

Discontinued

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- **Designed for CDMA2000 BTS Applications**
- **Simple External Impedance Matching**
- **Hermetic SMP-97 Surface-Mount Case**
- **Unbalanced Input and Output**
- **Complies with Directive 2002/95/EC (RoHS)**

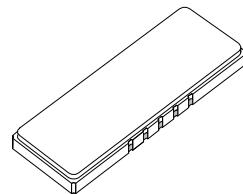


Absolute Maximum Ratings

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	

SF1111A

**160 MHz
SAW Filter**



SMP-97

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	f_C	1		160.000		MHz
Passband	Insertion Loss at f_C	IL		9	11.0	dB
	1.5 dB Passband	1, 2	±590			
	3 dB Passband		±750			kHz
	Amplitude Ripple over f_C ±470 kHz		0.7	1.0		dB
	Phase Linearity over f_C ±590 kHz		10	20		deg _{P-P}
Rejection	fc-10.0 to fc-1.25 and fc+1.25 to fc+10.0 MHz	1, 2, 3	40			
	fc-20 to fc-10.0 and fc+10.0 to fc+20 MHz		50			dB
Operating Temperature Range	T_A	1	-20		+70	°C

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 SF1111A YYWW

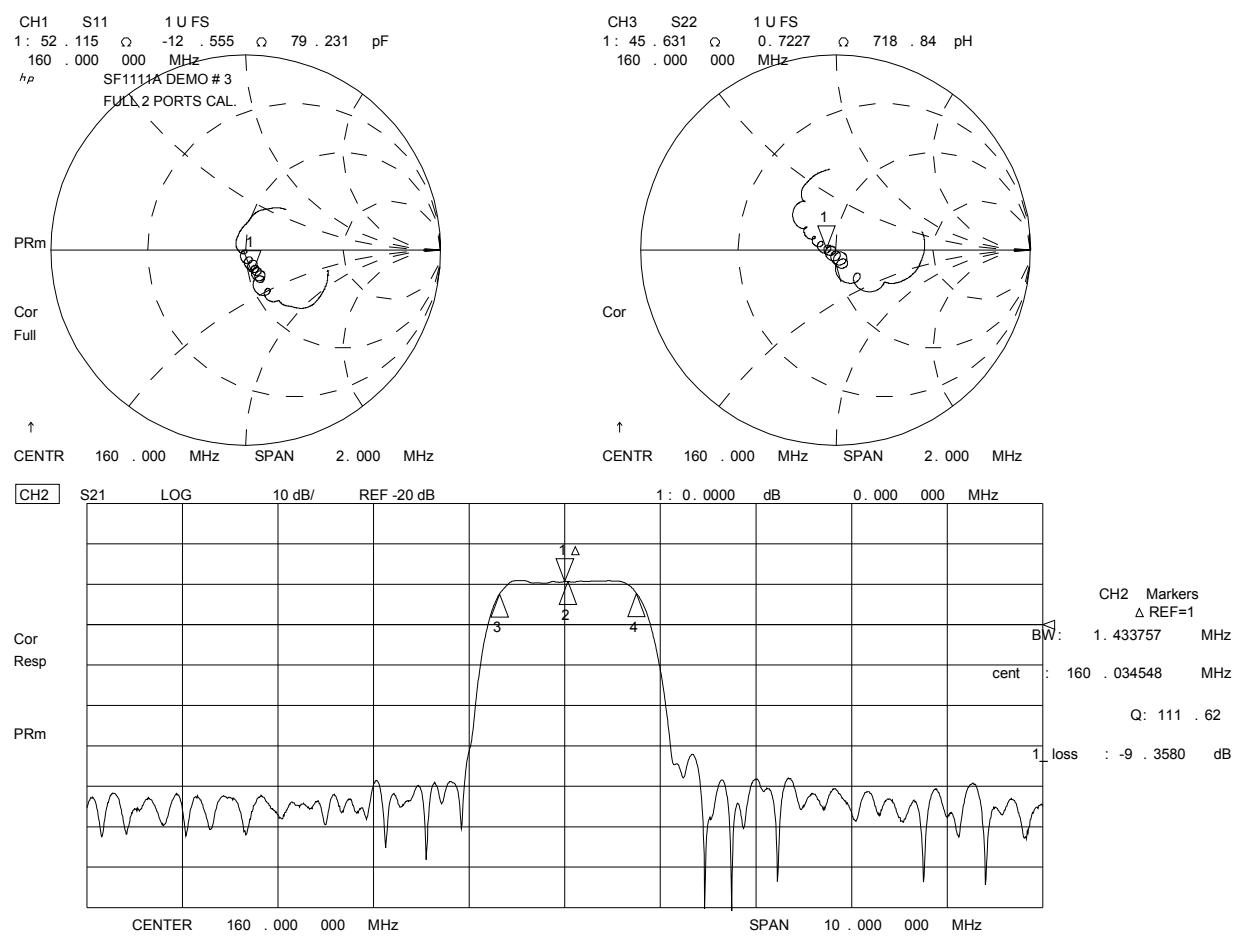
 **CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

