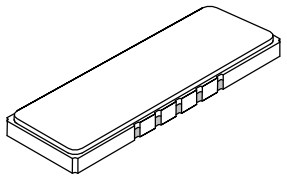
RFM products are now Murata products.

SF1194A

167 MHz SAW Filter

- ***Low Insertion Loss***
- ***Excellent Size-to-Performance Ratio***
- ***Hermetic SMP-75 Surface-Mount Case***
- ***Single-Ended or Differential Input and Output***
- ***Complies with Directive 2002/95/EC (RoHS)***



SMP-75

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Max. DC voltage between any 2 terminals	30	VDC
Temperature Range	-5 to +85	°C
Suitable for lead-free soldering - Max. Soldering Profile	260°C for 30 s	

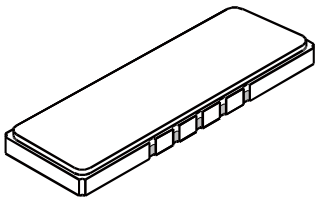
Characteristic		Sym	Notes	Min	Typ	Max	Units
Center Frequency		f_O	1		167		MHz
Maximum Insertion Loss 167 ± .075 MHz		IL				7.0	dB
	2.0 dB Bandedges					± .200	MHz
	17 dB Bandedges					± .400	MHz
	36 dB Bandedges					± .600	MHz
	41 dB Bandedges					± .800	MHz
Ultimate Rejection	30 to 147 MHz			70			dB
	147 to 165.4 MHz			41			dB
	168.6 to 187 MHz			41			dB
	187 to 276 MHz			70			dB
	276 to 278 MHz			50			dB
	278 to 2000 MHz			70			dB
Amplitude Variation	167 ± 0.75 MHz					1.5	dB p-p
Amplitude Ripple	167 ± 0.75 MHz					1	dB p-p
Absolute Group Delay	167 ± 0.75 MHz				2.3	2.6	µsec
Group Delay Variation	167 ± 0.75 MHz					400	nsec
Maximum RF Input Power						22	dBm
Input IMR	For two -20dBm input signals At 167 + .800 MHz And 167 + 1.600 MHz Or at 167 -.800 MHz And 167 -1.600 MHz			100			dB
Input Return Loss	167 ± .075 MHz			15			dB
Output Return Loss	167 ± .075 MHz			10			dB
Source/Load Impedance		Single-Ended or Differential Input / Output					Ohm
Matching Components		Fixed value, external Q 40-50					
Case Style			4	SMP-75 19 x 6.5 mm Nominal Footprint			
Lid Symbolization (YY = year, WW = week)				RFM SF1194A YYWW			

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, fc.
3. The design, manufacturing process, and specifications of this filter are subject to change.
4. Tape and Reel Standard ANSI / EIA 481.
5. US and international patents may apply.
6. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd
7. Electrostatic Sensitive Device. Observe precautions for handling.

SMP-75 Case

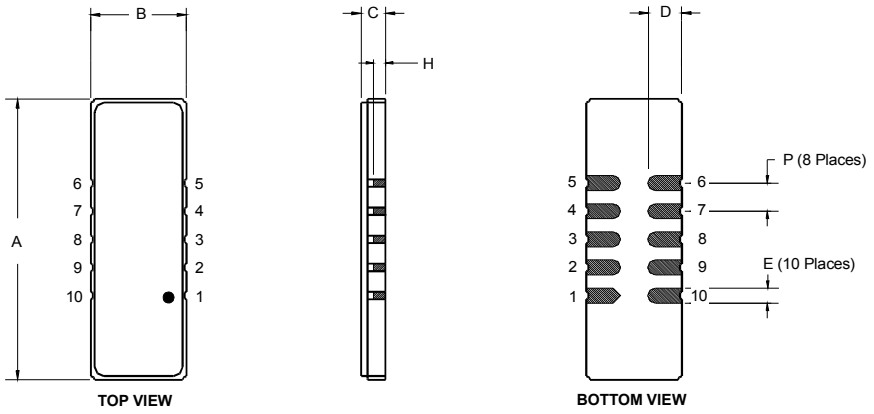
10-Terminal Ceramic Surface-Mount Case
19 x 6.5 mm Nominal Footprint



