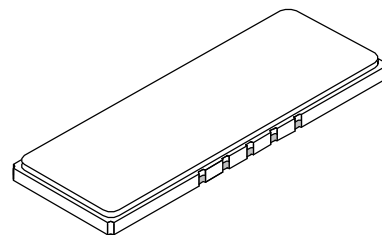


# SF1089A 167 MHz SAW Filter



- Designed for GSM PCS Receiver IF Applications
- Simple External Impedance Matching
- Hermetic SMP-97 Surface-Mount Case
- Unbalanced Input and Output



Characteristic	Sym	Min	Typ	Max	Units	Notes
Nominal Center Frequency	fc		167.000		MHz	1
Passband	Insertion Loss at fc	IL	6	8.0	dB	1, 2
	1 dB Passband	BW <sub>1</sub>	±70		kHz	
	3 dB Passband	BW <sub>3</sub>	±105			
	Amplitude Ripple over fc ±70 kHz			1.0	dB <sub>P-P</sub>	
	Group Delay Variation over fc ±70 kHz	GDV	500	1000	ns <sub>P-P</sub>	
	Absolute Group Delay	GD	3.1		µs	
Rejection	fc-400 to fc-225 and fc+225 to fc+400 kHz		5		dB	1, 2, 3
	fc-600 to fc-400 and fc+400 to fc+600 kHz		15	16		
	fc-800 to fc-600 and fc+600 to fc+800 kHz		40	45		
	fc-1500 to fc-800 and fc+800 to fc+1500 kHz		45	50		
	94 MHz to fc-1.5 MHz and fc+1.5 MHz to 242 MHz		50	65		
Operating Temperature Range	T <sub>A</sub>	-10		+85	°C	1

Impedance Matching to 50 Ω unbalanced	External L-C
Case Style	SMP-97 24.6 x 9 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week)	RFM 167 MHz SF1089A YYWW

## Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+20	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Max Soldering Profile	265°C for 10 s	

## Electrical Connections (See note 3)

Connection	Terminals
Port 1 Hot	10
Port 1 Gnd Return	1
Port 2 Hot	5
Port 2 Gnd Return	6
Case Ground	All others

## 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. All "NC" or "no connection" terminals should be grounded.
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. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.
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10. Electrostatic Sensitive Device. Observe precautions for handling.

