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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

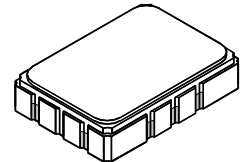
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



**SF2148B**

**138.24 MHz  
SAW Filter**



**SMP-03-S**

- **Designed for TD-SCDMA Applications**
- **Low Insertion Loss**
- **5.0 X 7.0 mm Surface-Mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**



**Absolute Maximum Ratings**

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage Between any Two Terminals	30	VDC
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile	265 °C for 10 s	

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	$f_C$	1	138.24			MHz
Insertion Loss at $f_C$	IL				10.5	dB
1 dB Passband, 128.24 to 148.24 MHz	$BW_1$			20		MHz
Amplitude Ripple over 20 MHz Passband		1, 2			1	dB <sub>P-P</sub>
Group Delay Ripple over 20 MHz Passband	$GD_{P-P}$				50	ns <sub>P-P</sub>
Rejection:						
0 to 108.24 MHz		1, 2, 3	54			dBc
108.24 to 117.52 MHz			50			
122.88 MHz			45			
220.4 to 271.12 MHz			50			
271.12 to 1000 MHz			40			
1 dB Compression			12			dBm
Input IP3			35			dBm
Operating Temperature Range	$T_A$	1	-40		+85	°C
Input/Output Impedance	200 ohms balanced or 50 ohms unbalanced					
Case Style	SMP-03-S 7 x 5 mm Nominal Footprint					
Lid Symbolization (YY=year, WW=week, S=shift) See note 4	RFM SF2148B YYWWS					

