



**THE DATASHEET OF  
SF2149A**

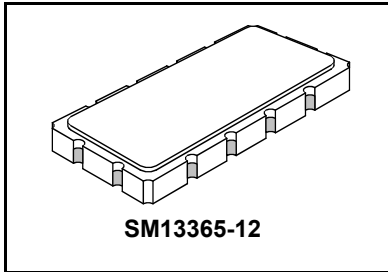


- TD-SCDMA SAW Filter, 46.08 MHz, 5 MHz BW
- Low Insertion Loss
- 13.3 x 6.5 x 1.9 mm Surface-mount Case
- Complies with Directive 2002/95/EC (RoHS)



**SF2149A**

**46.08 MHz  
SAW Filter**



**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 10 s	

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	$f_N$	1		46.08		MHz
Passband bandwidth	$B_W$		5			MHz
Insertion Loss	43.58 ... 48.58 MHz	1, 2, 3		8	10	dB
Relative Attenuation to IL @	30 ... 41.98 MHz		20	25		
out of pass band (Rejection)	61.44 MHz		40	45		
	50.18 ... 76.8 MHz		15	25		
	<30 MHz & >76.8 MHz		40	45		
Amplitude ripple (p-p)	43.58 ... 48.58 MHz			0.6	1.0	dB
Amplitude ripple (p-p) @ 25°C	43.58 ... 48.58 MHz			0.8		dB
Group delay ripple (p-p)	43.58 ... 48.58 MHz			100	120	ns
1 dB compression Point	43.58 ... 48.58 MHz		12	15		dBm
Input IP3			35	40		dBm
Operating Temperature			-40		+85	°C
Terminating impedance				50		Ohm

Case Style	SM13365-12 13.3 x 6.5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week, S=shift) See note 4	RFM SF2149A // YYWWS



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

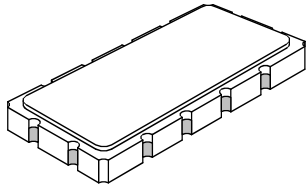
**Notes:**

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. 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.