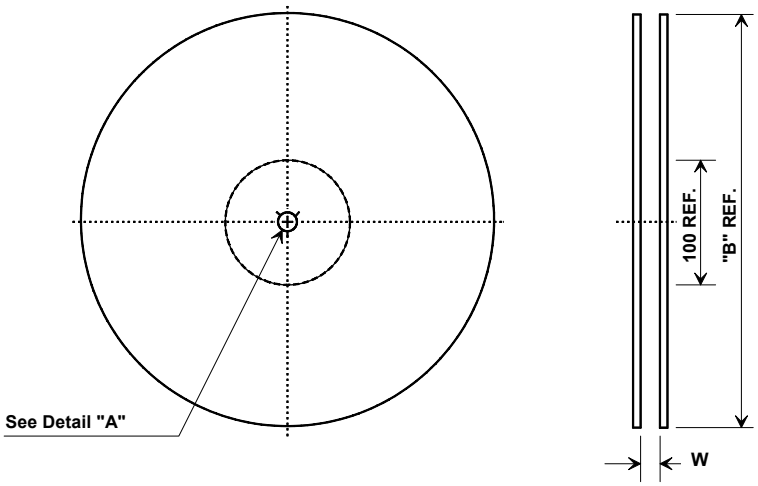
Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	18.80	19.00	19.30	0.740	0.748	0.760
B	6.30	6.50	6.80	0.248	0.256	0.268
C		1.75	2.00		0.069	0.079
D		2.29			0.090	
E		1.02			0.040	
H		1.0			0.039	
P		1.905			0.075	

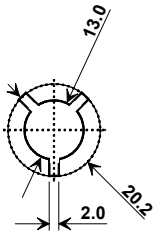
Materials	
Solder Pad Termination	Au plating 30 - 60 µinches (76.2-152 µm) over 80-200 µinches (203-508 µm) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 µinches Thick
Body	Al_2O_3 Ceramic
Pb Free	

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 Packaging with the following conditions:

Tape Width: 32 mm

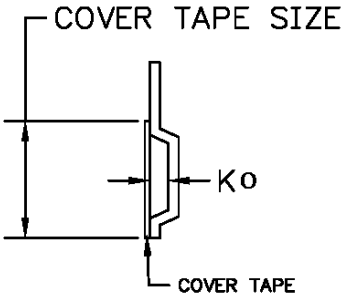
Tape Pitch (part to part): 12 mm

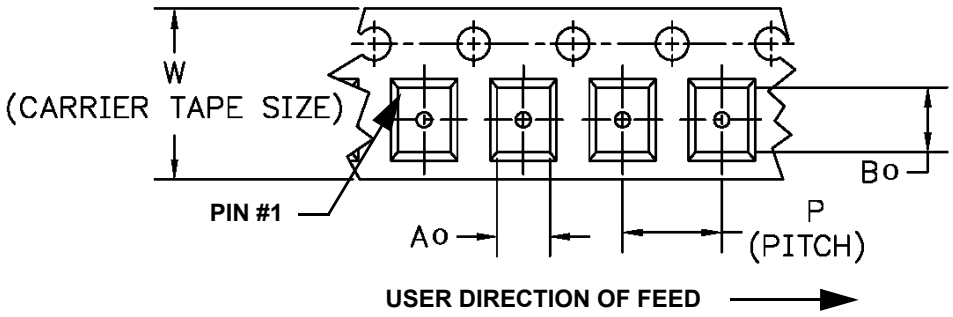
Component Orientation: Parts shall be oriented with the narrow side closest to the tape's round sprocket holes on the tape's trailing edge.

