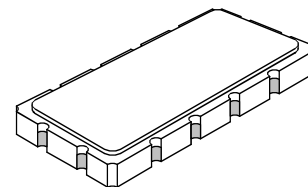


Preliminary



SF2111A

**140 MHz
SAW Filter**



SMP-53

- **Excellent Size-to-Performance Ratio**
- **Hermetic 13.3 x 6.5 mm Surface-mount Case**
- **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
Operating Temperature Range	-40 to +85	°C
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
Center Frequency	f_0	1	138.85	140	141.15	MHz
Insertion Loss				9	11	dB
1 dB Bandwidth			15	16.2		MHz
3 dB Bandwidth			16	17.0		MHz
35 dB Bandwidth				20	22	MHz
Passband Ripple	133.6 - 146.4 MHz			0.4	1	dB
Phase Linearity	133.6 - 146.4 MHz			2.5	6	deg
Group Delay Variation	133.6 - 146.4 MHz			15	50	nsec
Absolute Group Delay				0.928		µsec
Temperature Shift				-94		ppm/°C
Source Impedance				50		Ω
Load Impedance				50		Ω
Rejection (relative to Attenuation @ F_0)	100 to 128.7 MHz			40	49	dB
	128.7 to 129 MHz			40	55	
	151 to 152.3 MHz			28	40	
	152.3 to 180 MHz			37	42	

Case Style	SMP-53 13.3 x 6.5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week)	RFM SF2111A YYWW

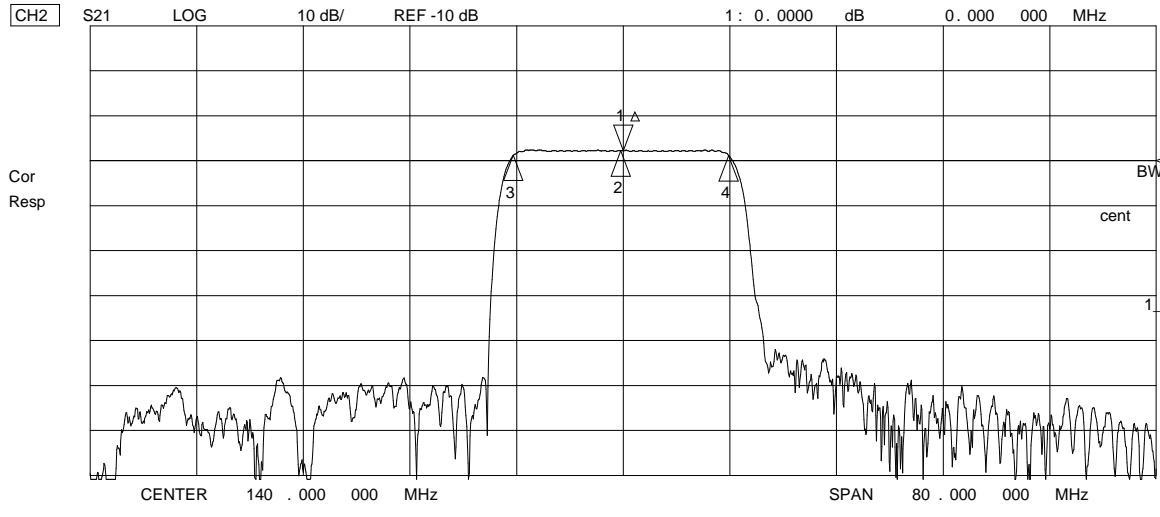
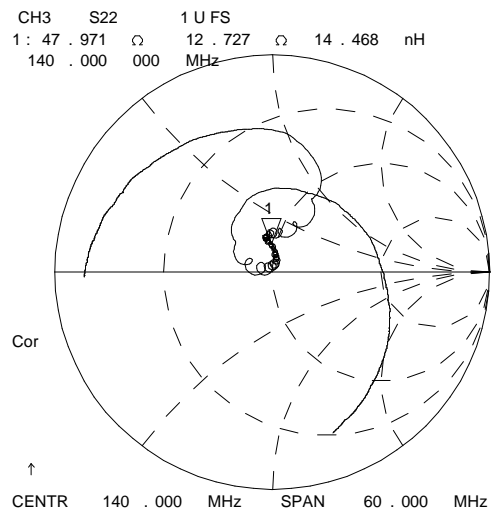
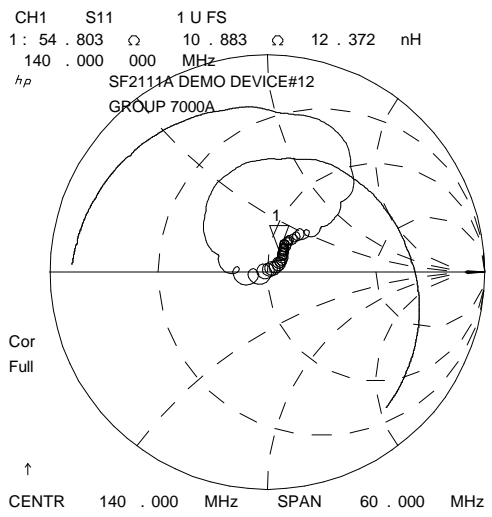
Notes:

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. The design, manufacturing process, and specifications of this filter are subject to change.
4. US and international patents may apply.
5. Electrostatic Sensitive Device. Observe precautions for handling. 

