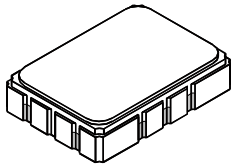
RFM
A BRAND OF AKOUSTIS

RoHS compliant

SF2073B

456.00 MHz SAW Filter

- ***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***



SMP-03

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 ±5.0 MHz	$\Delta\alpha$			0.6	1.5	dB p-p
	f_N ±5.2 MHz				0.8	2.5	
Absolute Group Delay (at f_N)					0.5	0.7	µs
Group Delay Variation (p-p)	f_N ±5.0 MHz				35	100	ns
Relative Attenuation	256 to 360 MHz			35	50		dB
	360 to 416.0 MHz			38	64		
	416 to 443 MHz			35	40		
	468 to 656 MHz			35	40		
	656 to 946 MHz			50	60		
Temperature Range	Operating			-40		85	°C
	Storage			-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 Matching .....page 2

II. 50 ohm Matching .....page 4

III. SMI 7035 Matching .....page 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.

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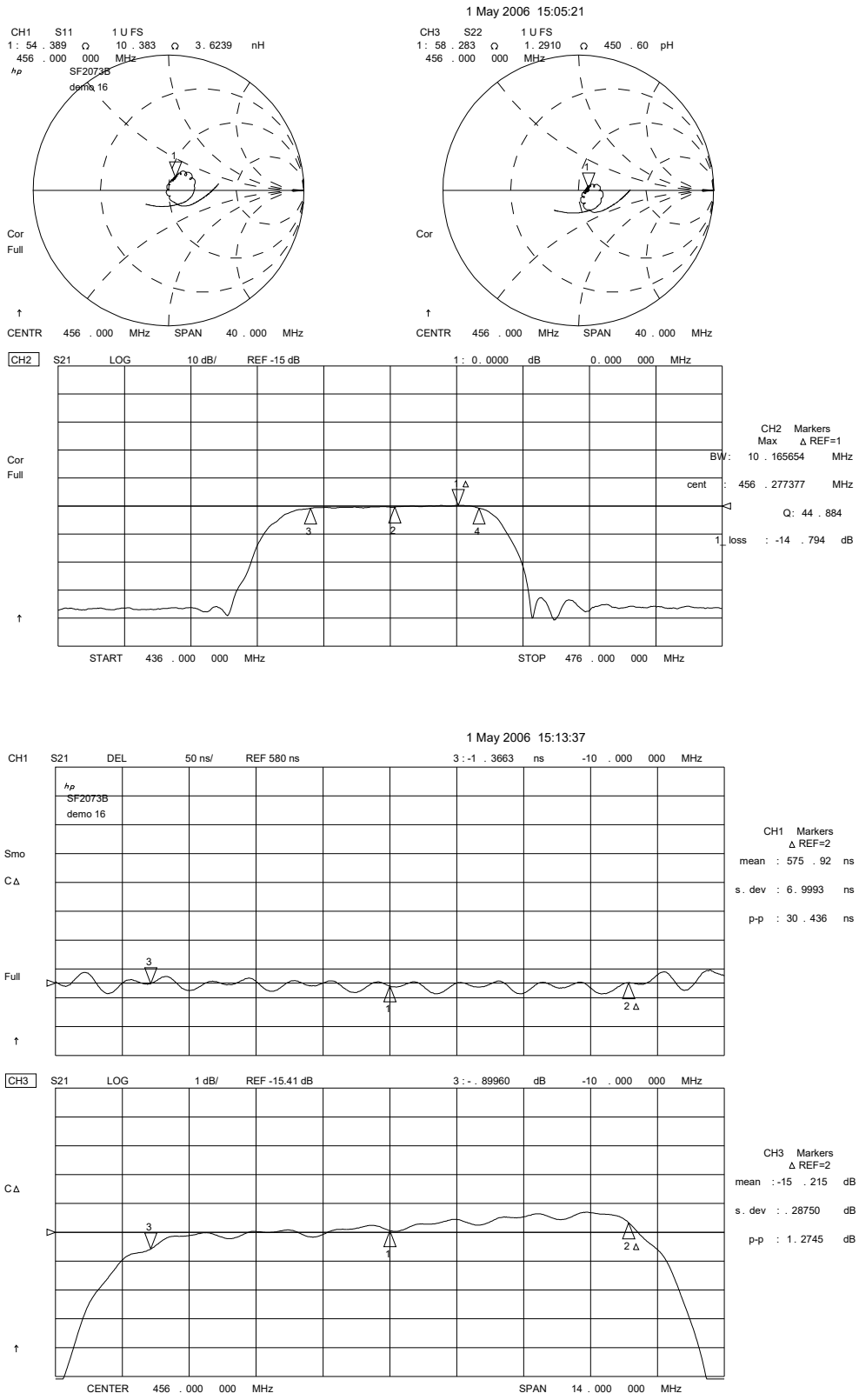
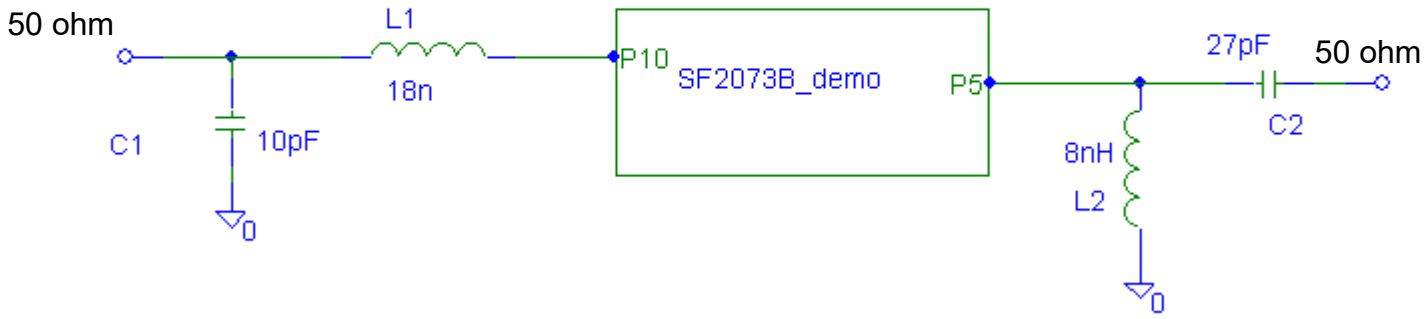
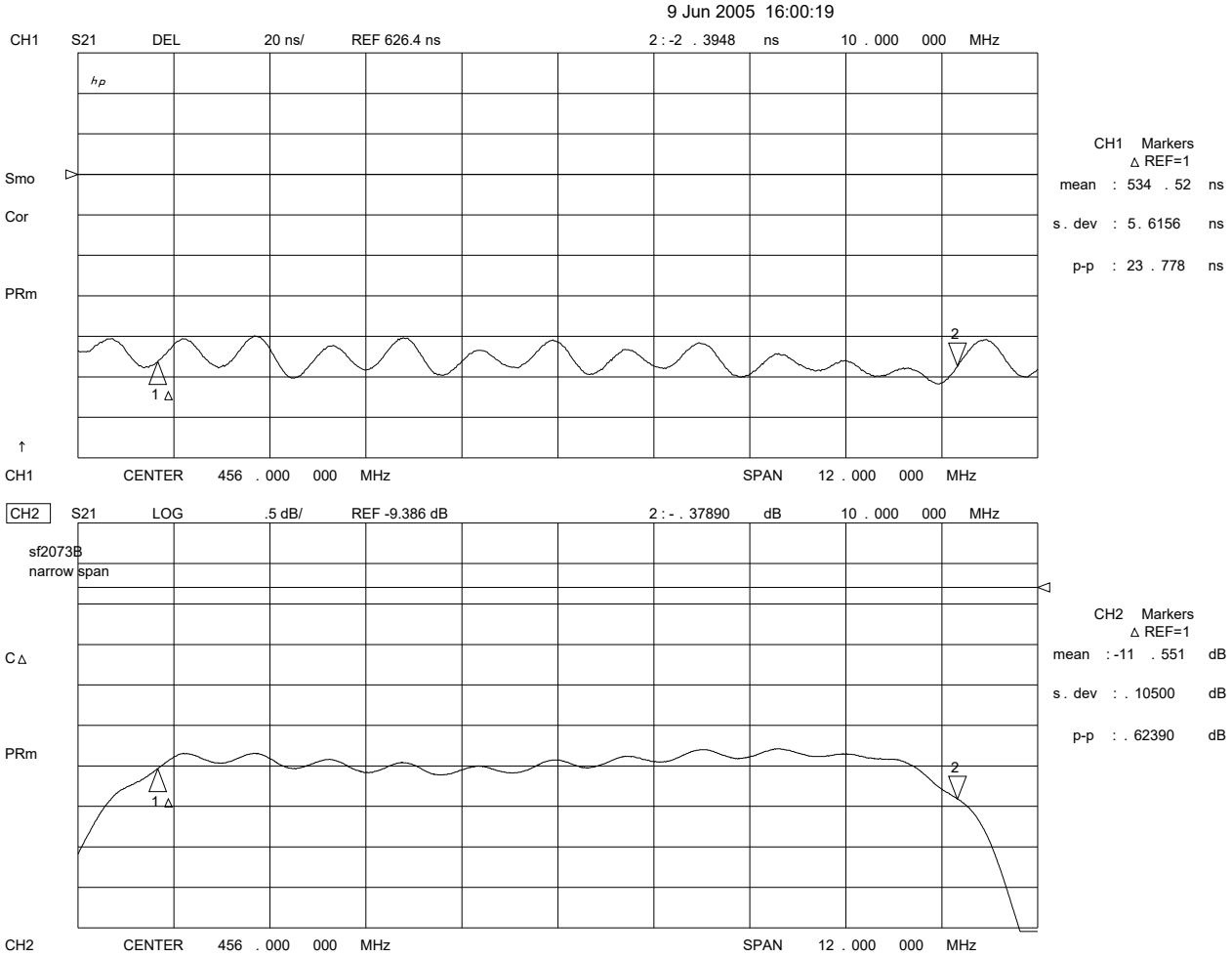
I. Impedance Matching for Differential 200 Ohm Load: Coilcraft Inductors (SAW Matched to 200 Ohms Balanced, 4:1 Transformers Account for 2dB of Loss)