# SM13365-12 Case

## 12-Terminal Ceramic Surface-Mount Case

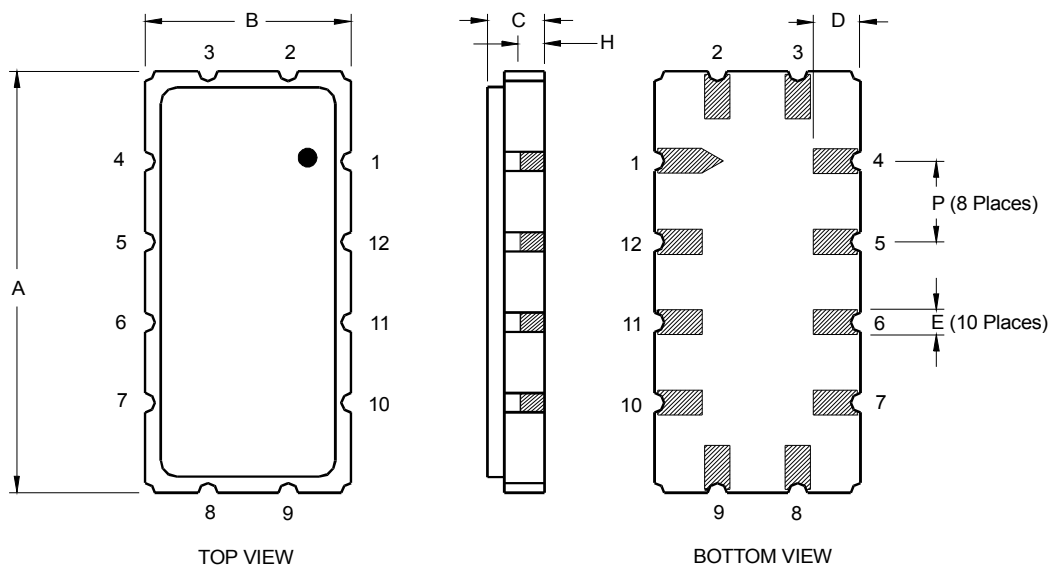
13.3 x 6.5 mm Nominal Footprint



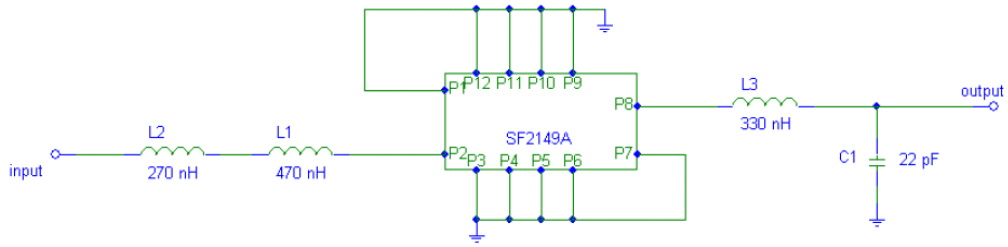
Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	13.08	13.31	13.60	0.515	0.524	0.535
B	6.27	6.50	6.80	0.247	0.256	0.268
C		1.91	2.00		0.075	0.079
D		1.50			0.059	
E		0.79			0.031	
H		1.0			0.039	
P		2.54			0.100	

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 <sub>2</sub> O <sub>3</sub> Ceramic
Pb Free	

Electrical Connections		
Connection		Terminals
Port 1	Input or Return	2
	Return or Input	3
Port 2	Output or Return	8
	Return or Output	9
Ground		All others
Single Ended Operation		Return is ground
Differential Operation		Return is hot

