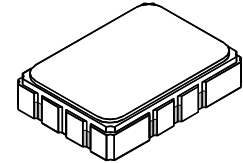


SF2073B

**456.00 MHz
SAW Filter**



SMP-03

- **Designed for 802.16 and WIMAX Receiver IF Application**
- **Low Insertion Loss**
- **5.0 X 7.0 mm Surface-Mount Case**
- **Differential or Single Ended Input and Output**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+13	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for lead-free soldering - Max Soldering Temperature	260°C for 30 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Frequency	f_N			456.000		MHz
Minimum Insertion Attenuation	α_{min}			12.5	14.5	dB
Amplitude Variation	$f_N \pm 5.0$ MHz $f_N \pm 5.2$ MHz	$\Delta\alpha$		0.6	1.5	dB p-p
				0.8	2.5	
Absolute Group Delay (at f_N)				0.5	0.7	μ s
Group Delay Variation (p-p)	$f_N \pm 5.0$ MHz			35	100	ns
Relative Attenuation	256 to 360 MHz 360 to 416.0 MHz 416 to 443 MHz 468 to 656 MHz 656 to 946 MHz		35	50		dB
			38	64		
			35	40		
			35	40		
			50	60		
Temperature Range	Operating Storage		-40		85	°C
			-40		85	
Case Style	SMP-03 7 x 5 mm Nominal Footprint					
Lid Symbolization (YY=year, WW=week, S=shift, ## = Sequence Code)	RFM SF2073B YYWWS##					

I. 200 ohm Matchingpage 2

II. 50 ohm Matchingpage 4

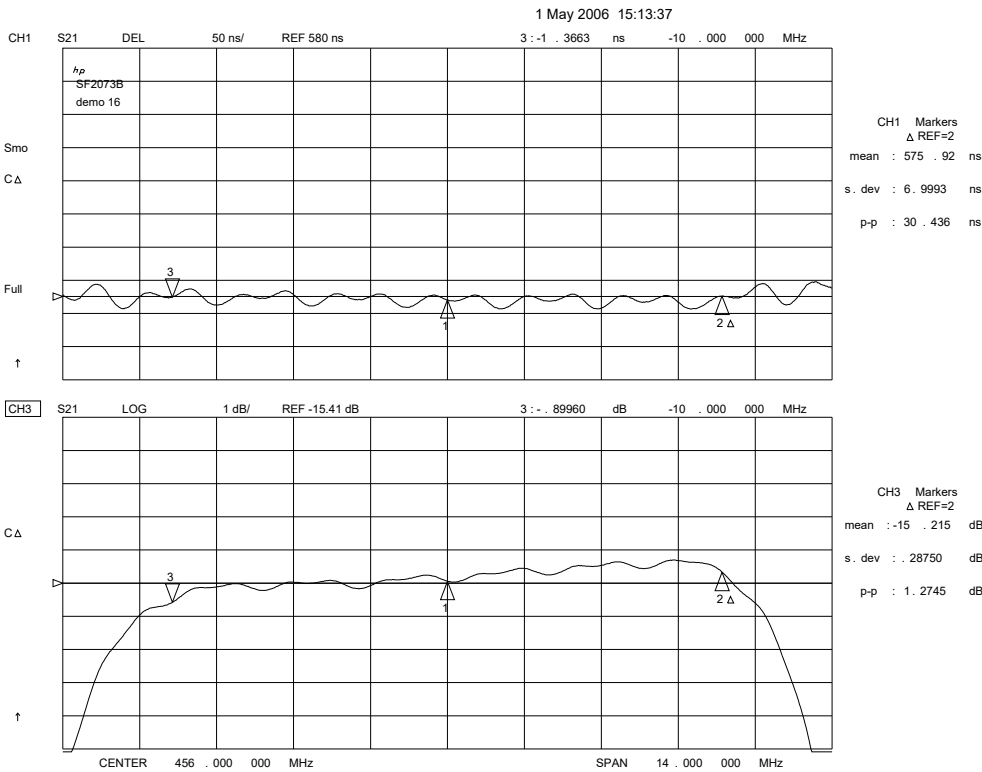
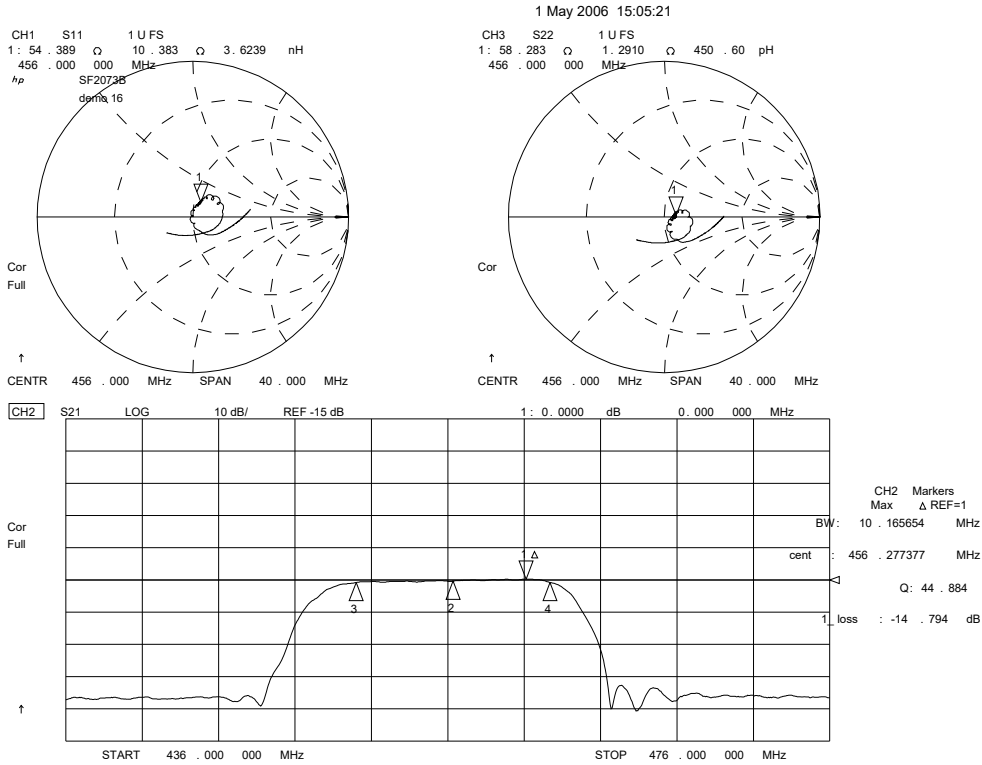
III. SMI 7035 Matchingpage 6