II. Impedance Matching for Single Ended 50 Ohm load





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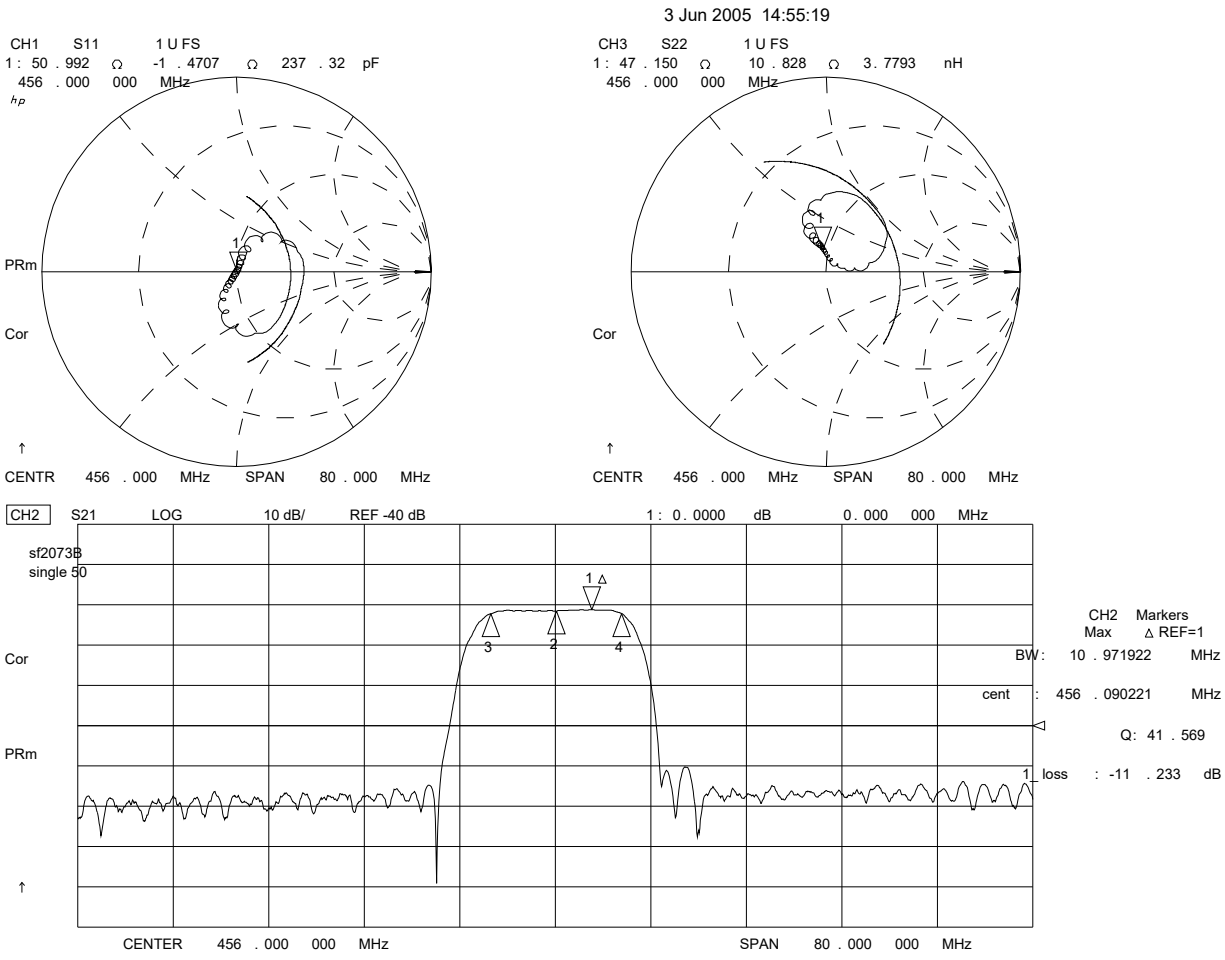
II. Impedance Matching for Single Ended 50 Ohm load (continued)



