

- **Designed for IF Applications**
- **Excellent Size-to-Performance Ratio**
- **Hermetic 13.3 x 6.5 mm Surface-mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**

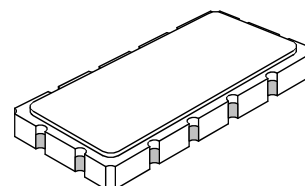


Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for lead-free soldering - Max. Soldering Profile	260°C for 30 s	

SF2045A

**140 MHz
SAW Filter**



SM13365-12

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency (3dB points) at 25°C	f_C	1	139.60	140.000	140.40	MHz
Passband Insertion Loss at f_C	IL	1, 2		7.7	11	dB
1 dB Passband	BW ₁		8	9.8		MHz
3 dB Passband	BW ₃		10	10.8		
Amplitude Ripple over 1 dB BW				0.4	0.8	dB _{P-P}
Phase Linearity over 1 dB BW				2.7	8	° _{P-P}
Group Delay Variation over 1 dB BW	GDV			50	100	ns _{P-P}
Absolute Group Delay				1.057		µsec
Rejection 35 dB BW		1, 2, 3		13.9	15	MHz
10 - 120 MHz			40	52		dB
120 - 130 MHz			40	47		
150 - 1000 MHz			40	45		
Operating Temperature Range	T _A	1	-40	25	85	°C
Frequency Temperature Coefficient	FTC			-94		ppm/°C

Impedance Matching to 50Ω Unbalanced	External L-C
Case Style	SM13365-12 13.3 x 6.5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week)	RFM SF2045A YYWW

