedance Plots

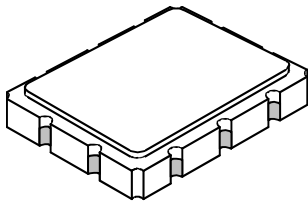


## SF1059A Typical Tuning Network



# SM9171-10 Case

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

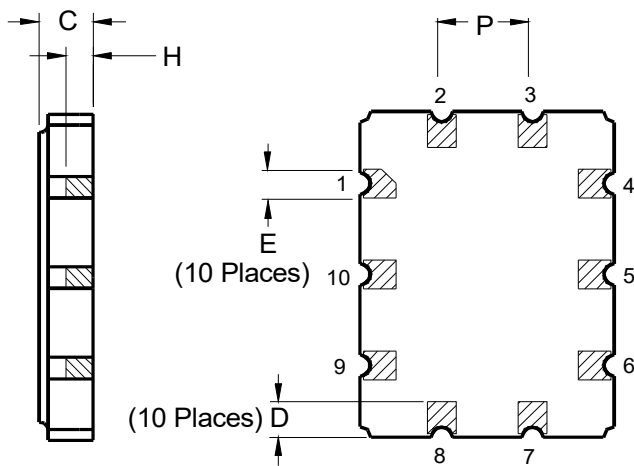
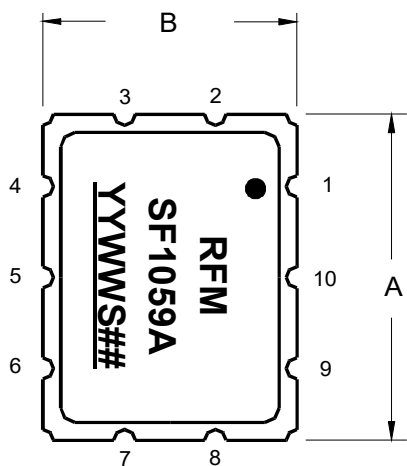


Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	8.86	9.09	9.40	0.349	0.358	0.370
B	6.88	7.11	7.40	0.271	0.280	0.291
C		1.91	2.00		0.075	0.079
D		0.99			0.039	
E		0.79			0.031	
H		1.0			0.039	
P		2.54			0.100	

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic

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		Ground 1, 6

Y = Year  
WW = Week  
S = Shift  
## = Sequence Code



## Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C+0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