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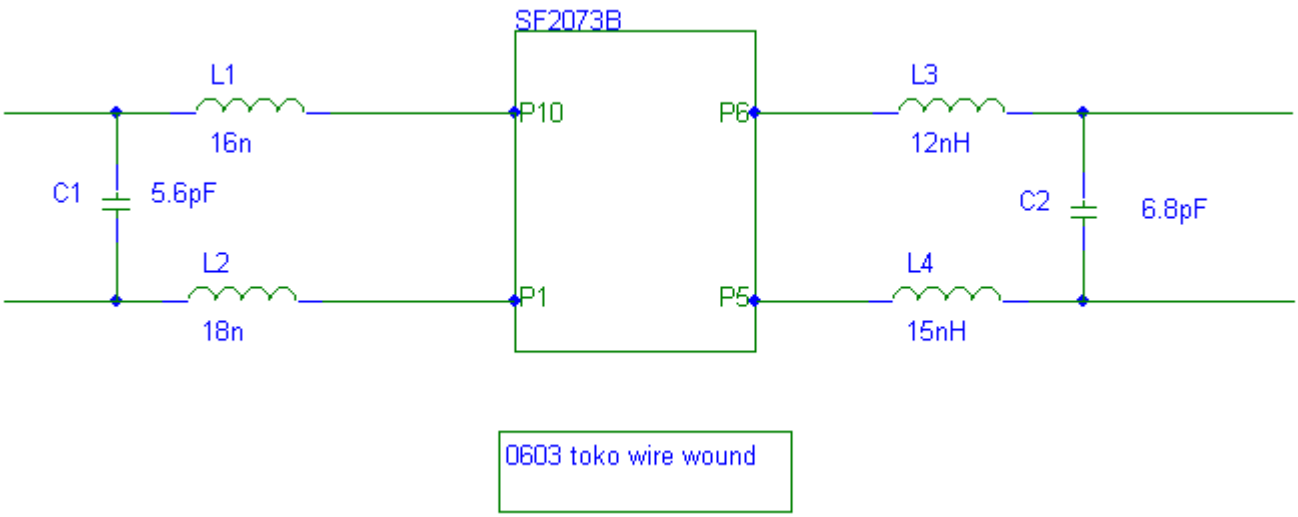
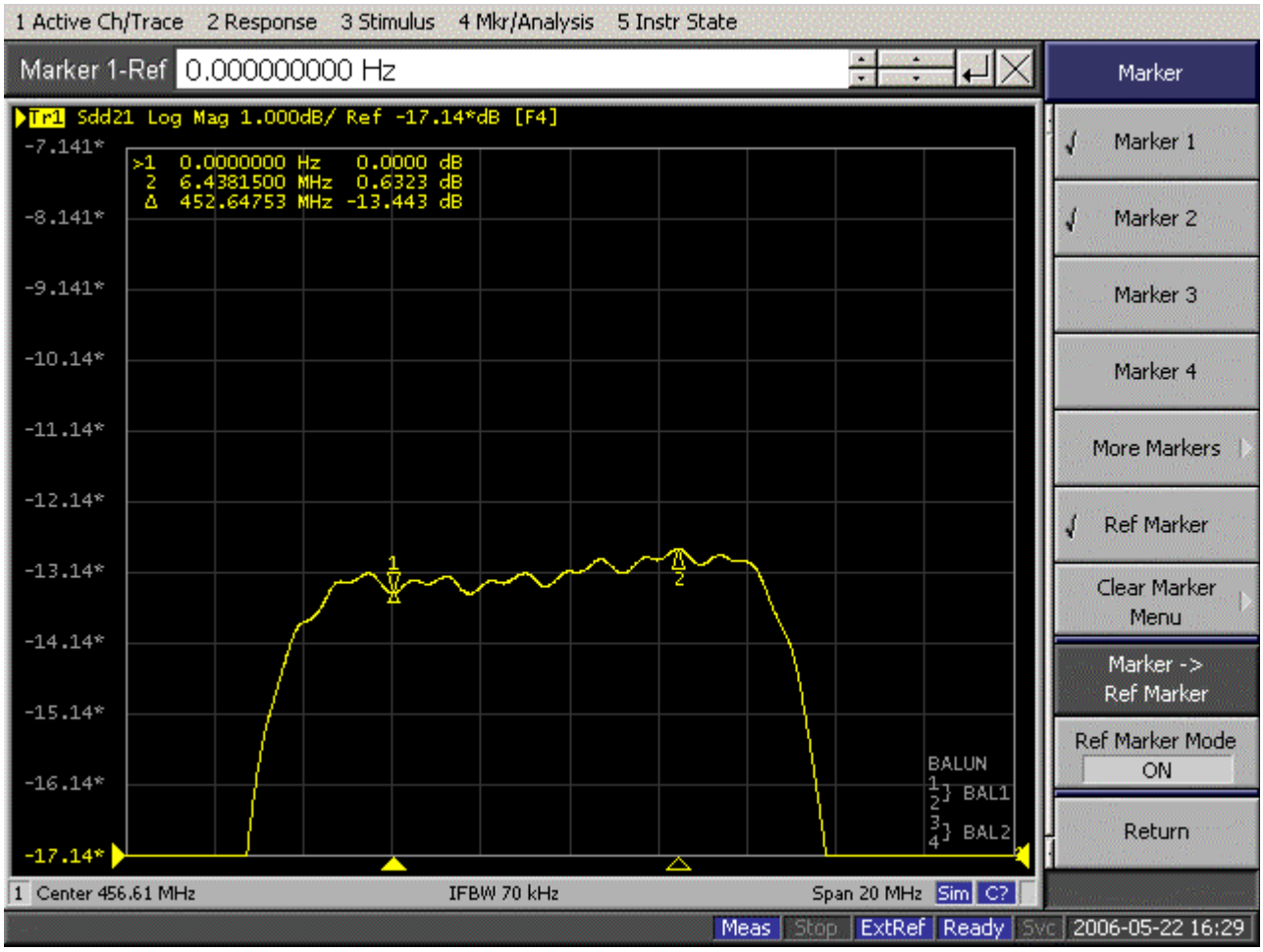
III. Impedance Matching on SMI Radio Board: SMI 7035