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

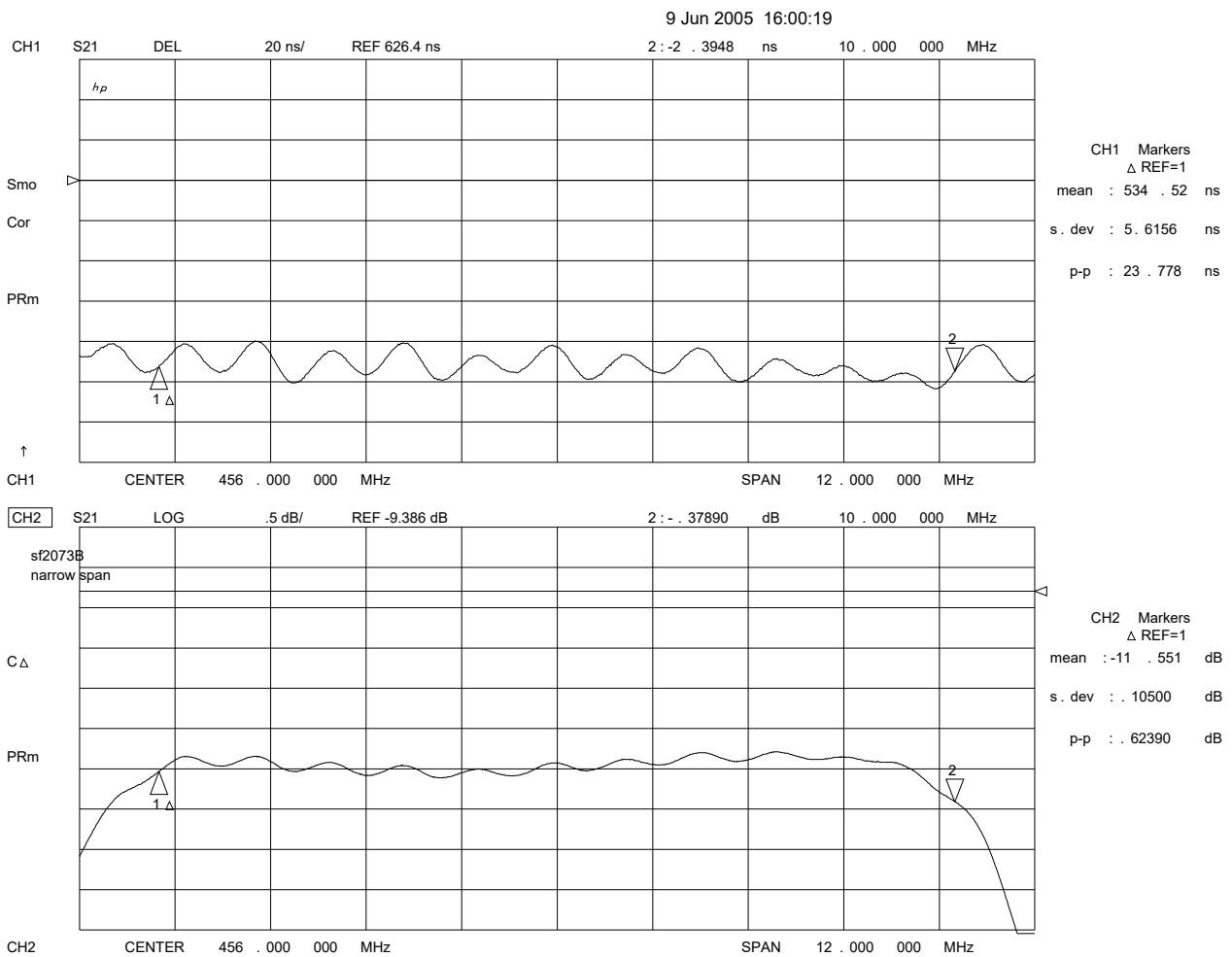
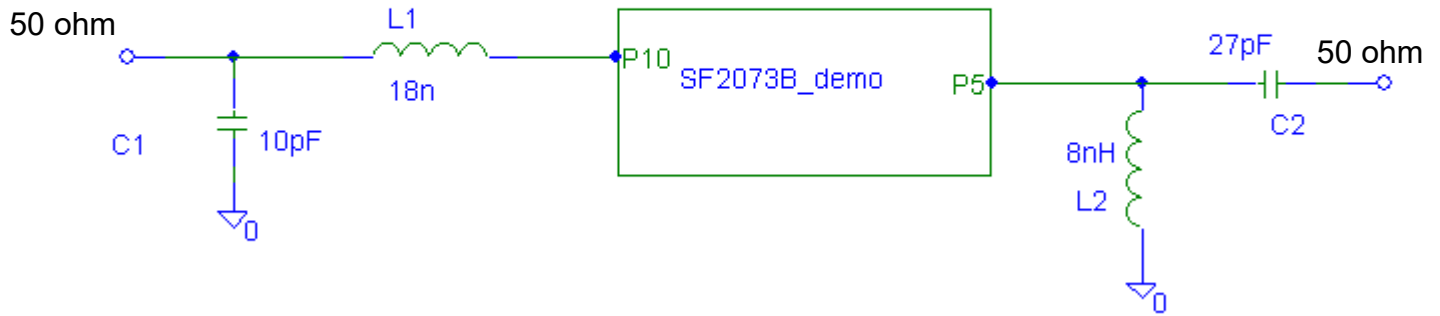
NOTES:

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.

