



THE DATASHEET OF SF2063A



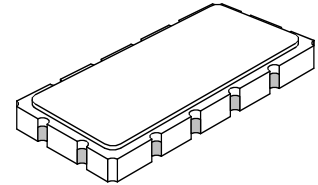
- **Excellent Size-to-Performance Ratio**
- **Hermetic 13.3 x 6.5 mm Surface-mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Tape and Reel Standard per ANSI/EIA-481**
- **Moisture Sensitivity Level: 1**

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
Suitable for Lead-free Soldering - Maximum Soldering Profile	260°C for 30 s	

SF2063A

**156 MHz
SAW Filter**



SMP-53

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	f_C		156.00			MHz
Insertion Loss at f_C	IL			15.5	18	dB
Amplitude Ripple				1.1	2.0	dB _{P-P}
1.5 dB Bandwidth	BW _{1.5}		9.4	10		MHz
Rejection Referenced to IL						
50 to 149 MHz			39	45		dB
165 to 500 MHz			39	45		
Operating Temperature Range	T_A		-40		+85	°C

Impedance Matching to 50Ω Unbalanced	External L-C
Case Style	SMP-53 13.3 x 6.5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week, S = shift, ## = Sequence Code))	RFM, SF2063A, <u>YYWWS##</u>

Electrical Connections

Connection	Terminals
Port 1 Hot	11
Port 1 Gnd Return	12
Port 2 Hot	5
Port 2 Gnd Return	6
Case Ground	All others



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

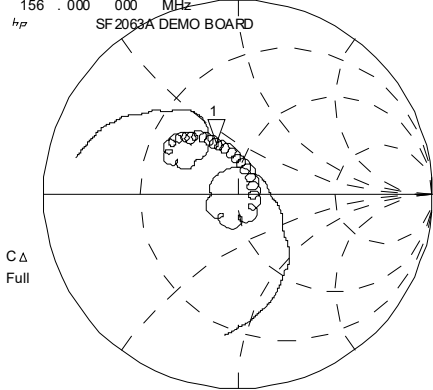
NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

SF2063A S_{11} , S_{22} and Amplitude Response

8 Mar 2006 16:19:43

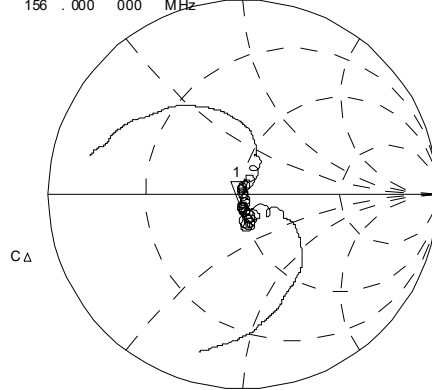
CH1 S11 1 UFS
 1: 35.279 Ω 20.383 Ω 20.795 nH
 156.000 000 MHz
 SF2063A DEMO BOARD



C Δ
 Full

CENTR 156.000 MHz SPAN 32.000 MHz

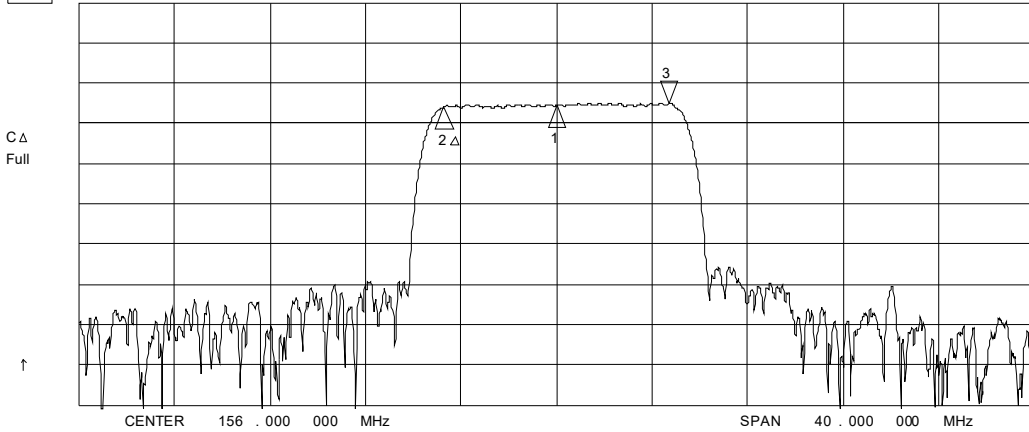
CH3 S22 1 UFS
 1: 47.971 Ω -4.7188 Ω 216.21 pF
 156.000 000 MHz



