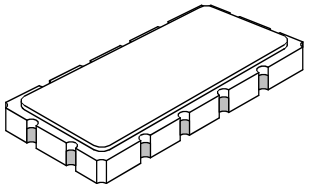
Discontinued

RFM products are now Murata products.

SF2135A

96.0 MHz SAW Filter

- ***Designed for Wide Channel IF Filtering***
- ***Low Insertion Loss***
- ***Hermetic 13.3 x 6.5 mm Surface-mount Case***
- ***Balanced or Single-ended Input and Output***
- ***Complies with Directive 2002/95/EC (RoHS)***



SMP-53

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+13	dBm
Maximum DC Voltage Between any Two 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
Center Frequency		f_C	1		96.0		MHz
1 dB Bandwidth		BW_1		1.56	1.80		MHz
Insertion Loss		IL	1, 2,3		11.8	15.0	dB
Relative Attenuation	91 to 94.5 MHz			6	9.5		
	97.5 to 98.5 MHz			6	11.5		dB
	10 to 60 MHz			55	72		dB
	76.8 MHz			55	72		dB
	132 to135 MHz			55	74		dB
	135 to 1000 MHz			35	58		
Passband Amplitude Ripple	95.2 to 96.8 MHz		1, 2, 3		0.9	1.2	dB_{P-P}
Group Delay Ripple	95.2 to 96.8 MHz				62	100	ns_{P-P}
Operating Temperature			1	-30		+85	°C
Terminating Source Impedance					50		ohm
Terminating Load Impedance					50		ohm

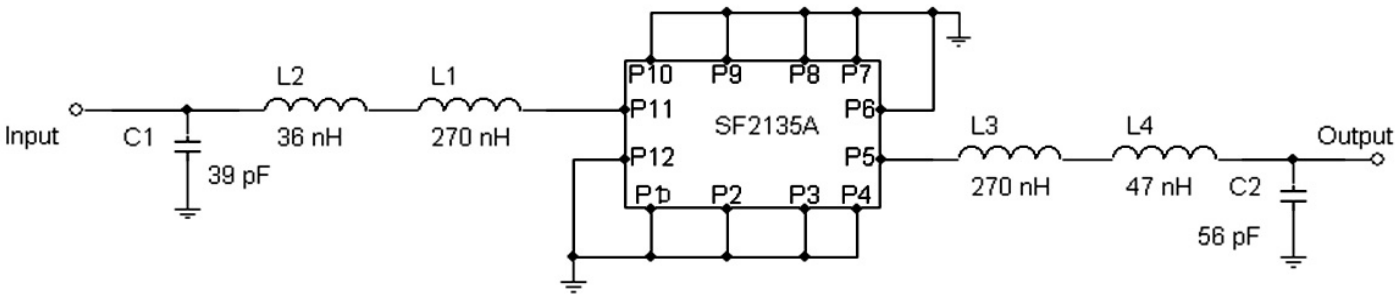
Impedance Matching to 50 Ω Unbalanced	External L-C
Case Style	SMP-53 13.3 x 6.5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week)	RFM SF2135A YYWW