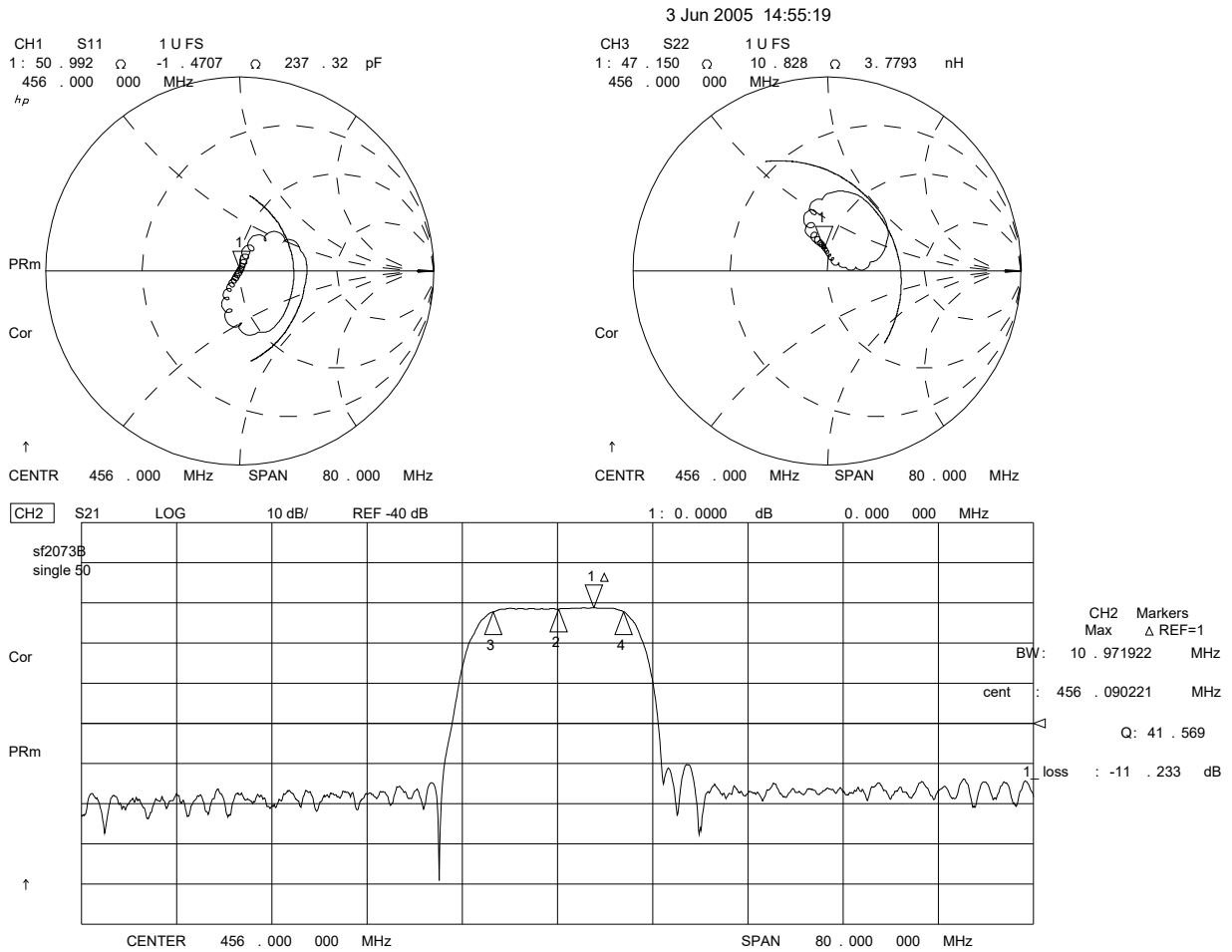
I. Impedance Matching for Differential 200 Ohm Load: Coilcraft Inductors (SAW Matched to 200 Ohms Balanced, 4:1 Transformers Account for 2dB of Loss)