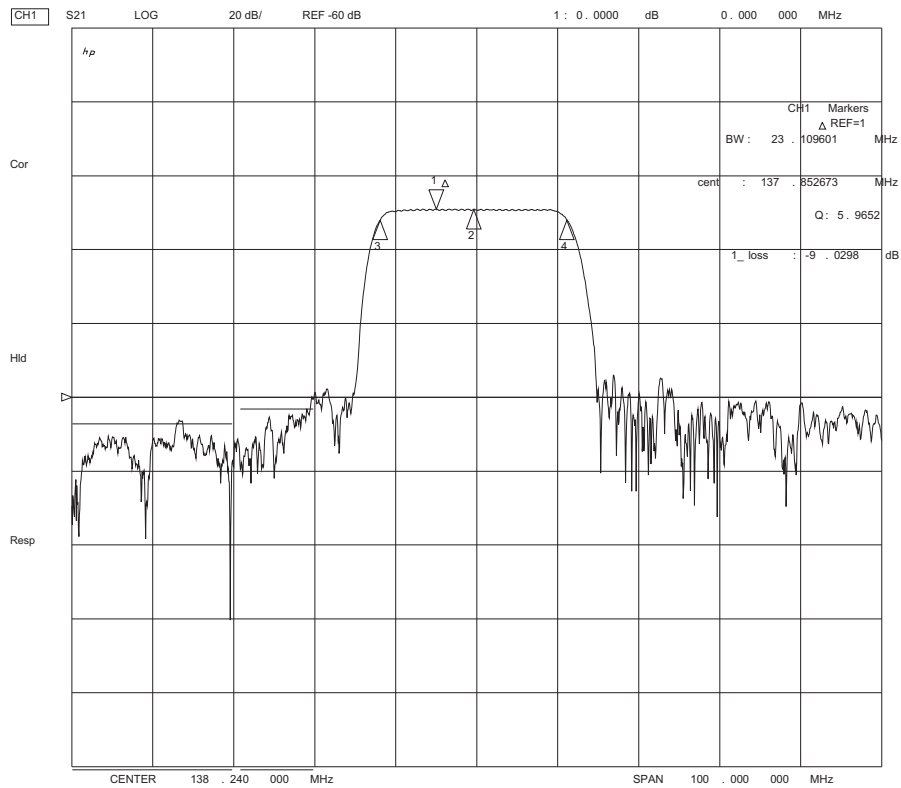


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

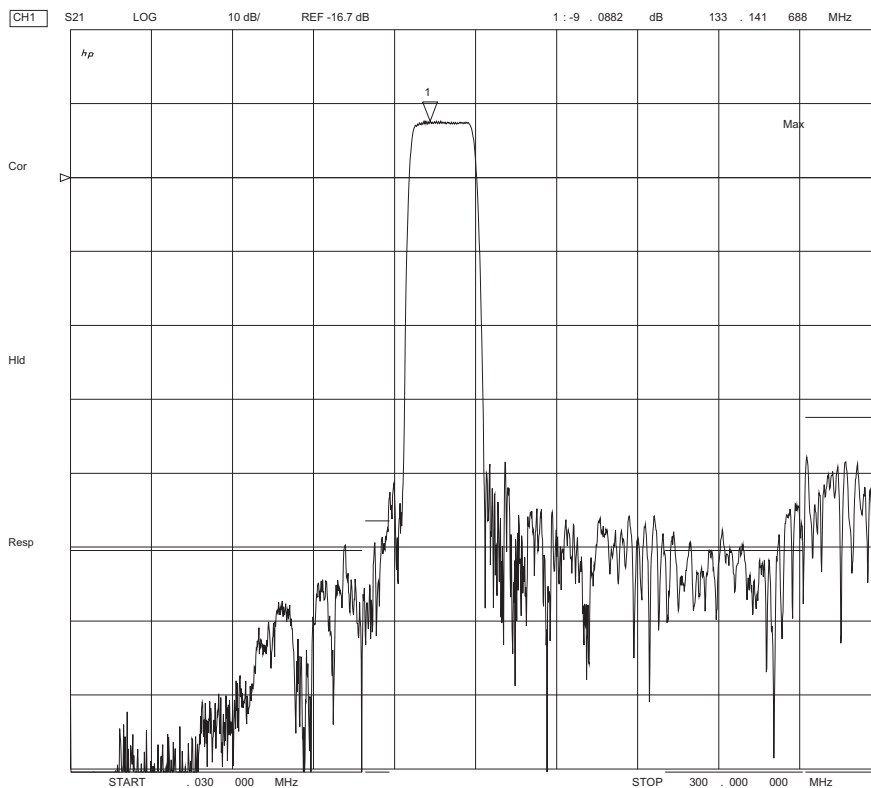
**Notes:**

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  $\Omega$  and measured with 50  $\Omega$  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. 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.
5. US and international patents may apply.