"B " Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	1000

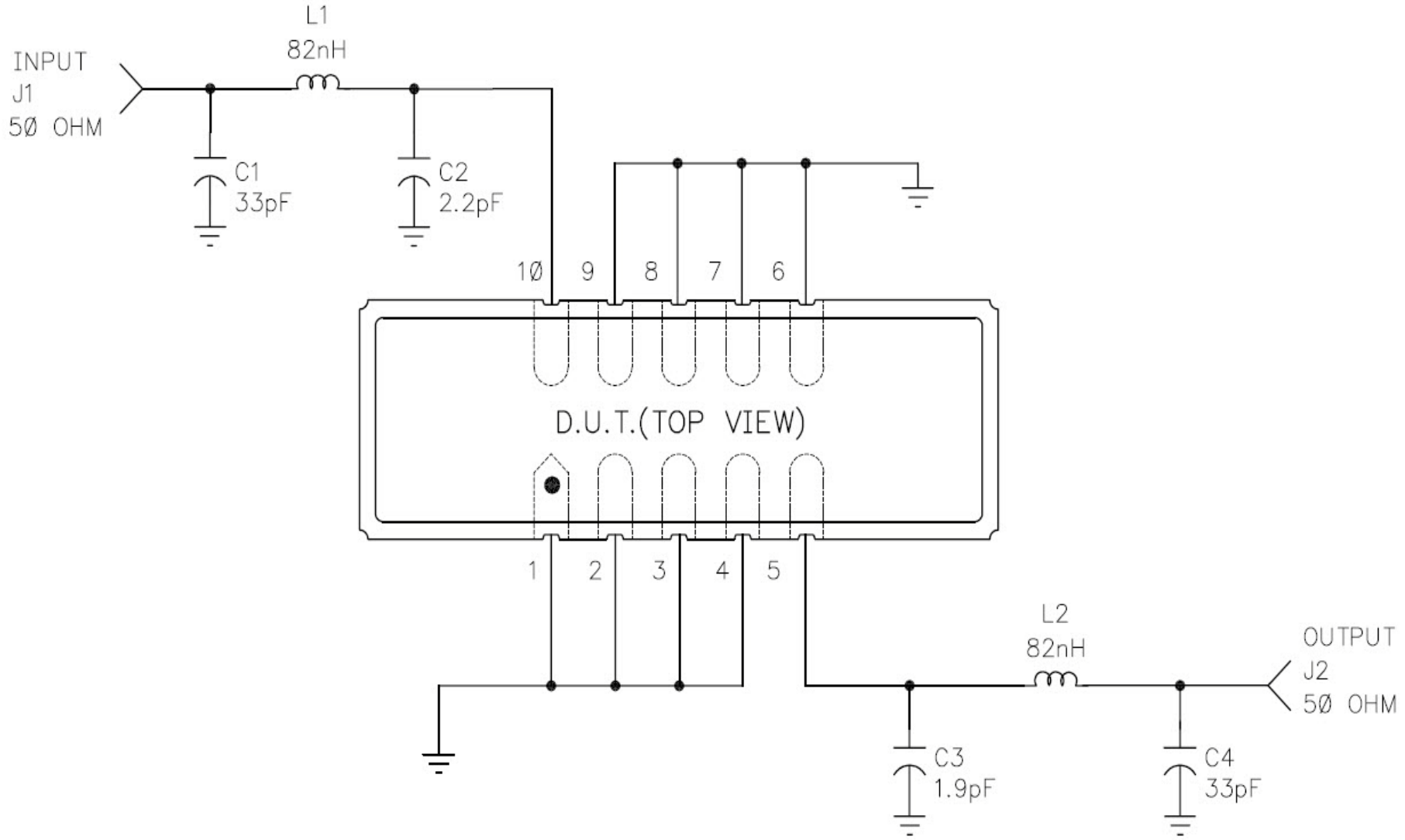
COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions		Cover Tape
Ao	.276 ± .004 (7.01)	25.5 mm
Bo	.768 ± .004 (19.51)	
Ko	.088 ± .004 (2.24)	
Pitch	12mm	
W	32mm	