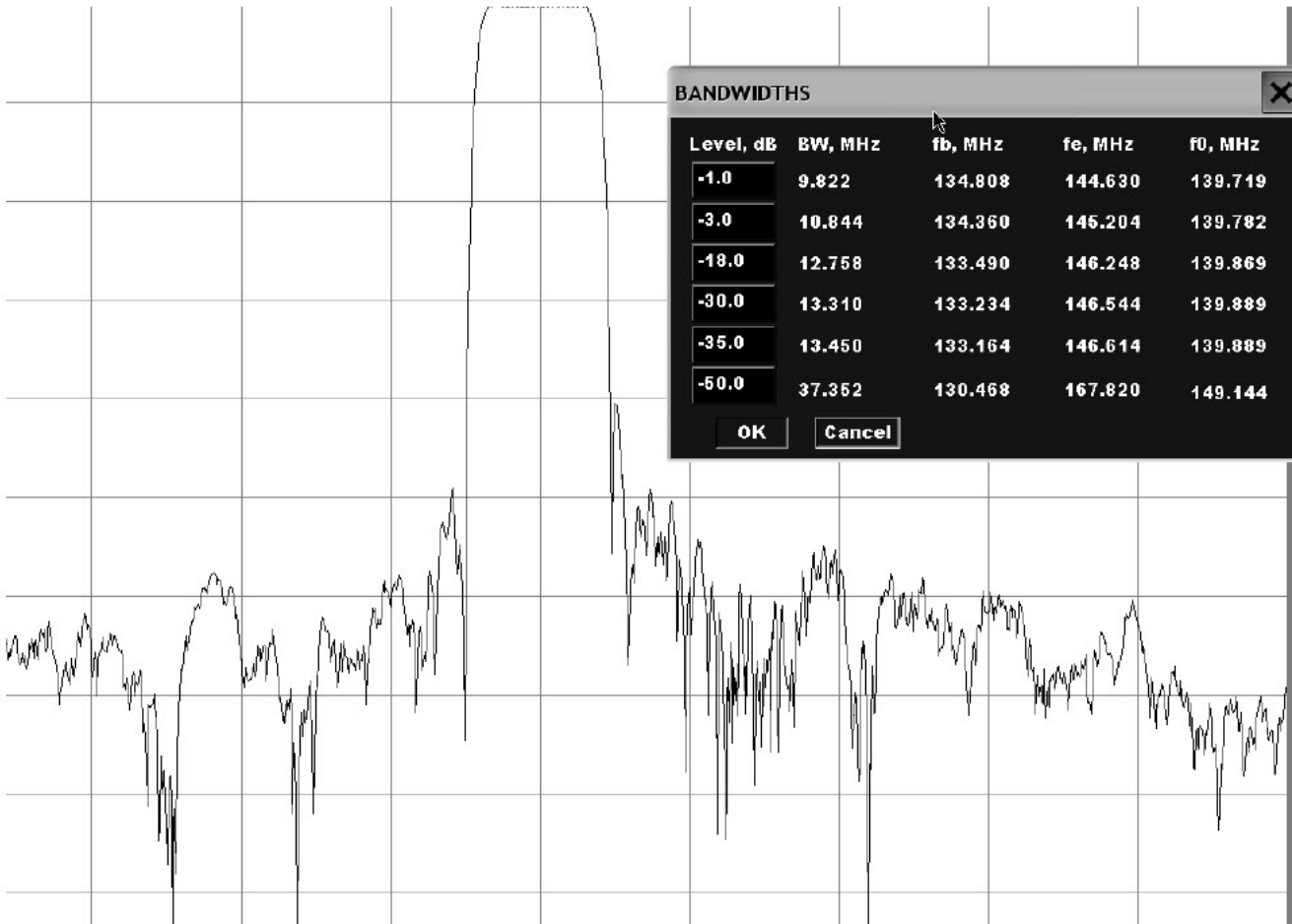


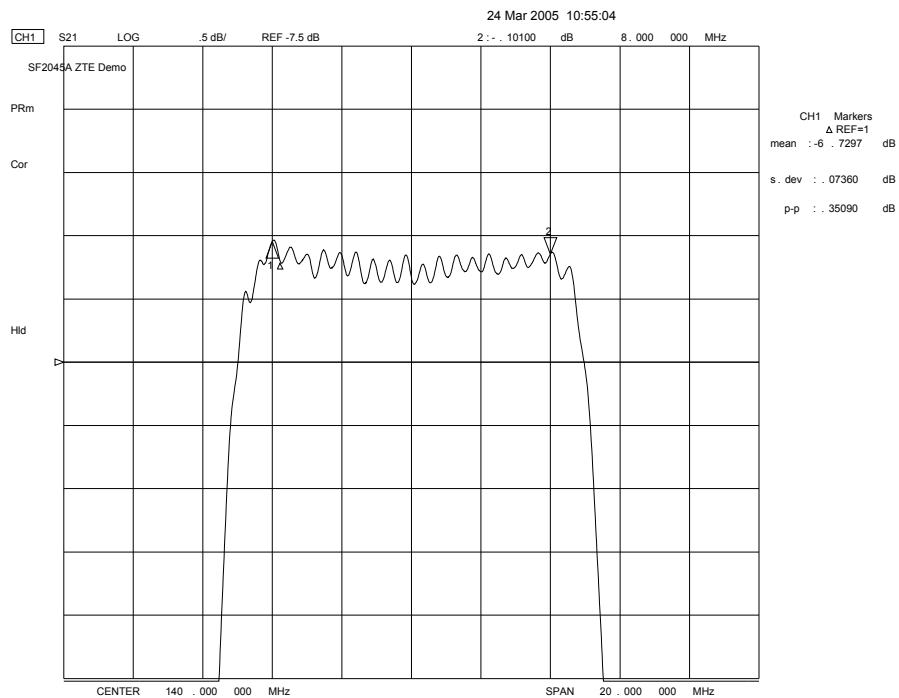
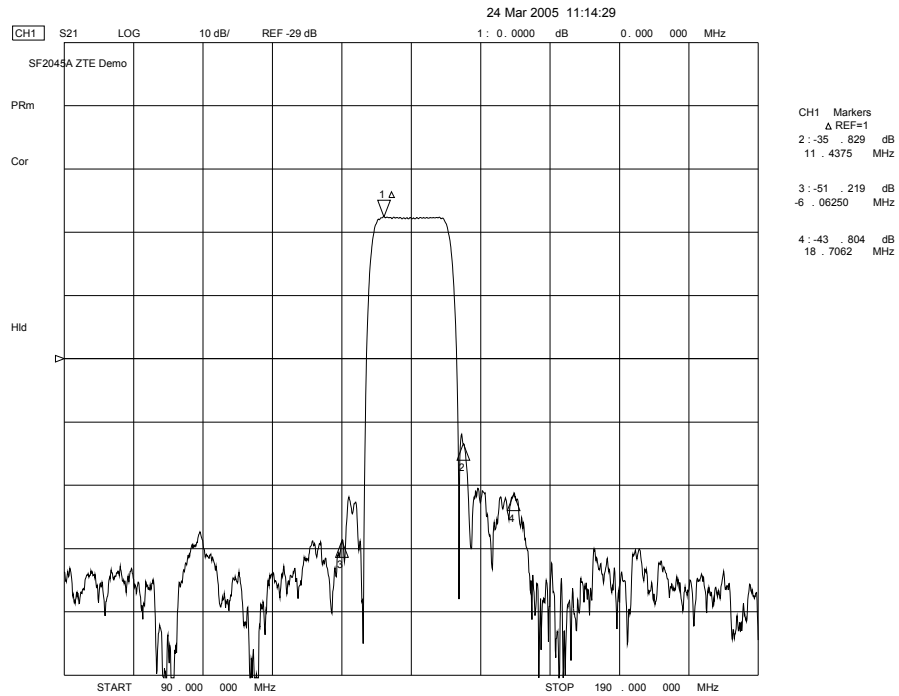
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