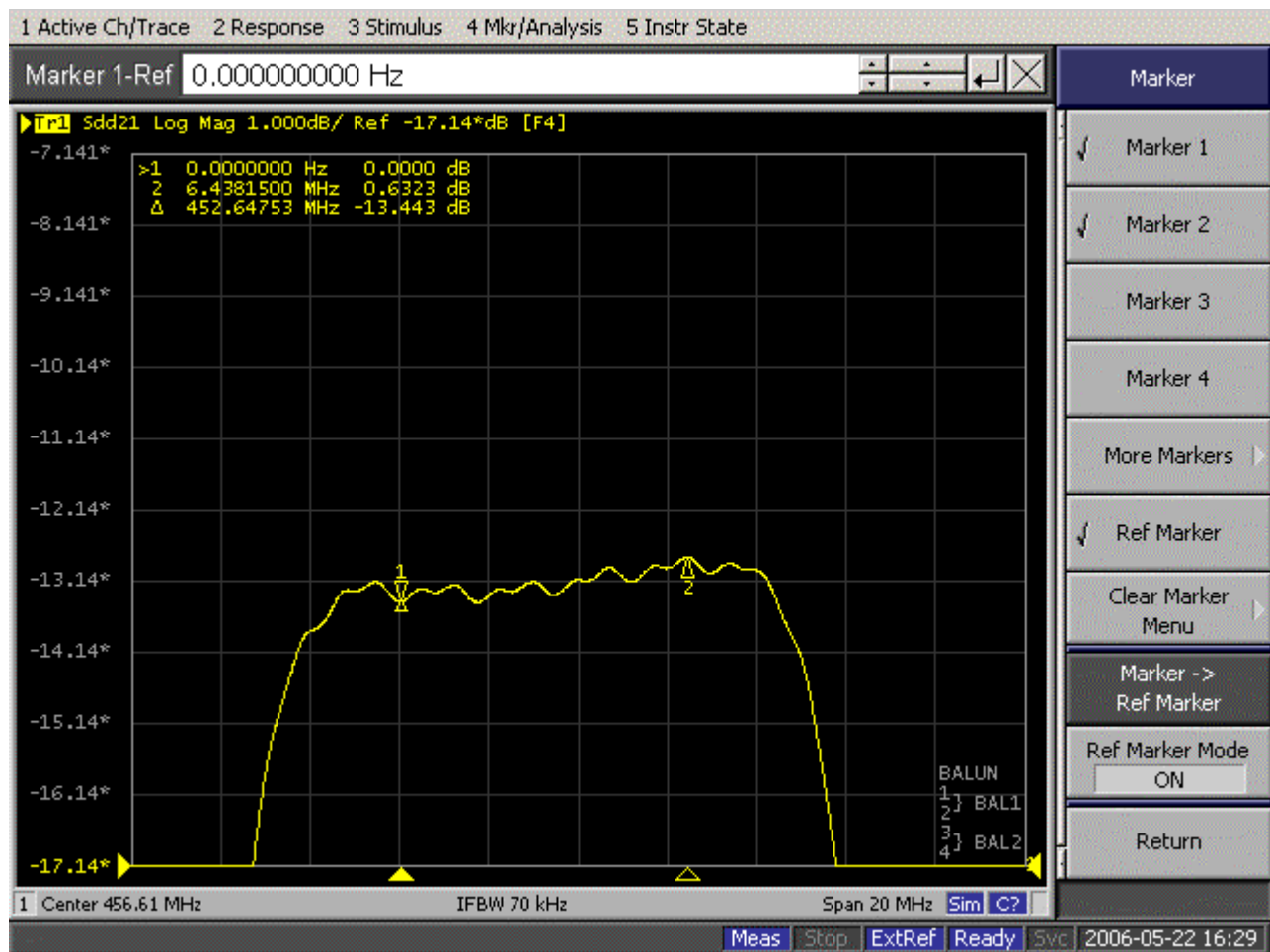
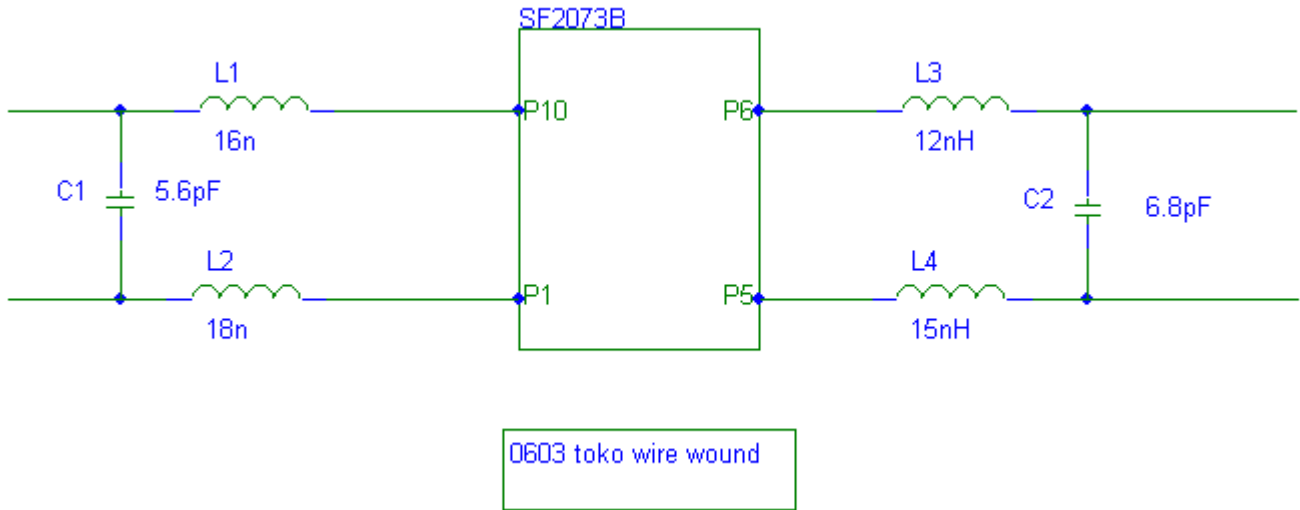
II. Impedance Matching for Single Ended 50 Ohm load