C Δ

CENTR 156.000 MHz SPAN 32.000 MHz

CH2 S21 LOG 10 dB/ REF -20 dB 3: .66240 dB 9.400 000 MHz



C Δ
 Full

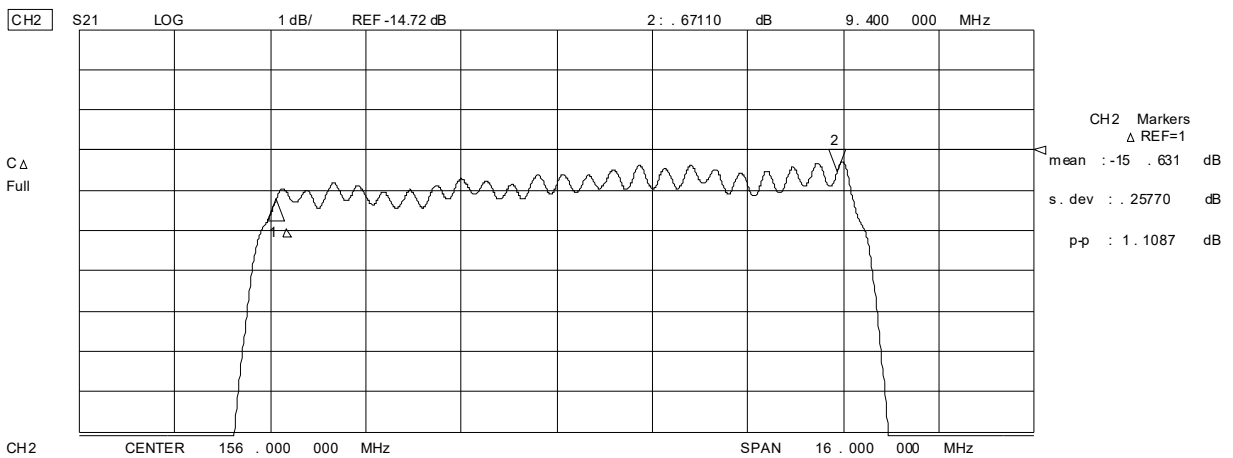
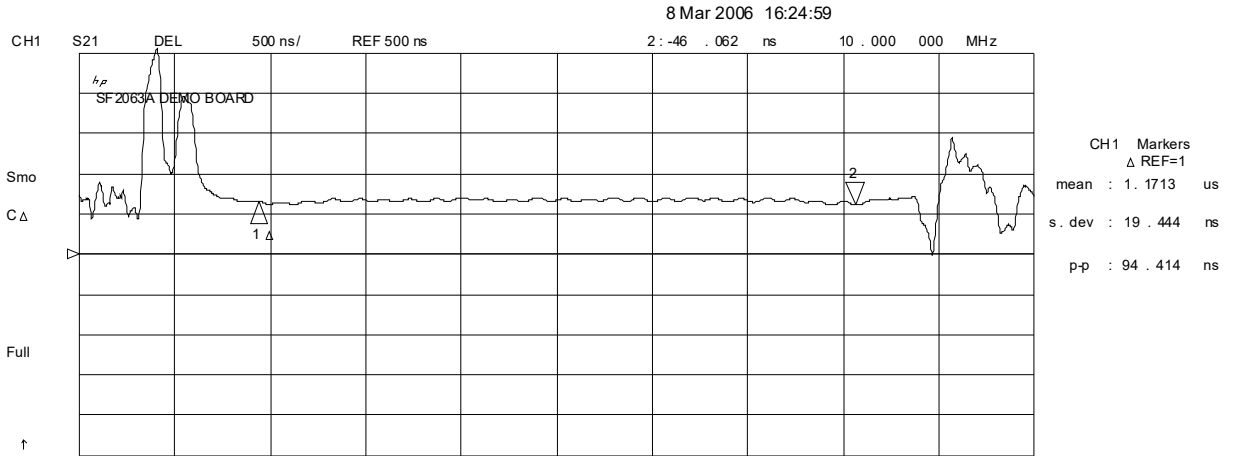
↑