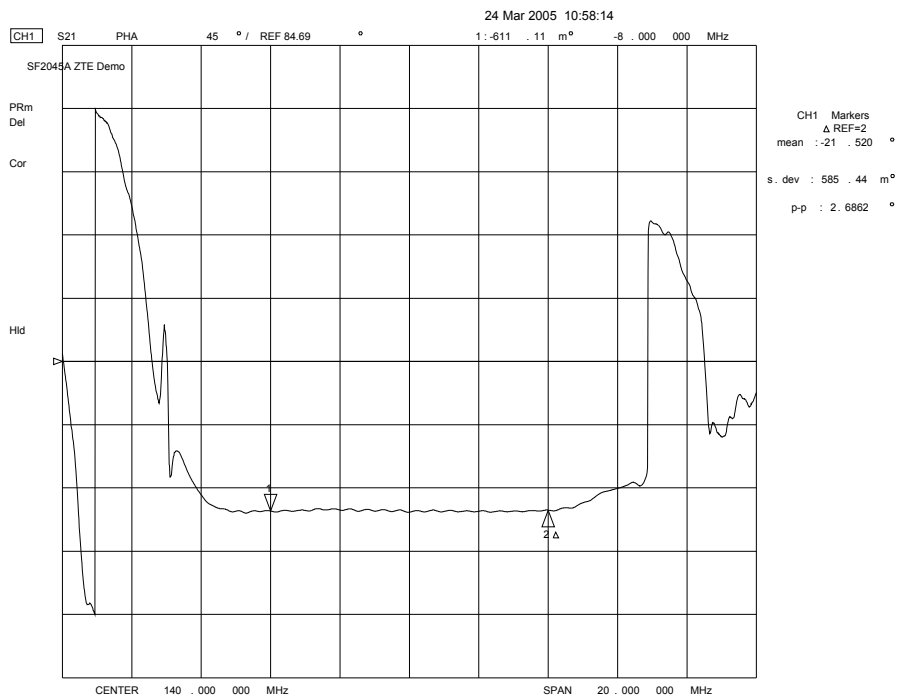
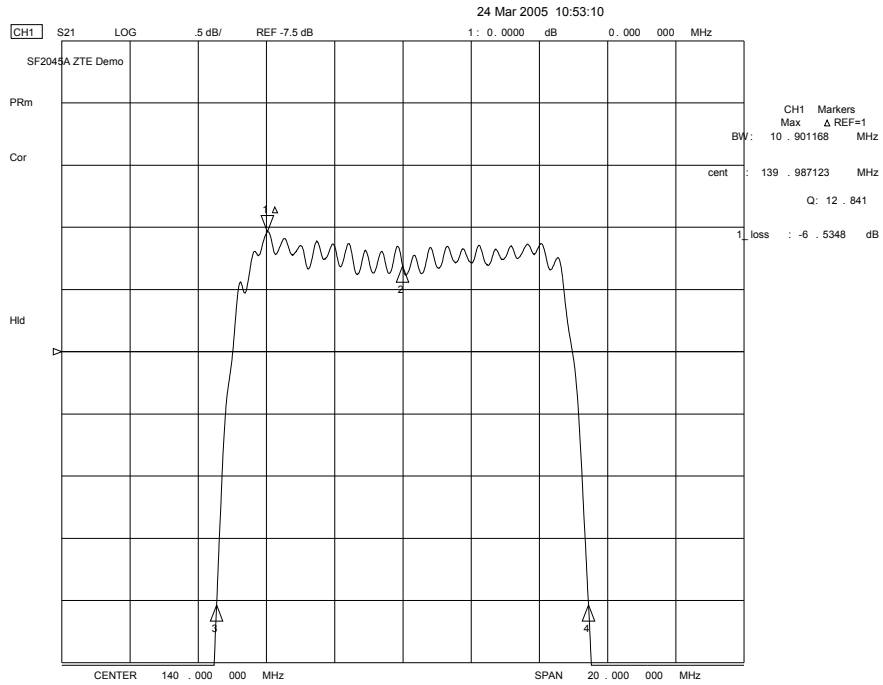
NOTES:

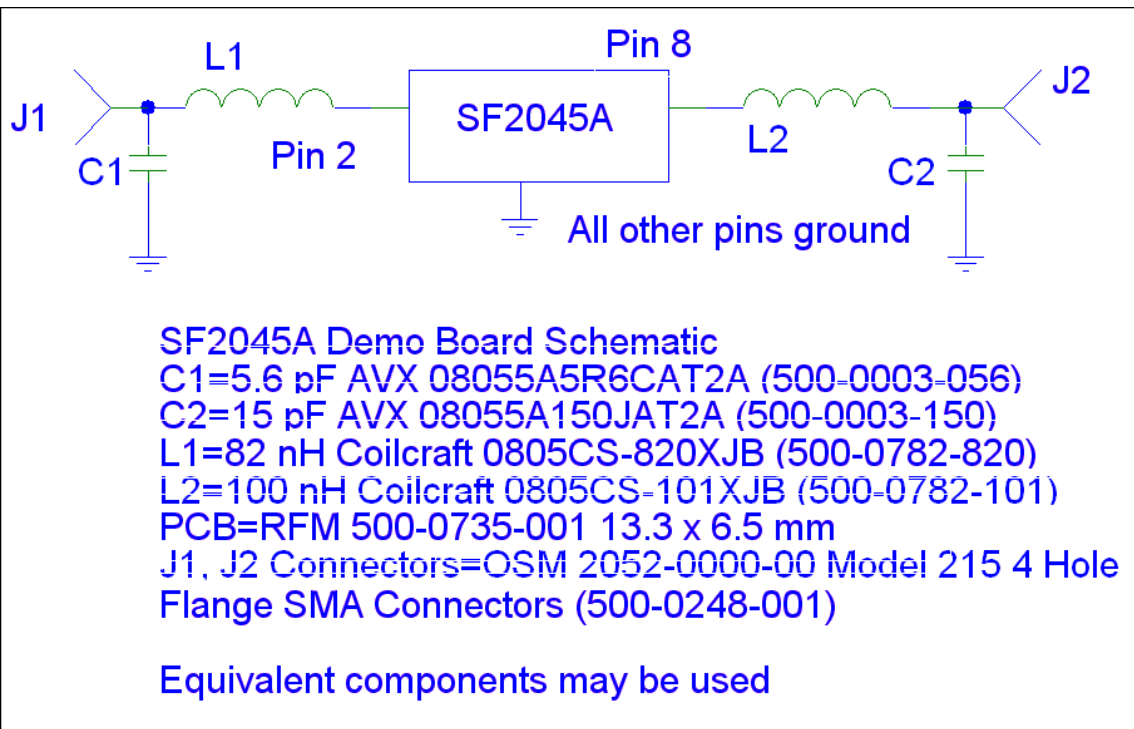
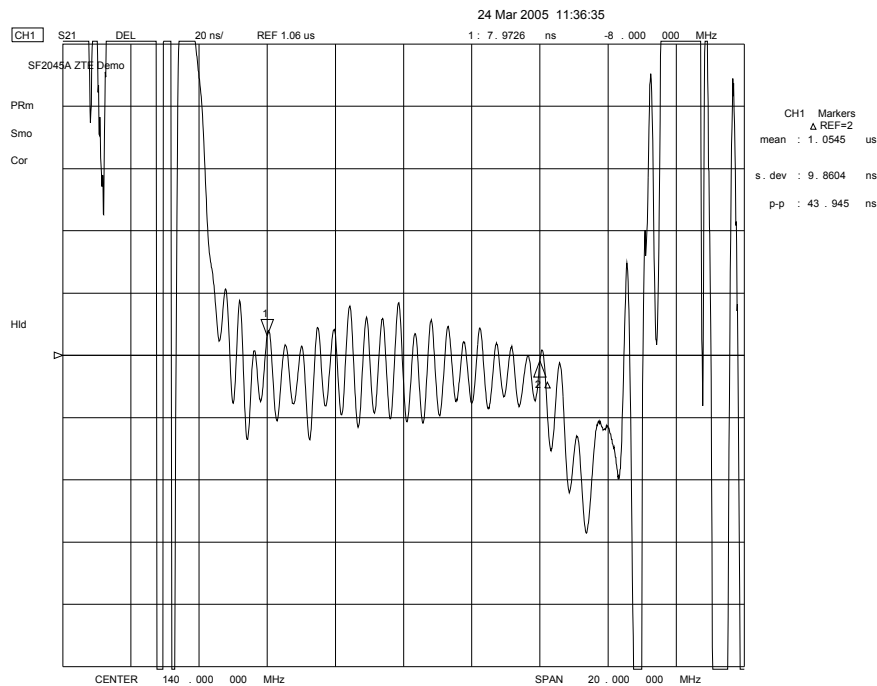
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. The design, manufacturing process, and specifications of this filter are subject to change.
3. 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.
4. US and international patents may apply.