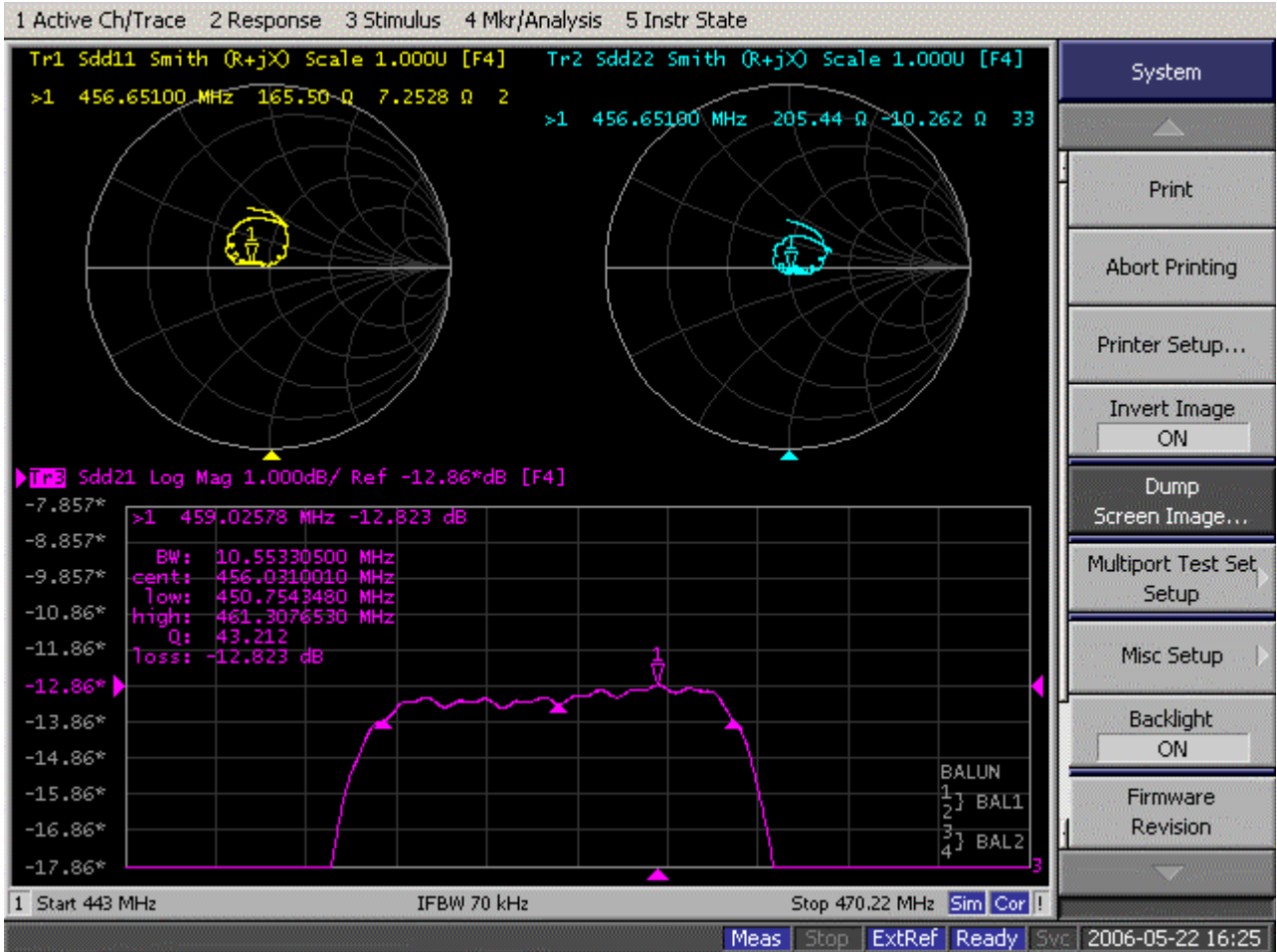


II. Impedance Matching for Single Ended 50 Ohm load (continued)



III. Impedance Matching on SMI Radio Board: SMI 7035

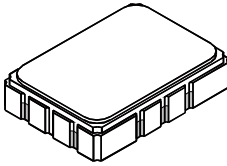




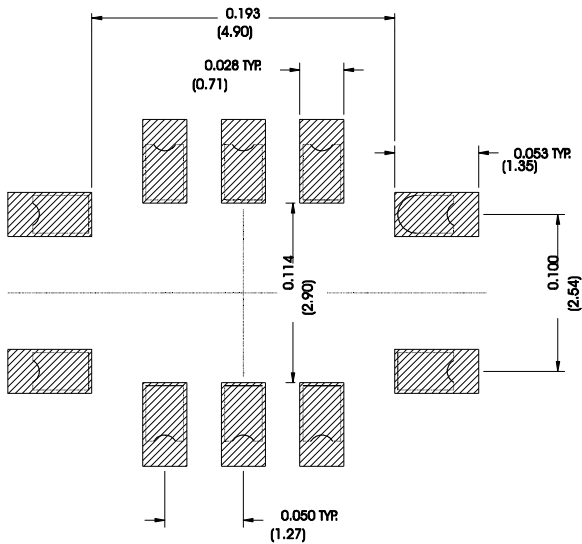
SMP-03 Case

10-Terminal Ceramic Surface-Mount Case

7 x 5 mm Nominal Footprint



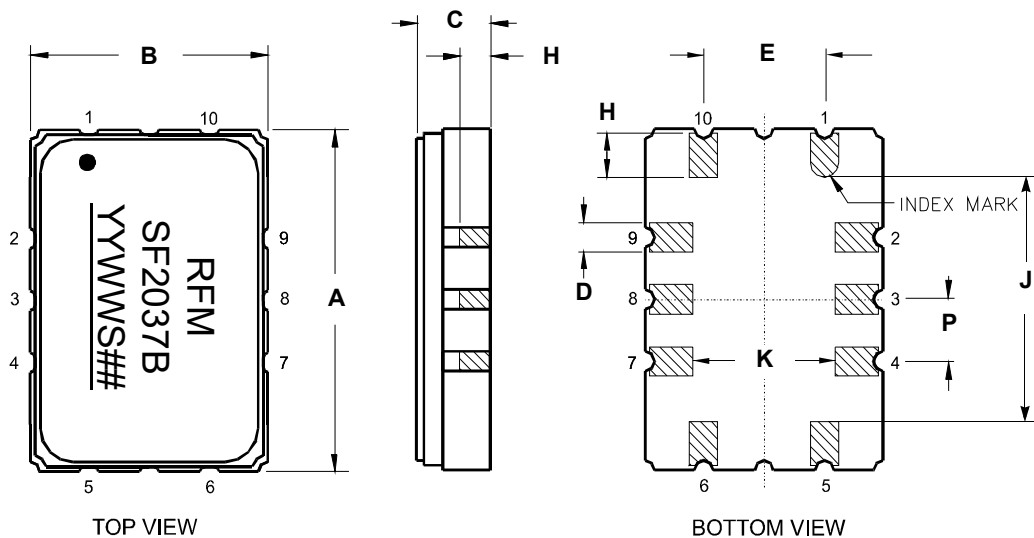
Recommended PCB Footprint



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	1.50	1.65	2.00	0.059	0.065	0.079
D	.47	0.60	.73	0.019	0.024	0.029