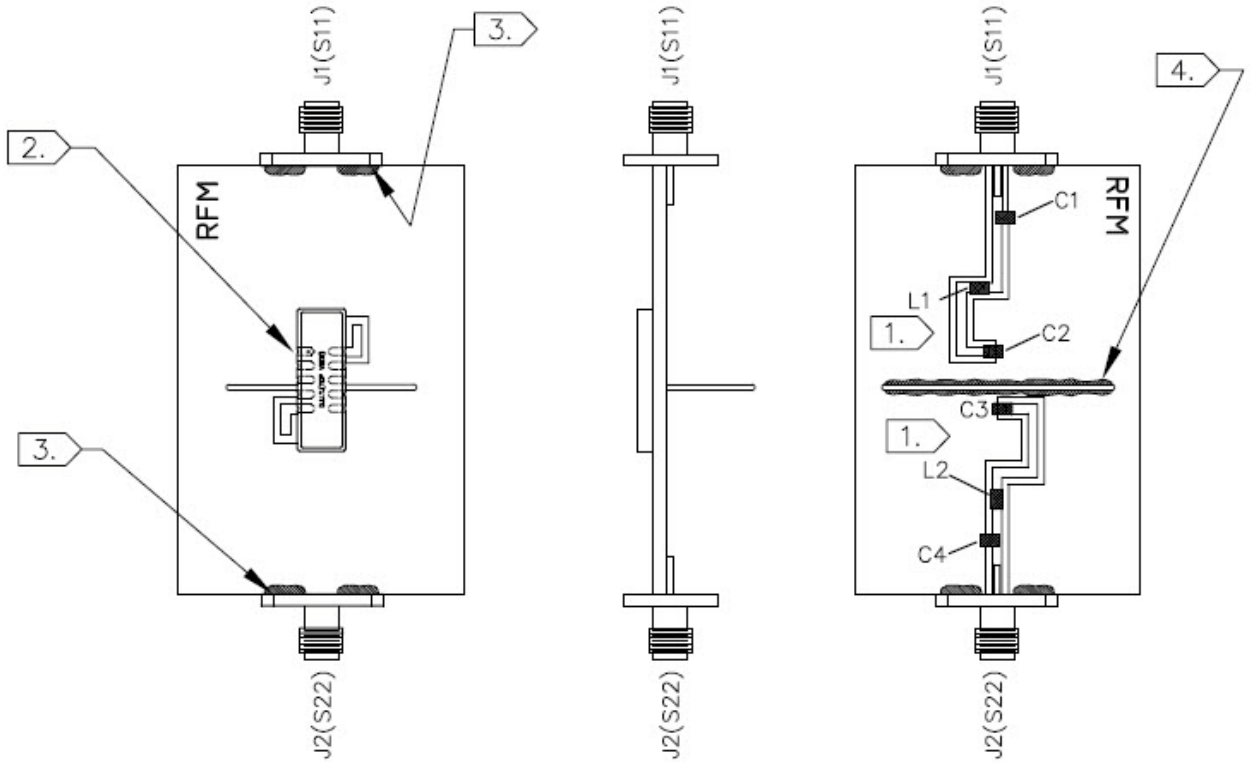
Assembly Diagram



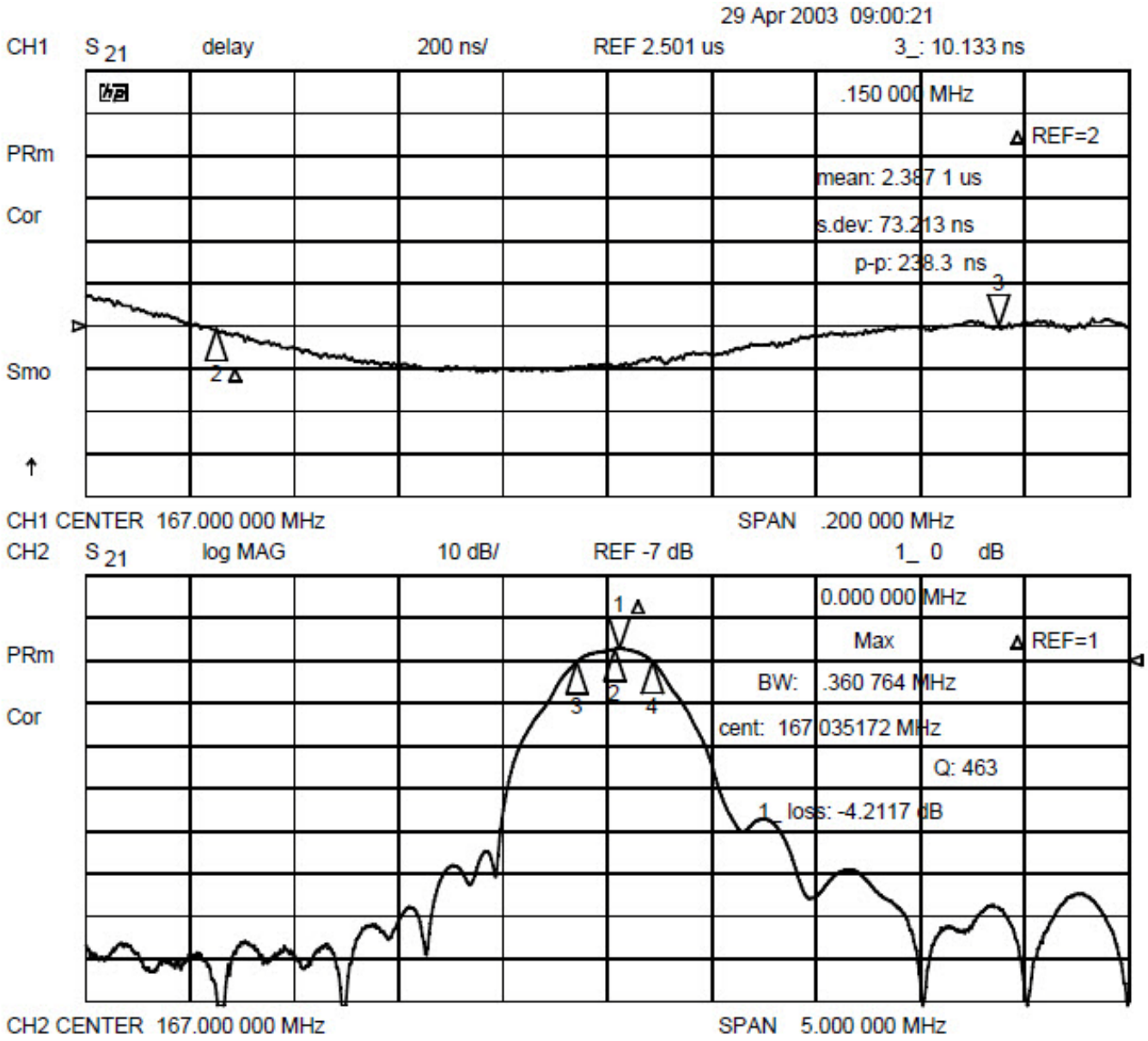
Inductor Pairs

NOTES:

1. NOTE PROPER ORIENTATION OF INDUCTOR PAIRS L1 & L2. THEY ARE TO BE POSITIONED 90° TO EACH OTHER.
2. SOLDER SURFACE MOUNT PACKAGE TO TEST SIDE OF PCB. SOLDER 10 PLACES AS SHOWN. NOTE PIN 1 INDICATOR.
3. SOLDER CONNECTOR FLANGES ON BOTH SIDES OF PCB.
4. SOLDER SHIELD AS SHOWN.



