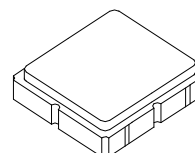




- **Designed for Front End GPS Applications**
- **Low Insertion Loss**
- **3.0 x 3.0 x 1.3 mm Surface-Mount Case**
- **No Matching Circuit Required**

SF1186B-1**1575.42 MHz
SAW Filter****SM3030-6****Absolute Maximum Ratings**

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Max. DC voltage between any 2 terminals	0	VDC
Storage Temperature Range	-50 to +100	°C
Max Soldering Profile	265°C for 10 s	

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Operating Frequency	f_C	1	1575.42			MHz
Passband	IL			2.6	3.5	dB
Amplitude Ripple p-p across $F_c \pm 1.0$ MHz				0.1	1.5	
Attenuation			35	42		
1475.42 MHz			30	44		
1535.42 MHz			30	55		
1615.42 MHz			40	48		
1675.42 MHz						
VSWR across $F_c \pm 1.0$ MHz				1.5	2.5	
Source impedance	Z_S			50		Ω
Load impedance	Z_L			50		Ω
Operating Temperature	T_A	1	-40		+85	°C

Single Ended Input / Output, Impedance match	No matching network required for operation at 50 ohms
Case Style	SM3030-6 3 x 3 mm Nominal Footprint
Lid Symbolization (YY=year, WW=week)	RFM 11861 YYWWD