E	2.41	2.54	2.67	0.095	0.100	0.105
H	0.87	1.0	1.13	0.034	0.039	0.044
J	4.87	5.00	5.13	0.192	0.197	0.202
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

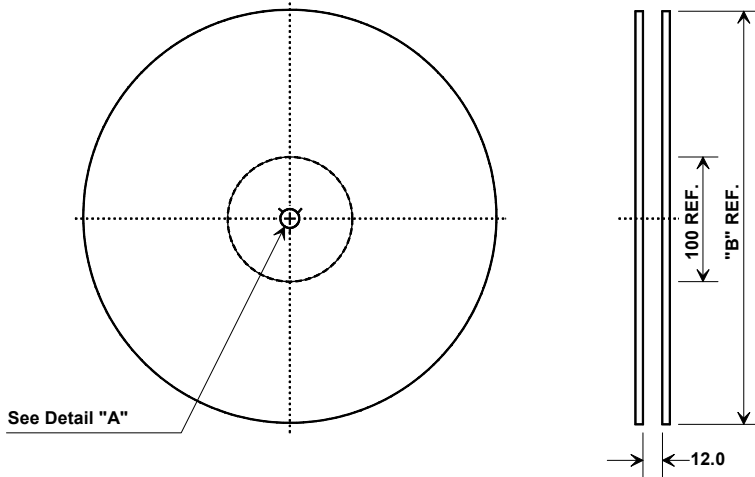
Materials	
Solder Pad Termination	Au plating 30 - 60 μinches (76.2-152 μm) over 80-200 μinches (203-508 μm) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 μinches Thick
Body	Al ₂ O ₃ Ceramic

Electrical Connections		
Connection		Terminals
Port 1	Input or Return	10
	Return or Input	1