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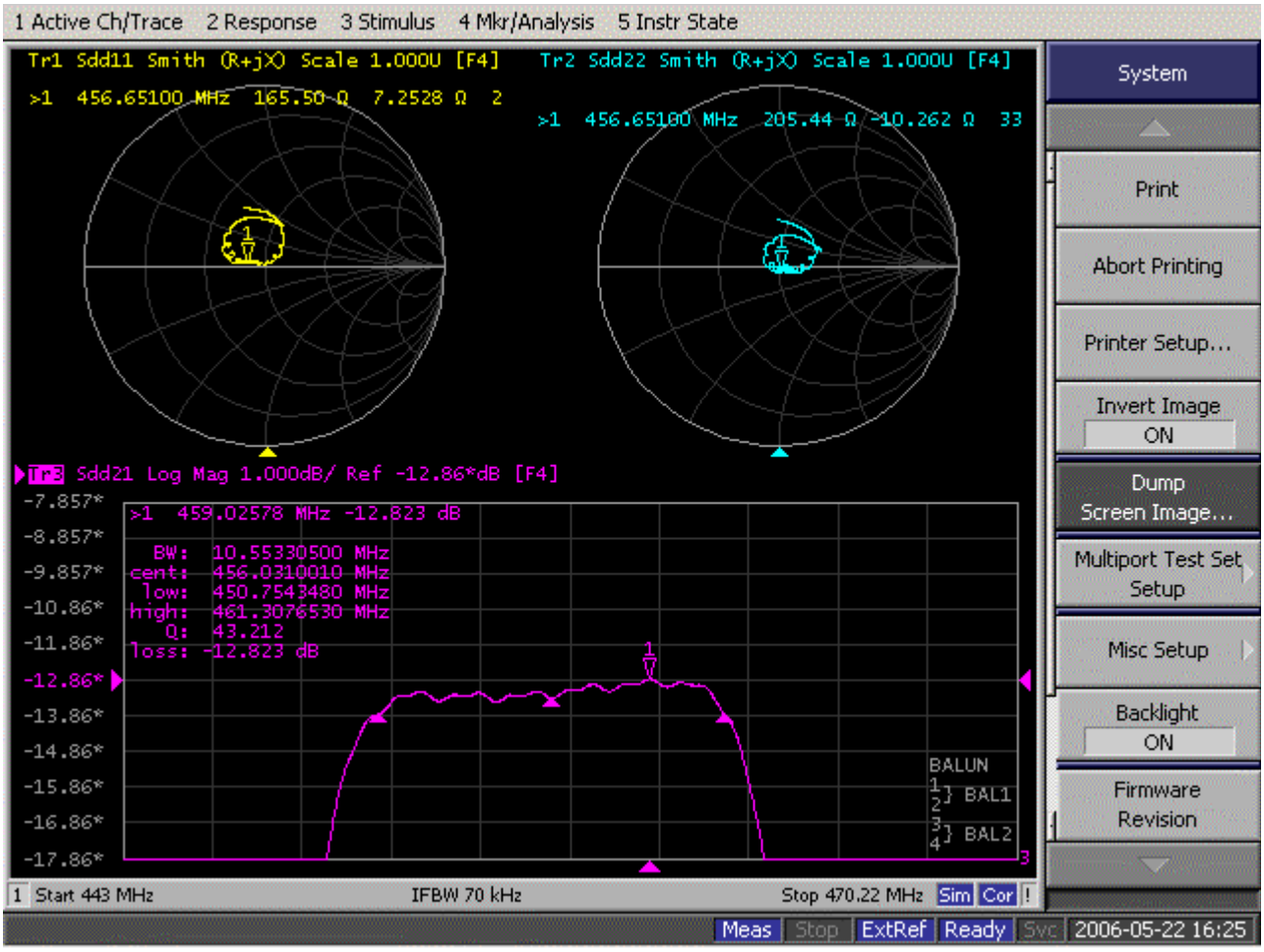