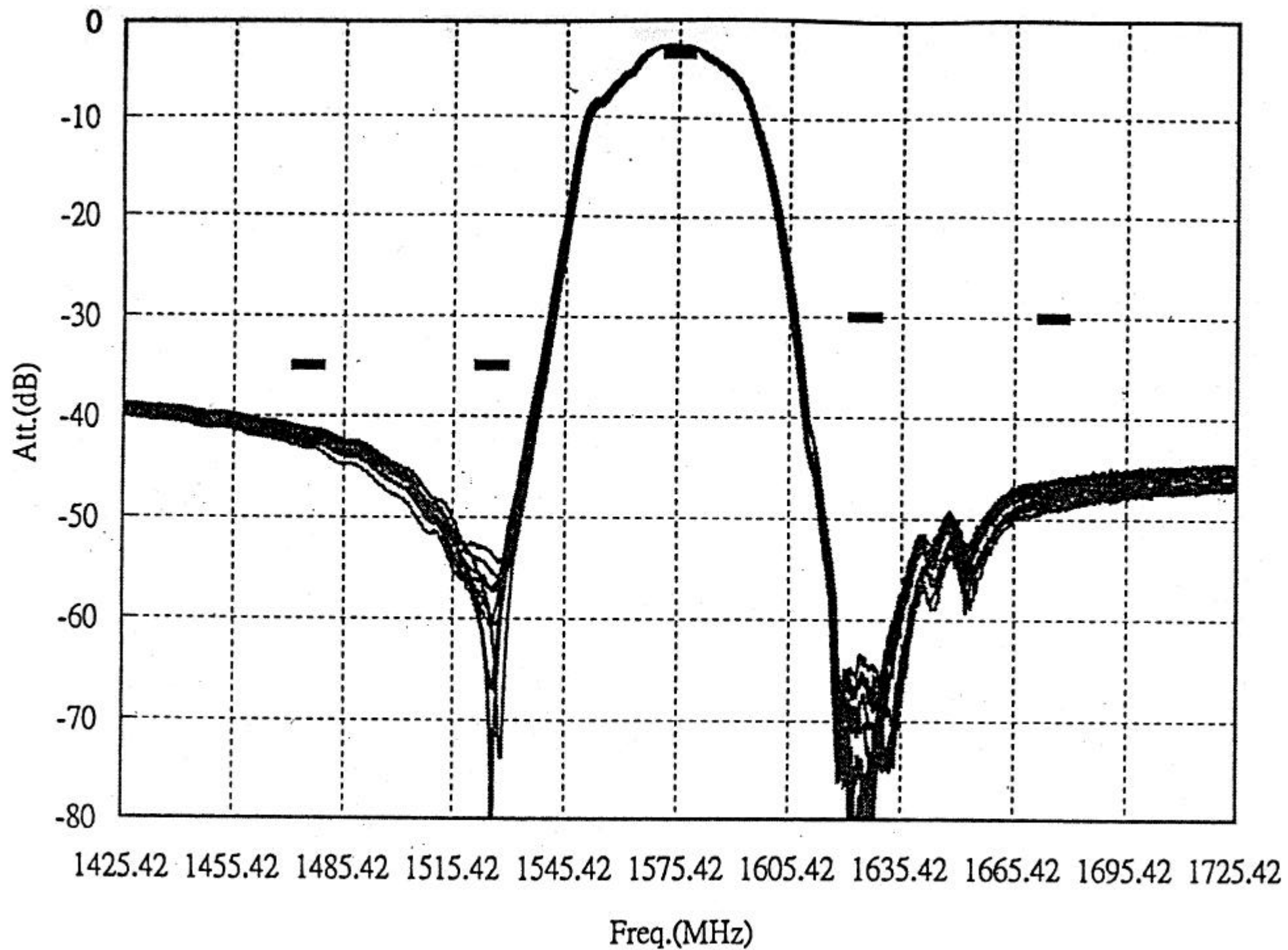
Electrical Connections

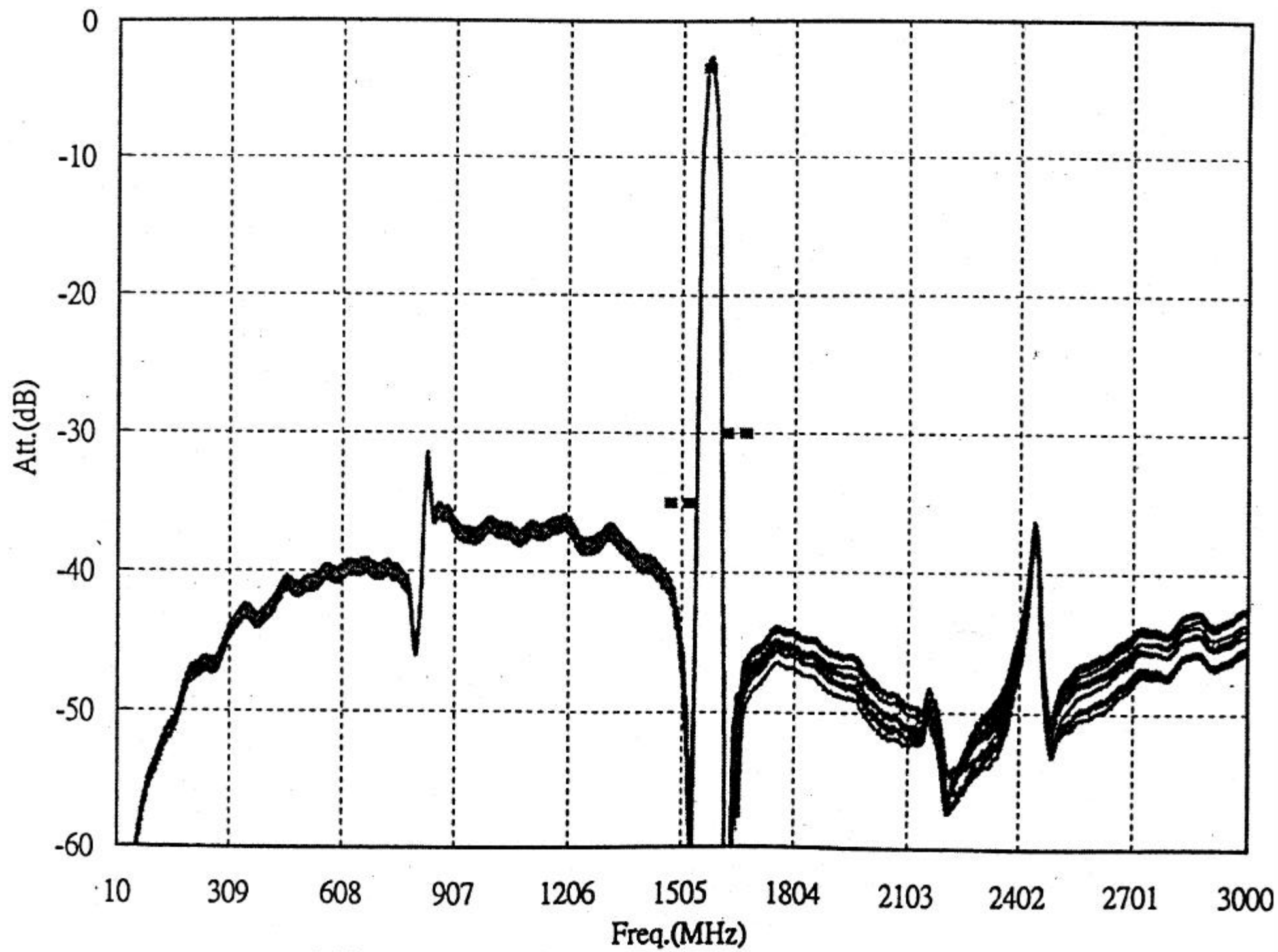
Connection	Terminals
Input	2
Output	5
Ground	All others

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, f_c .
3. Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
5. The design, manufacturing process, and specifications of this filter are subject to change.
6. 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.
7. US and international patents may apply.
8. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.
9. ©Copyright 1999, RF Monolithics Inc.
10. Electrostatic Sensitive Device. Observe precautions for handling.