Frequency Characteristics



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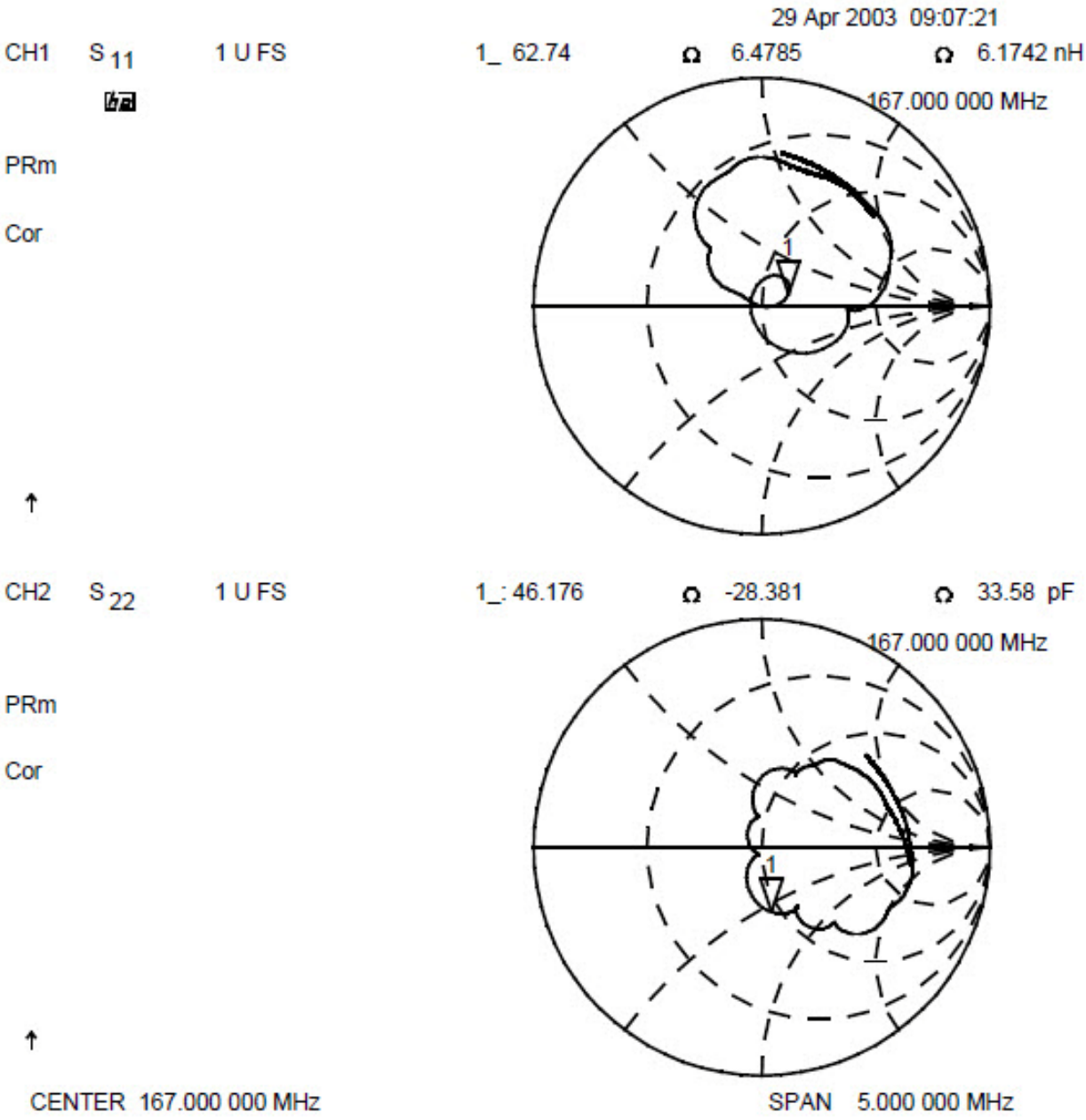