CENTER 156.000 000 MHz

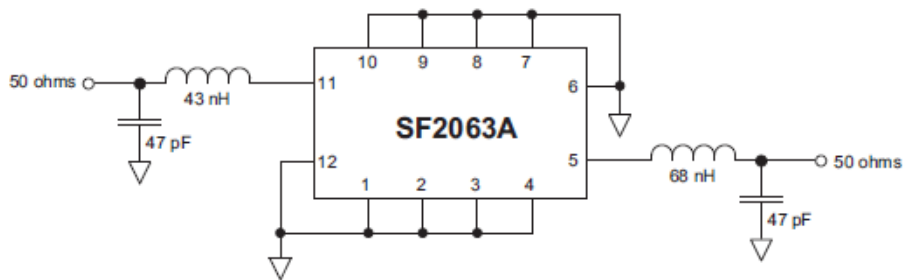
SPAN 40.000 000 MHz

CH2 Markers
 Δ REF=2
 mean : -15.645 dB
 s. dev : .25400 dB
 p-p : 1.0964 dB

SF2063A Passband Group Delay and Amplitude Ripple

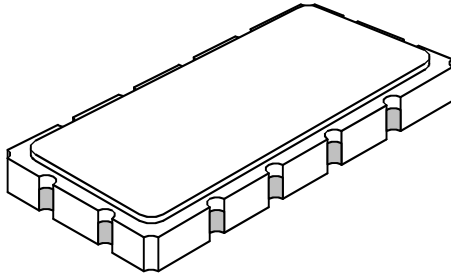


SF2063A Matching Components



SMP-53 Case

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



Case Dimensions

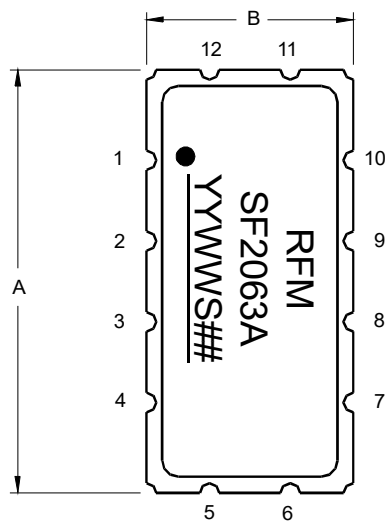
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	13.08	13.31	13.60	0.515	0.524	0.535
B	6.27	6.50	6.80	0.247	0.256	0.268
C		1.91	2.00		0.075	0.079
D		1.50			0.059	
E		0.79			0.031	
H		1.0			0.039	
P		2.54			0.100	

Electrical Connections

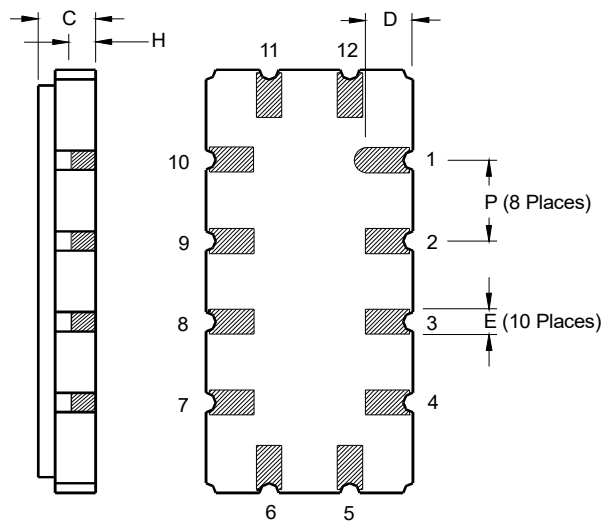
Connection		Terminals
Port 1	Input or Return	11
	Return or Input	12
Port 2	Output or Return	5
	Return or Output	6
Ground		All others
Single-ended Operation		Return is ground
Differential Operation		Return is hot

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



TOP VIEW



BOTTOM VIEW



Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.



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