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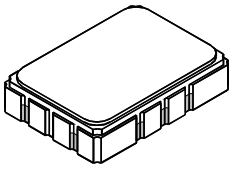
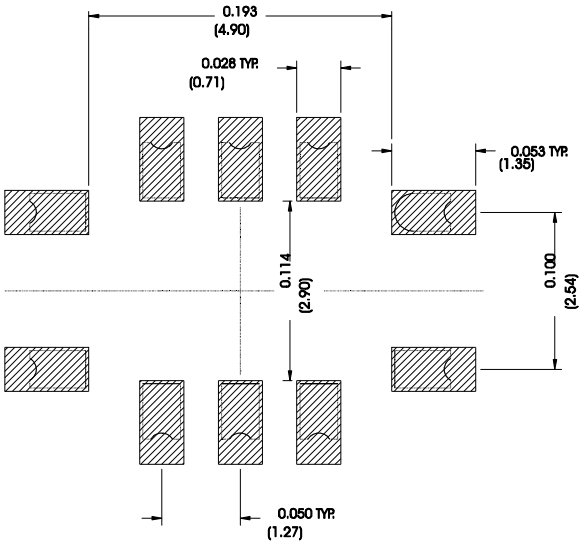
SMP-03 Case

10-Terminal Ceramic Surface-Mount Case

7 x 5 mm Nominal Footprint



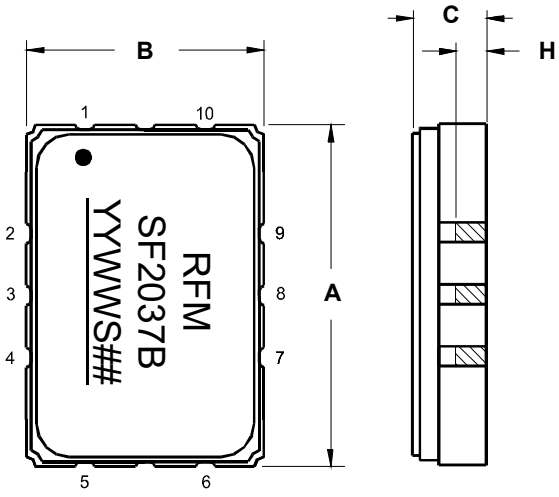
Recommended PCB Footprint

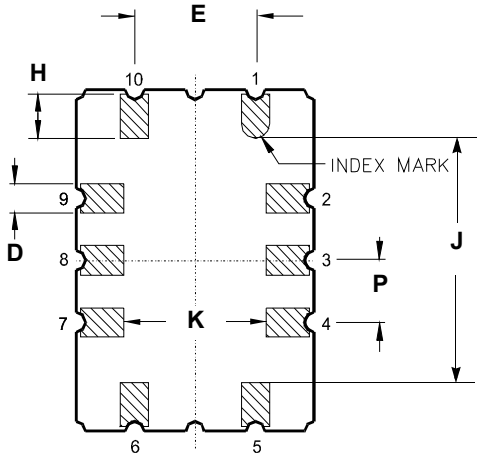


Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	6.80	7.00	7.20	0.268	0.276	0.283
B	4.80	5.00	5.20	0.189	0.197	0.205
C	1.50	1.65	2.00	0.059	0.065	0.079
D	.47	0.60	.73	0.019	0.024	0.029
E	2.41	2.54	2.67	0.095	0.100	0.105
H	0.87	1.0	1.13	0.034	0.039	0.044
J	4.87	5.00	5.13	0.192	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_2O_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**





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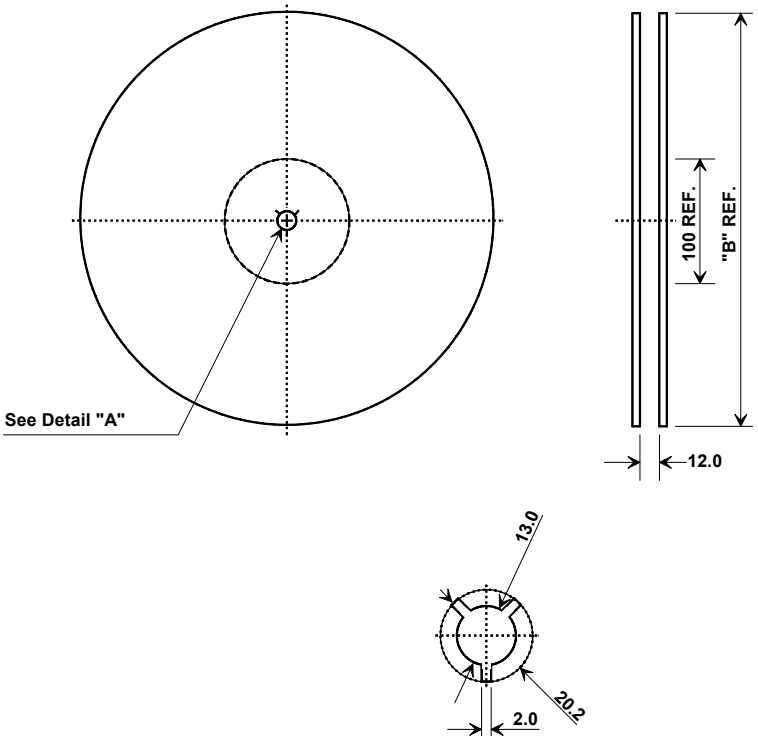
Tape and Reel Specifications