Port 2	Output or Return	5
	Return or Output	6
Ground		All others
Single Ended Operation		Return is ground
Differential Operation		Return is hot

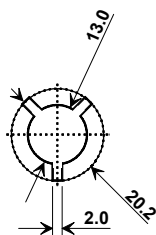


Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481

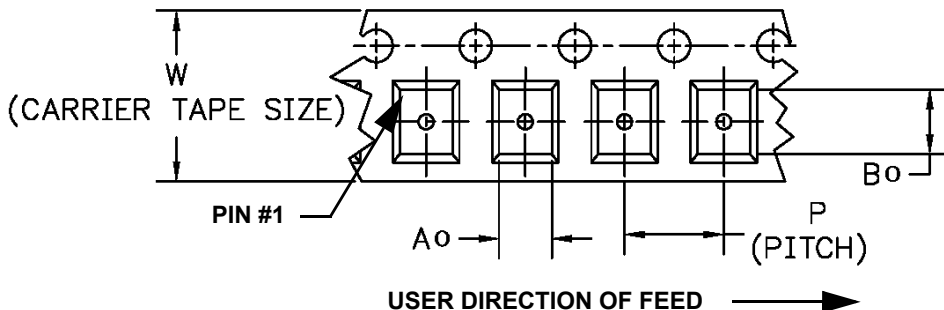
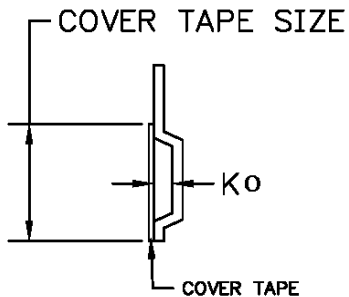


"B"		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000



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



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.