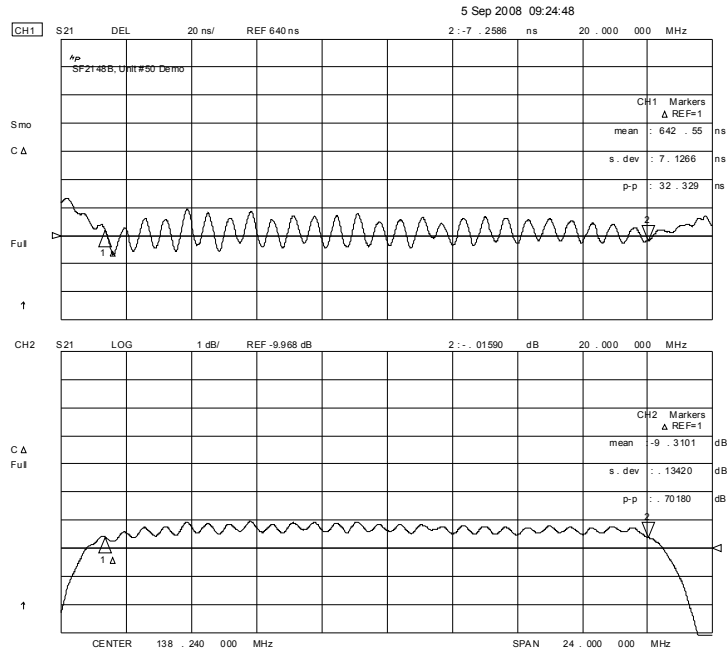
# SF2148B Passband Response



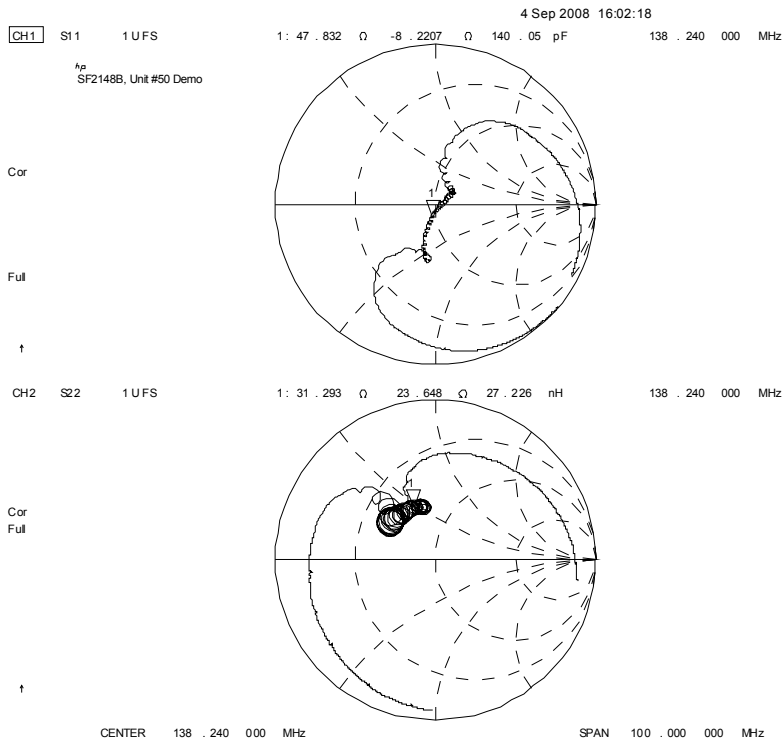
# SF2148B Broadband Response



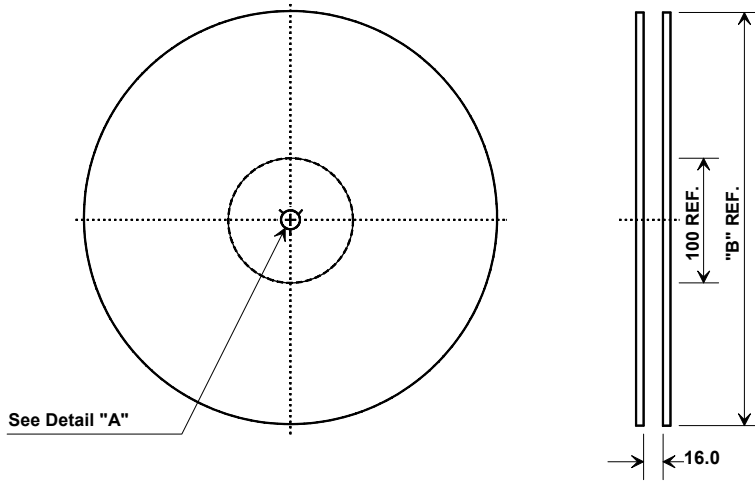
# SF2148B Group Delay Deviation & Amplitude Ripple



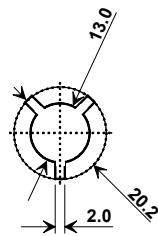
# SF2148B Input/Output Impedance Plots



## Tape and Reel Specifications

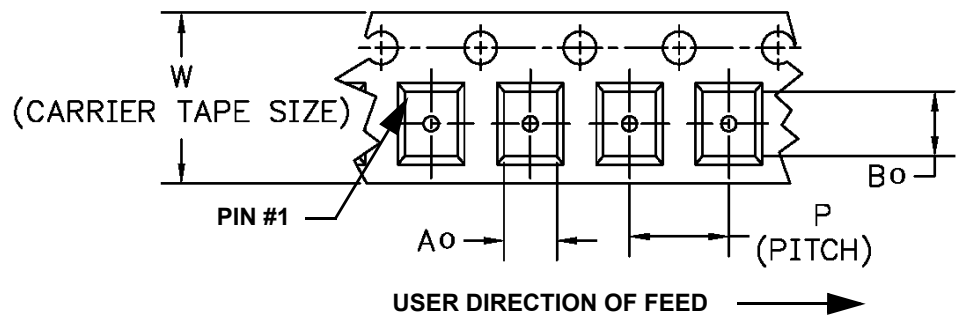
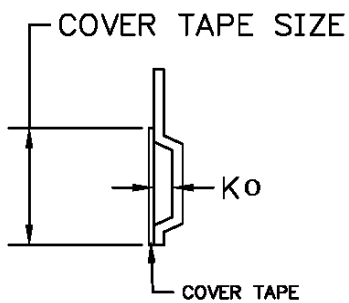


"B" Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000



### COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions		Tolerance
Ao	5.5 mm	± 0.1mm
Bo	7.5 mm	± 0.1mm
Ko	2.0 mm	± 0.1mm
Pitch	8.0 mm	± 0.1mm
W	16.0 mm	± 0.2mm

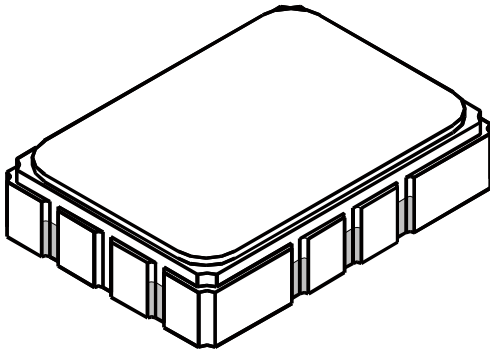




# SMP-03-S Case

## 12-Terminal Ceramic Surface-Mount Case

### 5 x 7 mm Nominal Footprint



Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	6.80	7.00	7.20	0.268	0.276	0.283
B	4.80	5.00	5.20	0.189	0.197	0.205
C		1.65	2.00		0.065	0.079
D		0.80				
E	2.41	2.54	2.67	0.095	0.100	0.105
H	0.87	1.1	1.13	0.034	0.039	0.044
J		2.54				
K	2.87	3.00	3.13	0.113	0.118	0.123
P	1.14	1.27	1.40	0.045	0.050	0.055

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel
Lid Plating	2.0 to 3.0 $\mu\text{m}$ Nickel
Body	$\text{Al}_2\text{O}_3$ Ceramic
Pb Free	

Electrical Connections	
Input	1, 10
Output	6, 5
Ground	2, 3, 4, 7, 8, 9, 11, 12