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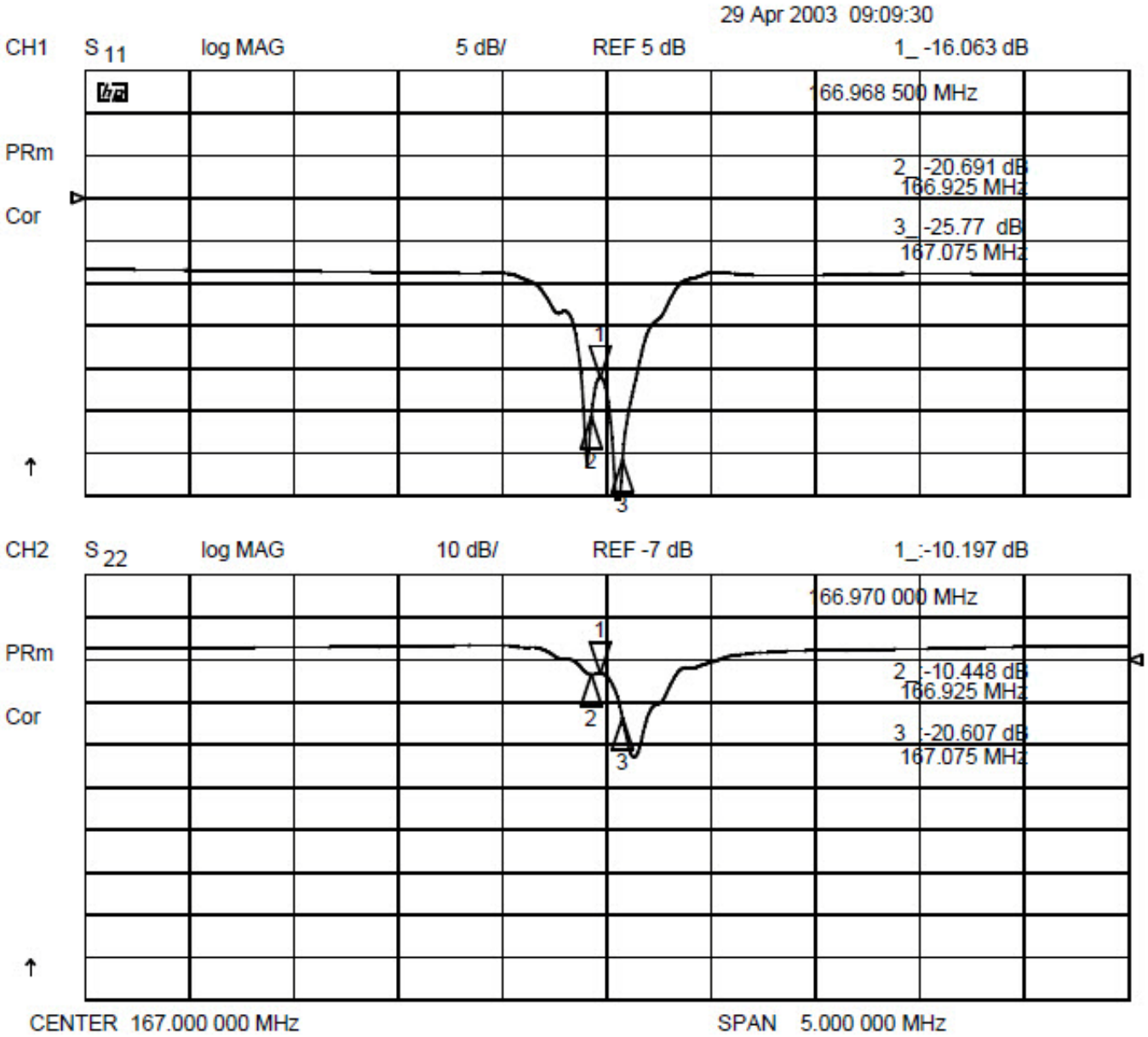