Filter Response Plots





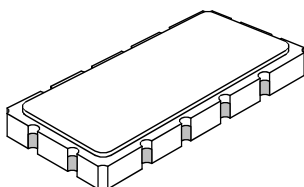




SM13365-12 Case

12-Terminal Ceramic Surface-mount Case

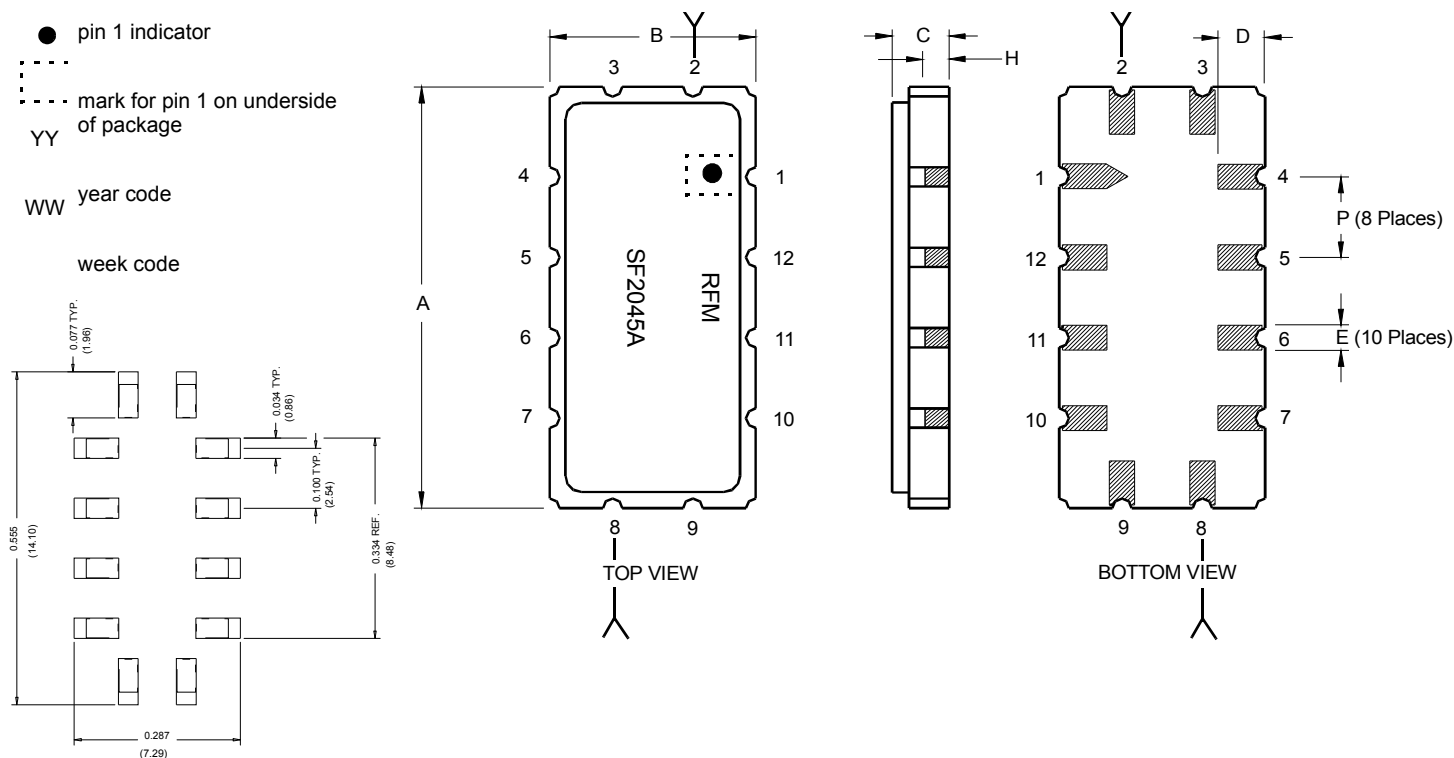
13.3 x 6.5 mm Nominal Footprint



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	

Electrical Connections		
Connection		Terminals
Port 1	Input	2
	Ground	3
Port 2	Output	8
	Ground	9
	Ground	All others
See Note 3 on Data Sheet		

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 ₂ O ₃ Ceramic
Pb Free	



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