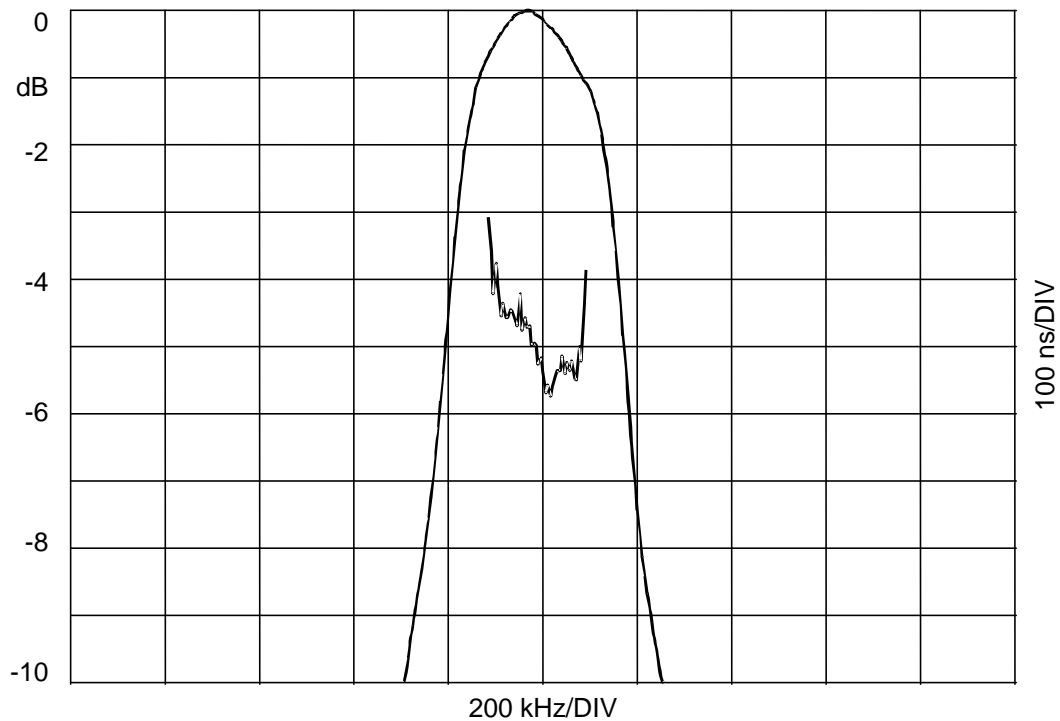
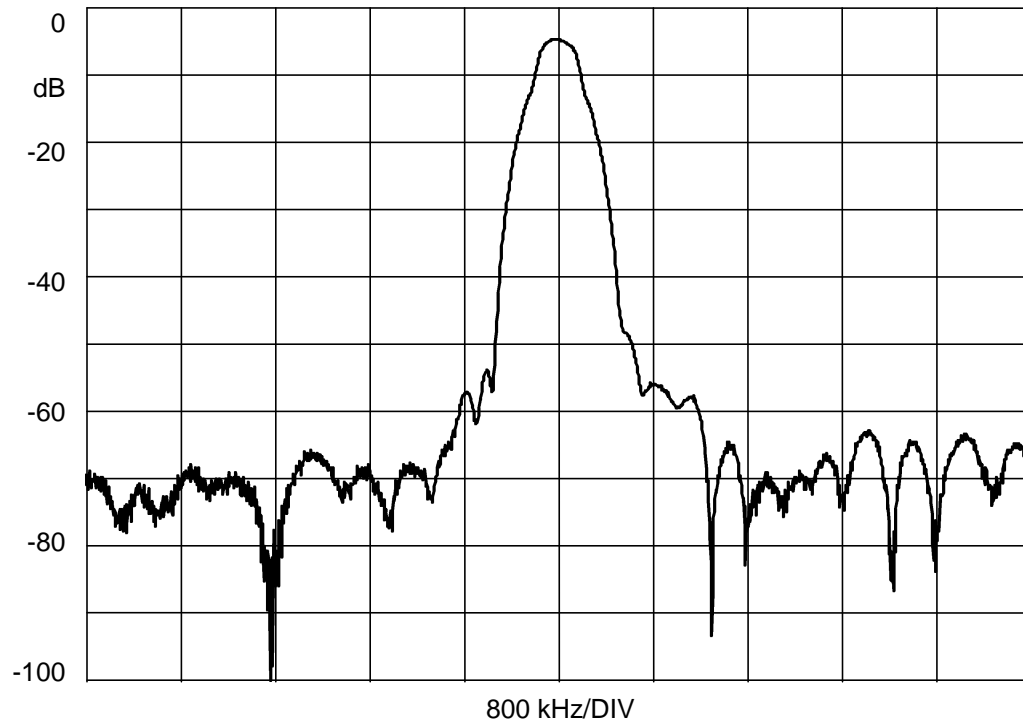


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**European Sales Office**  
44 1963 251383  
44 1963 251510

# SF1089A 170.6 MHz SAW Filter

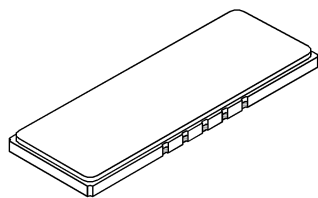


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## 10-Terminal Ceramic Surface-Mount Case 24.6 x 9 mm Nominal Footprint



Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	24.41	24.64	24.94	0.961	0.970	0.982
B	8.80	8.99	9.30	0.349	0.354	0.366
C		1.75	2.00		0.069	0.079
D		2.29			0.090	
E		1.02			0.040	
H		0.76			0.030	
M		4.83			0.190	
N		3.40			0.134	
P		1.905			0.075	