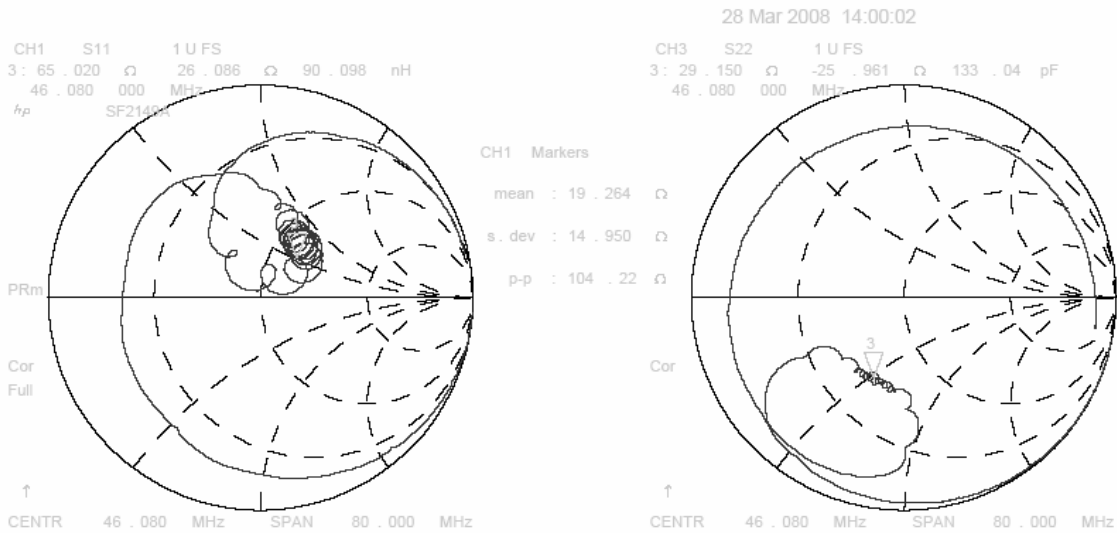


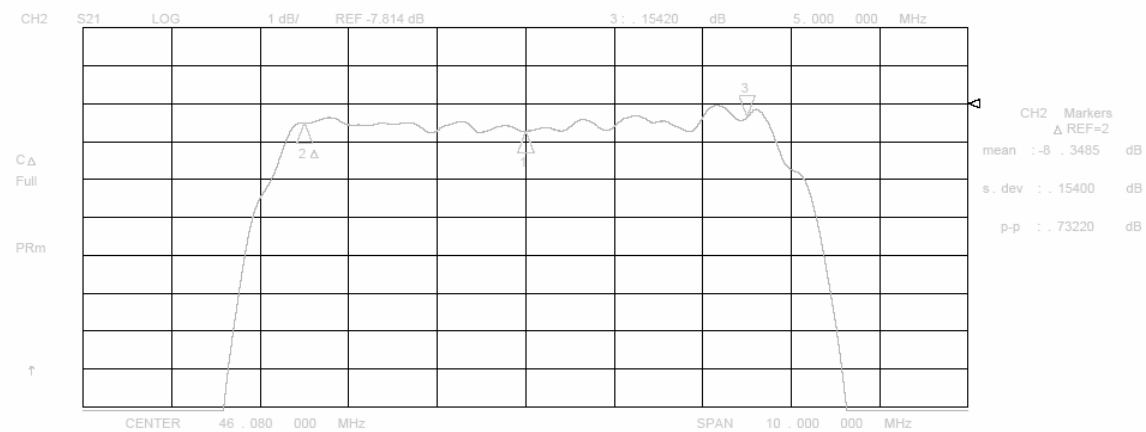
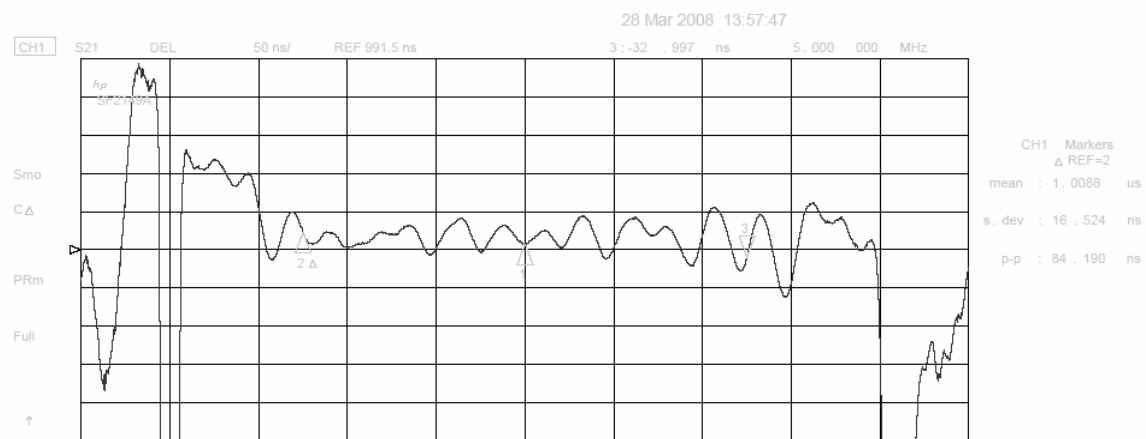
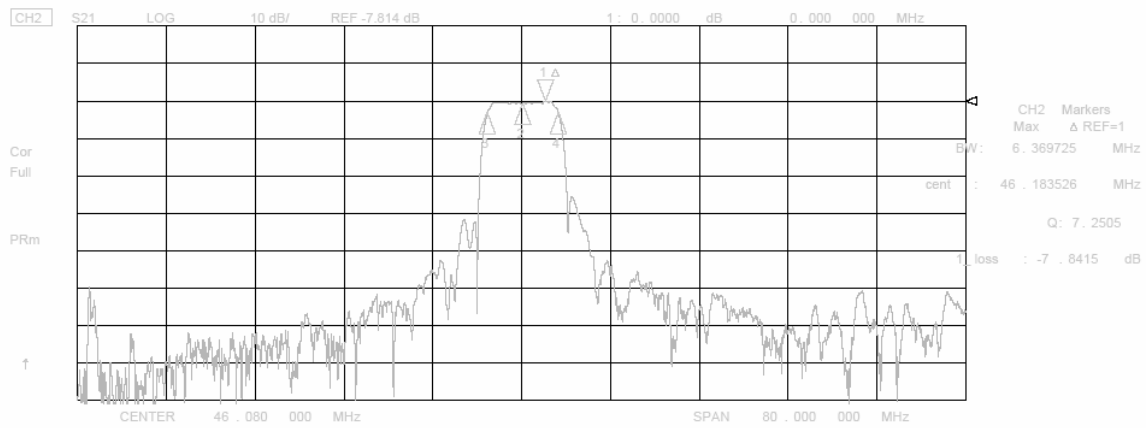
## Testing Environment



401-1412-001 PCB  
0805 coilcraft inductors



## Frequency Response





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