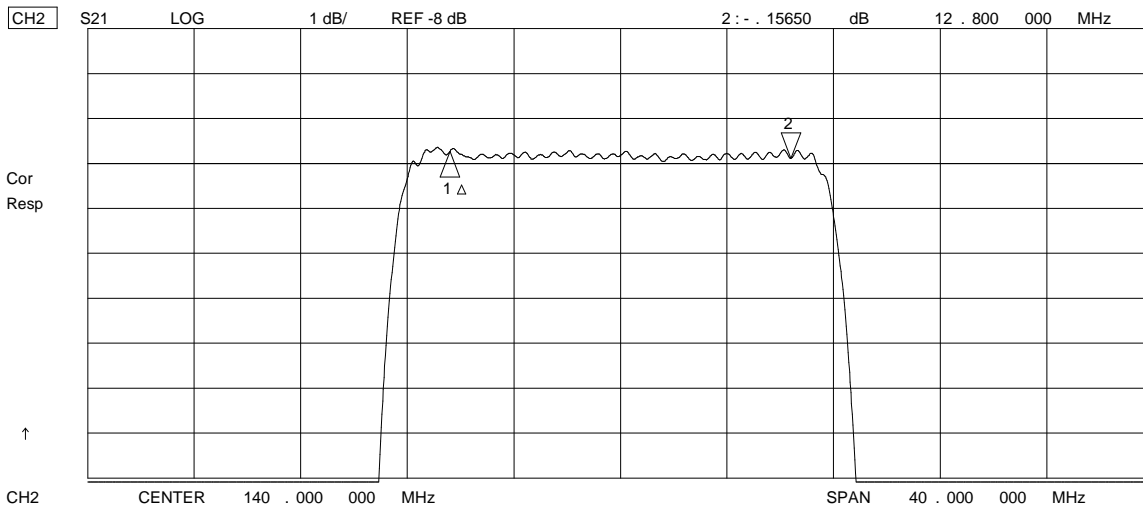
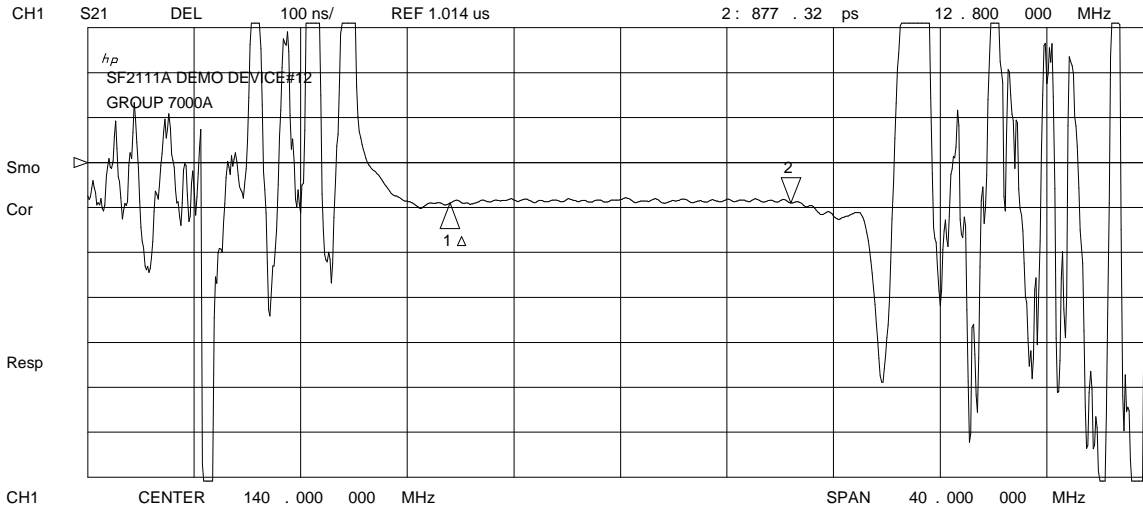
140.0 MHz

SAW Filter

4 Jun 2007 13:22:07



4 Jun 2007 13:21:42

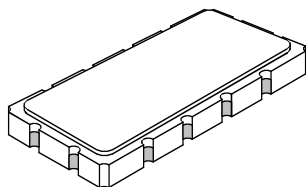




PCB,	401-0735-001		
IND,	501-0782-680	0805, 68NH	L1
IND,	501-0782-560	0805, 56NH	L2
CAP,	501-1275-270	0805, 27PF	C1
CAP,	501-1275-330	0805, 33PF	C2
CONN, 500-0248-001		CONN, 4 HOLES	J1, J2

SMP-53 Case

12-Terminal Ceramic Surface-Mount Case
13.3 x 6.5 mm Nominal Footprint



Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	13.08	13.31	13.60	0.515	0.524	0.535
B	6.27	6.50	6.80	0.247	0.256	0.268
C		1.91	2.00		0.075	0.079
D		1.50			0.059	
E		0.79			0.031	
H		1.0			0.039	
P		2.54			0.100	

Materials	
Solder Pad Termination	Au plating 30 - 60 ulnches (76.2-152 uM) over 80-200 ulnches (203-508 uM) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 ulnches Thick
Body	Al ₂ O ₃ Ceramic
Pb Free	

Electrical Connections

Connection		Terminals
Port 1	Input or Return	11
	Return or Input	12
Port 2	Output or Return	5
	Return or Output	6
Ground		All others
Single Ended Operation		Return is ground
Differential Operation		Return is hot