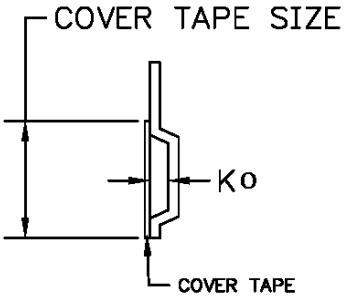
Tape and Reel Standard per ANSI/EIA-481

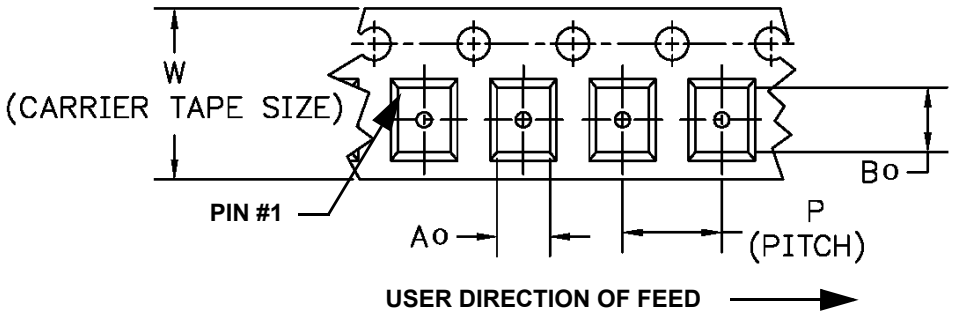


"B "		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000

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





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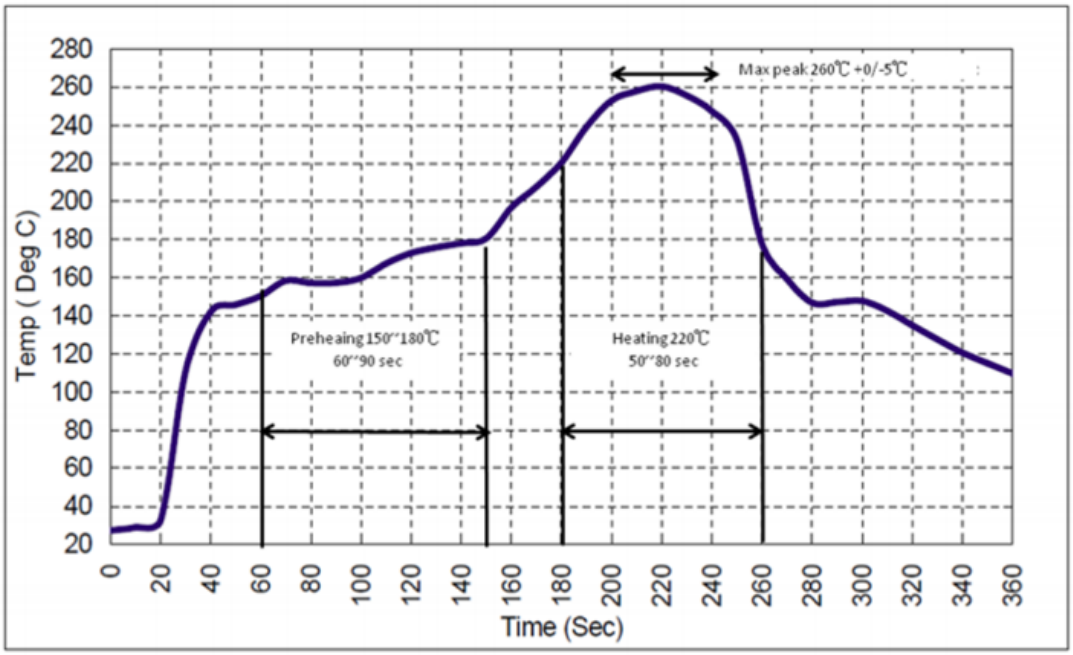
Recommended Reflow Profile

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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