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

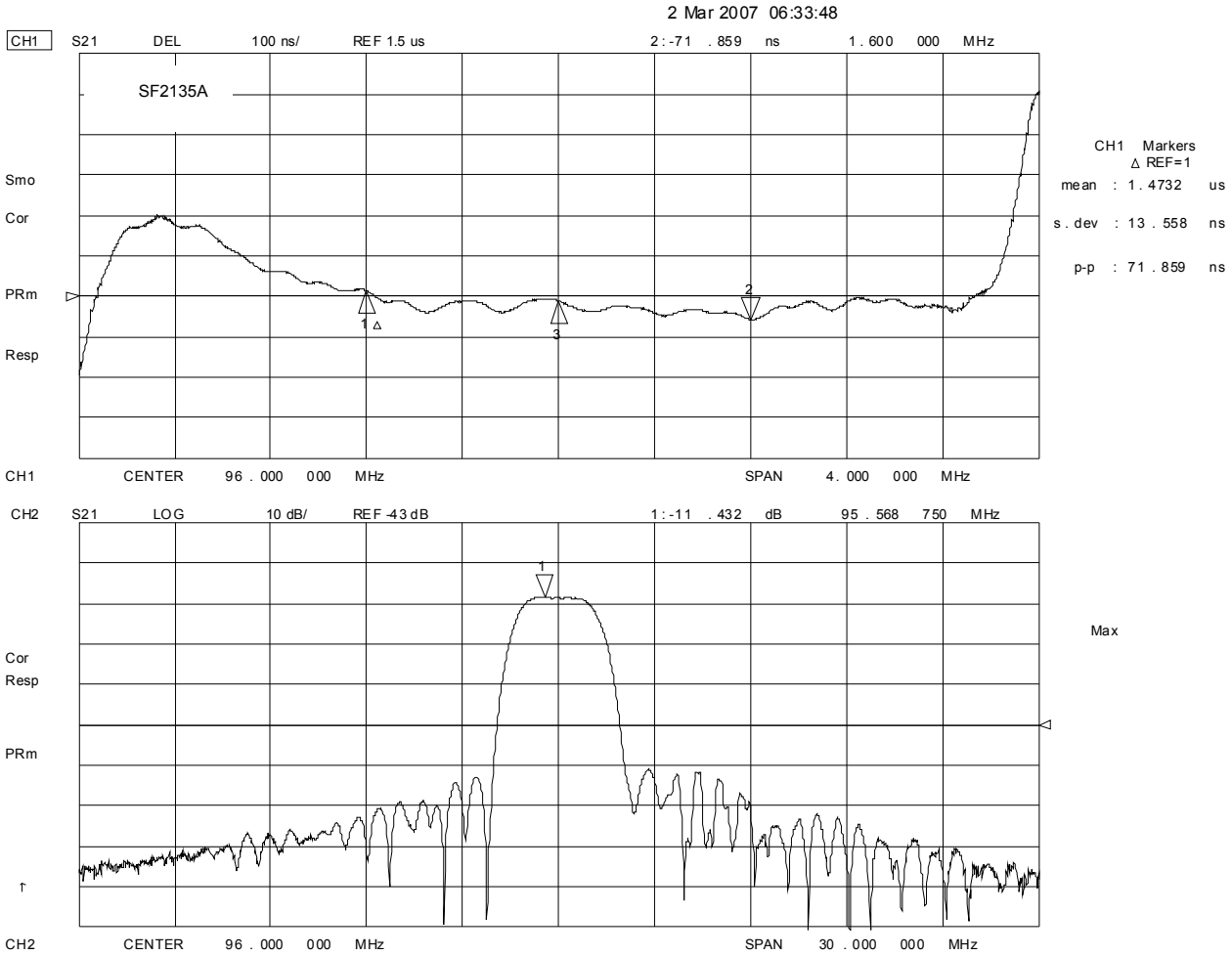
NOTES:

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, 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.
4. Part to part absolute delay measurement records the absolute delay mean across 1 dB passband.
5. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
6. The design, manufacturing process, and specifications of this filter are subject to change.
7. 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.
8. US and international patents may apply.