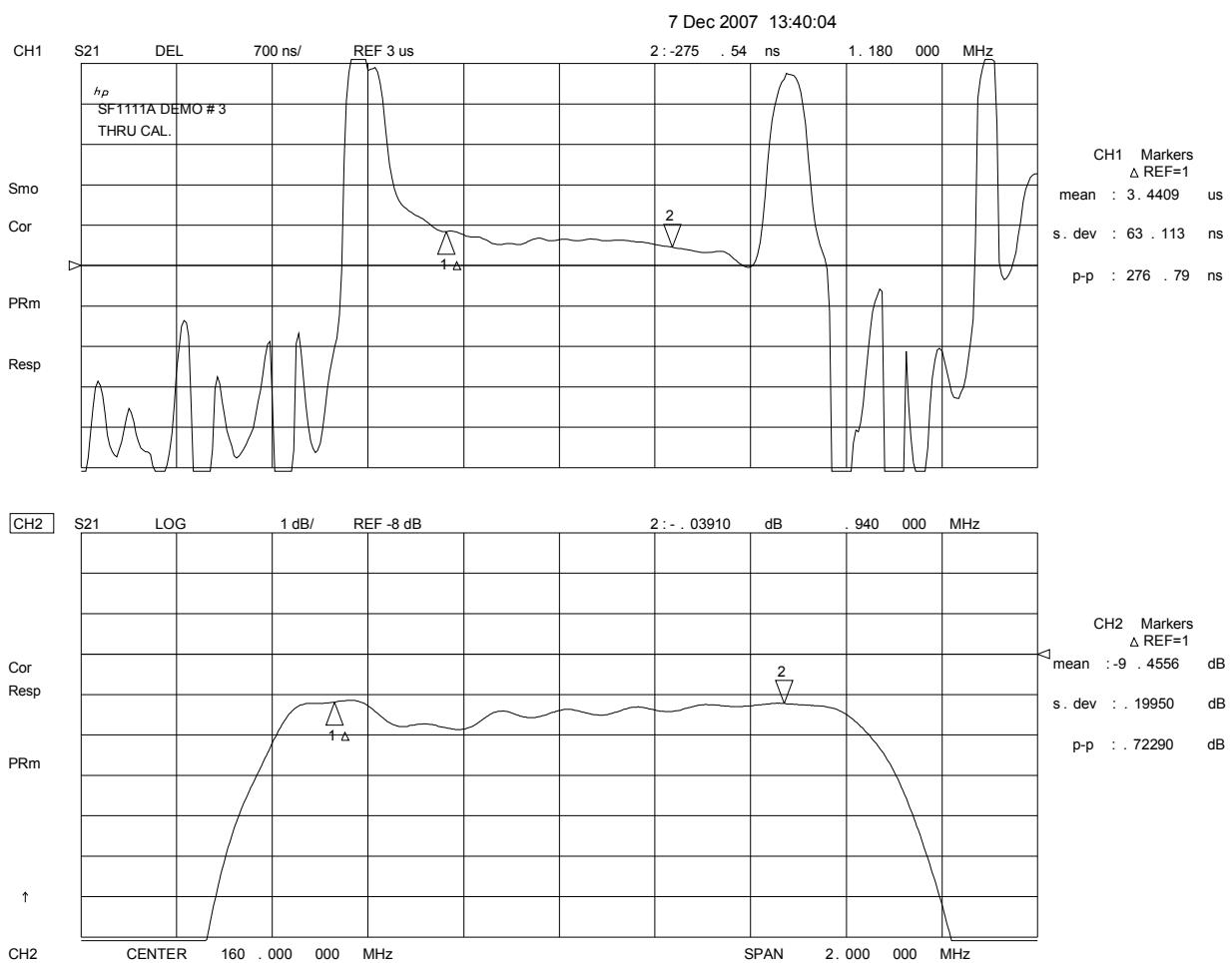
NOTES:

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. 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.
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.

Electrical Connections

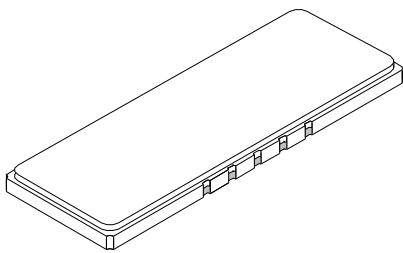
Connection	Terminals
Port 1 Hot	10
Port 1 Gnd Return	1
Port 2 Hot	5
Port 2 Gnd Return	6
Case Ground	All others





SMP-97 Case

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



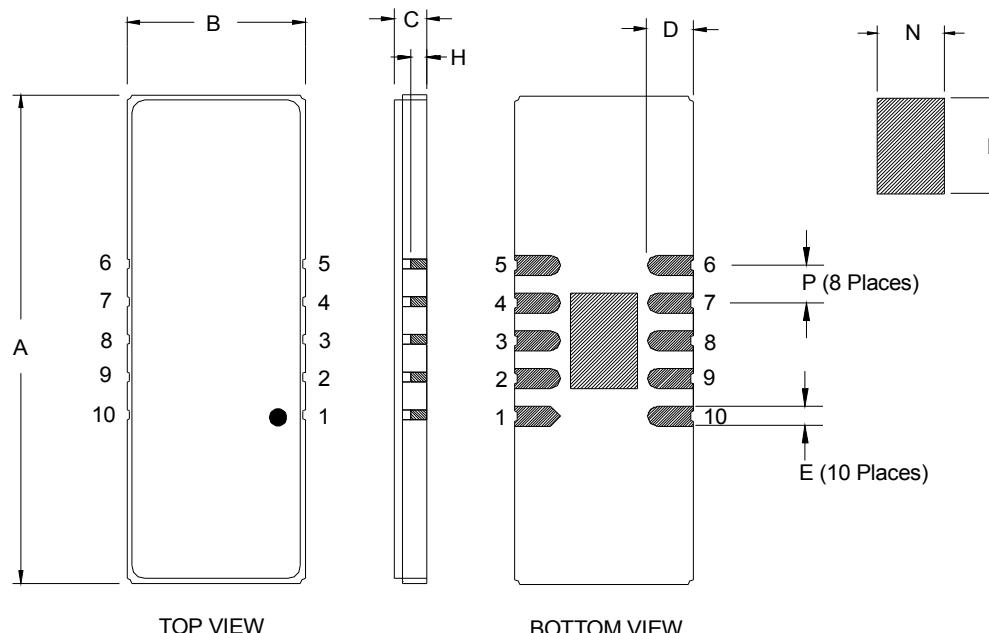
Case Dimensions

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		1.0			0.039	
M		4.83			0.190	
N		3.40			0.134	
P		1.905			0.075	

Electrical Connections

	Connection	Terminals
Port 1	Input or Return	10
	Return or Input	1
Port 2	Output or Return	5
	Return or Output	6
	Ground	All others
Single Ended Operation		Return is ground
Differential Operation		Return is hot

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



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