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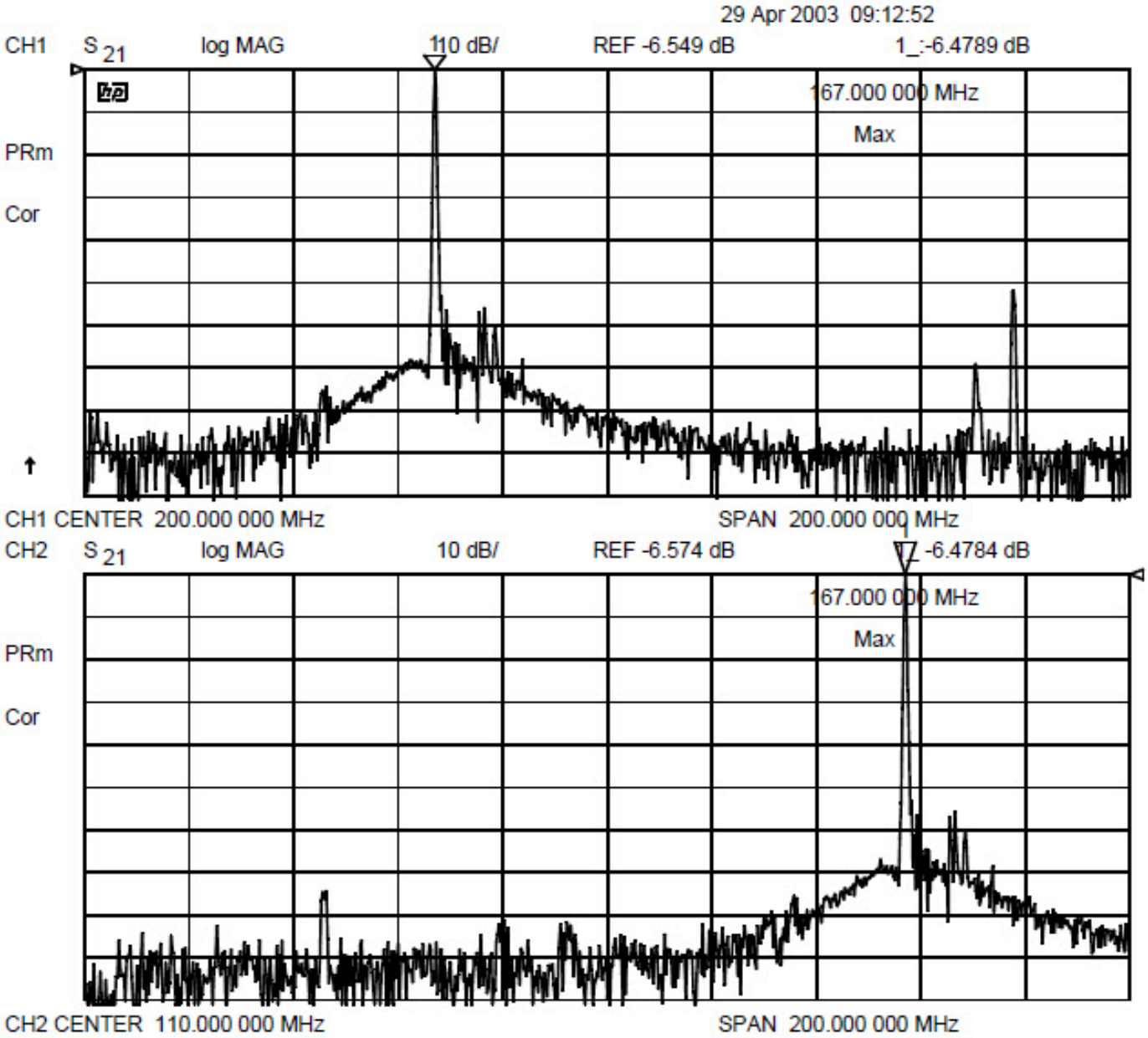

Frequency Characteristics