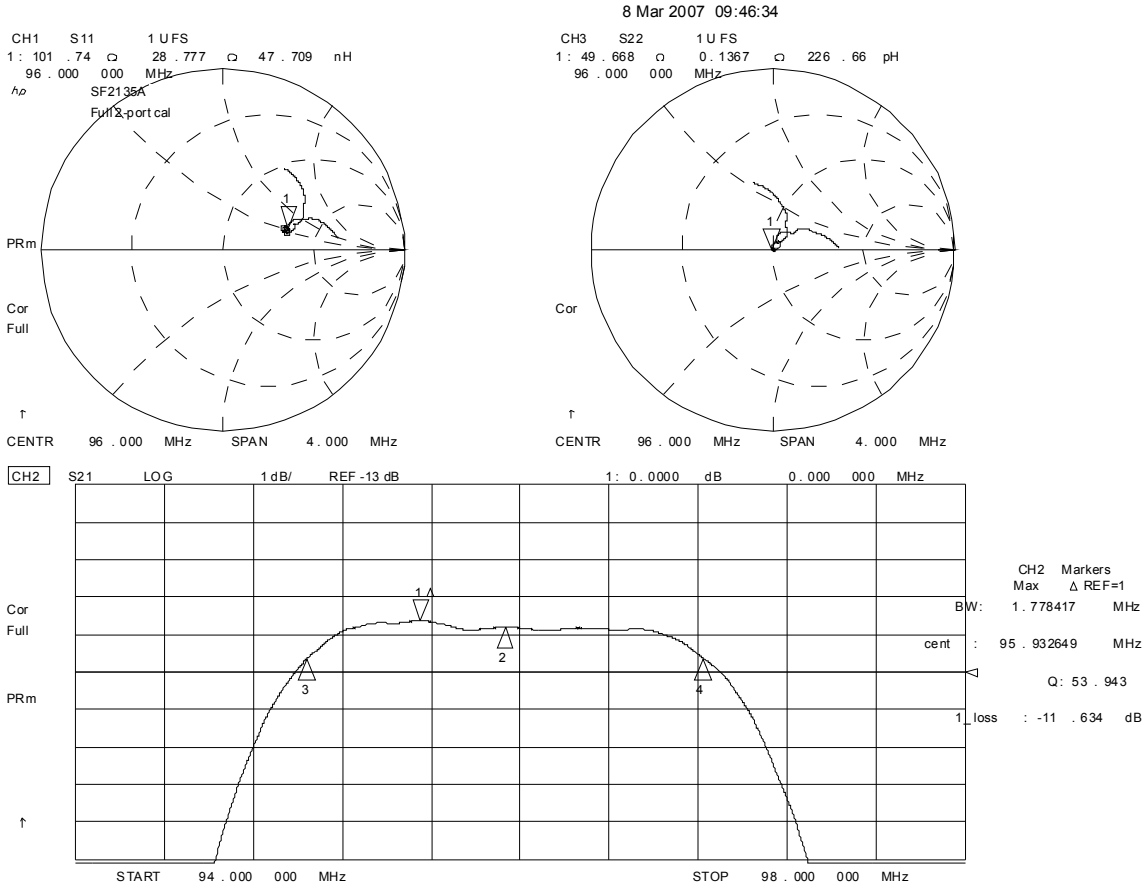
SF2135A 50 ohm Tuning Network



SF2135A Group Delay Ripple and Filter Response Plots

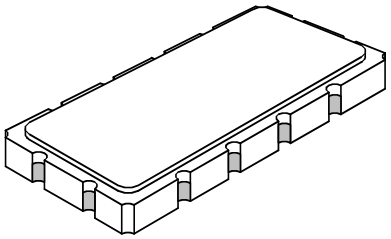


SF2135A S_{11}, S_{22} and Pass-band Plots



SAW Filters Package
SMP-53 Case

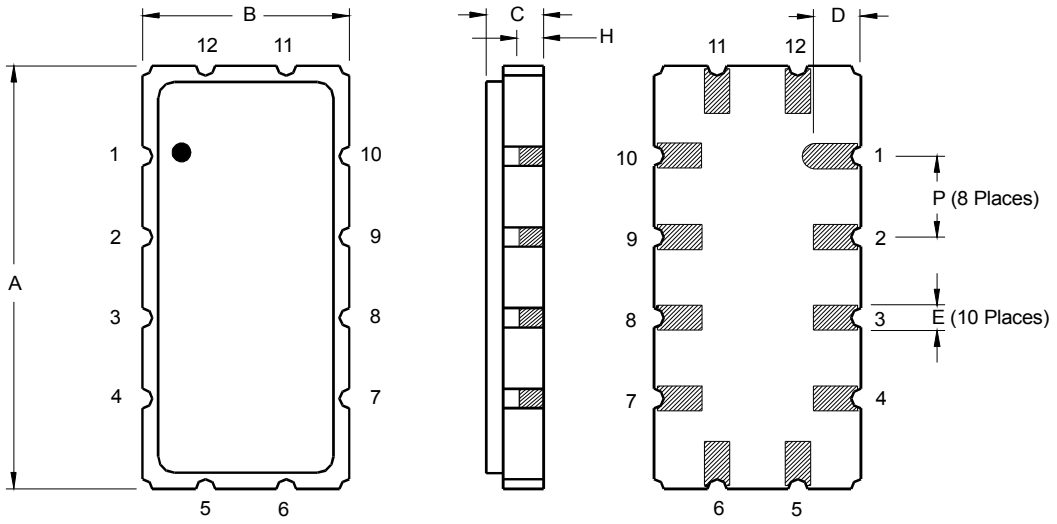
12-Terminal Ceramic Surface-Mount Case
13.3 x 6.5 mm Nominal Footprint



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 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_2O_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



TOPVIEW BOTTOMVIEW