A₂

29 May 2001 03:26:18

1 625 420 000 MHz

CH1 PASS

PRm

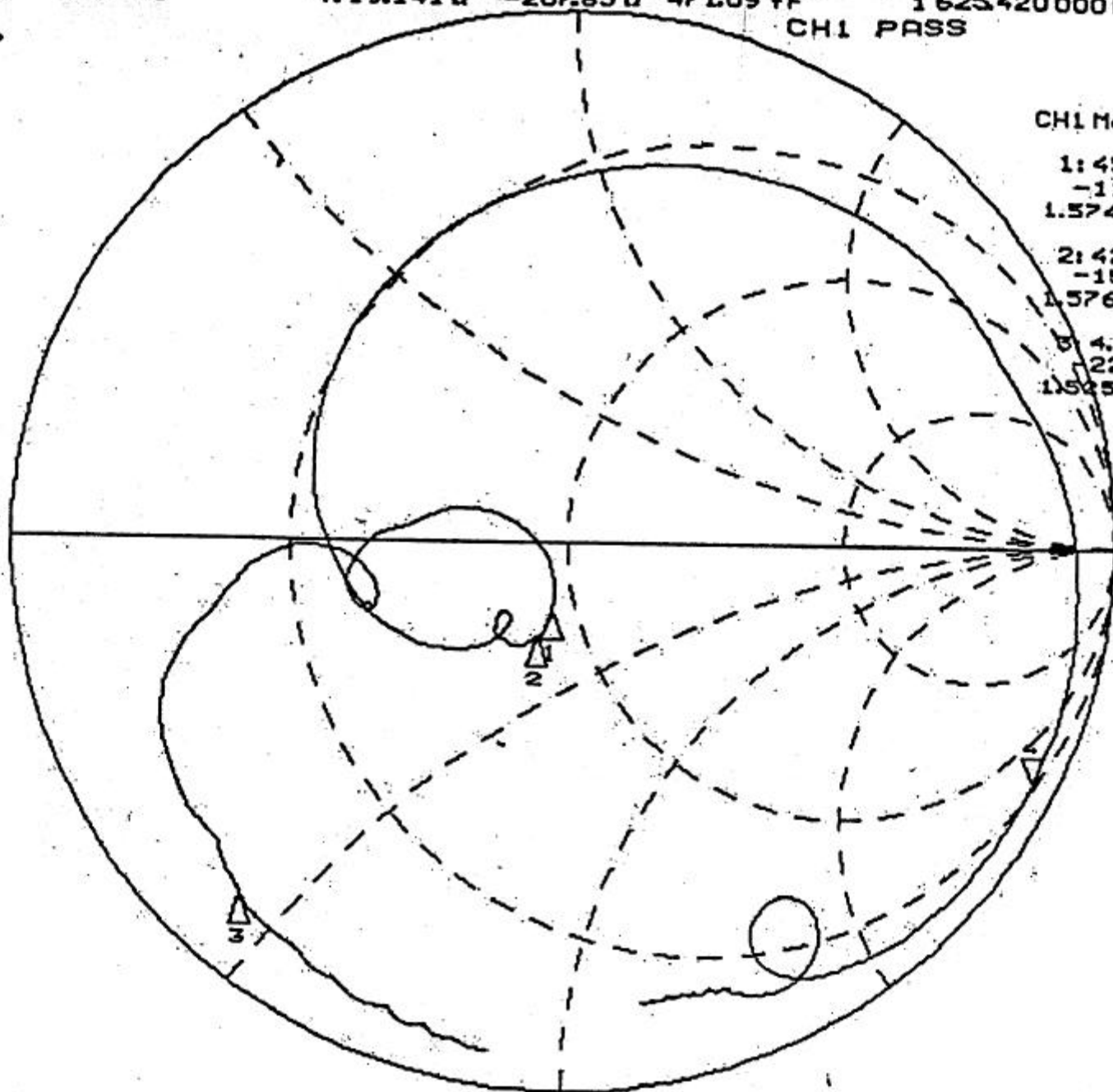
Cor:

CHI Markers

1: 45.9920
-11.6910
1.57442GHz

2:42.561 n
-15.252 n
1.57642 GHz

4.23930
221760
1152542GHz



CENTER 1 375.420 000 MHz.

SPAN 300.000 000 MHz

CH1 S22 1 U FS

4:18.8750 -208.270 470.15 fF

1625420000MHz

29 May 2001 03:26:25

CH1 PASS

PRm

Cor

CH1 Markers

1: 44.4280

-12.6990

1.57442GHz

2: 40.6660

-14.6500

1.57642GHz

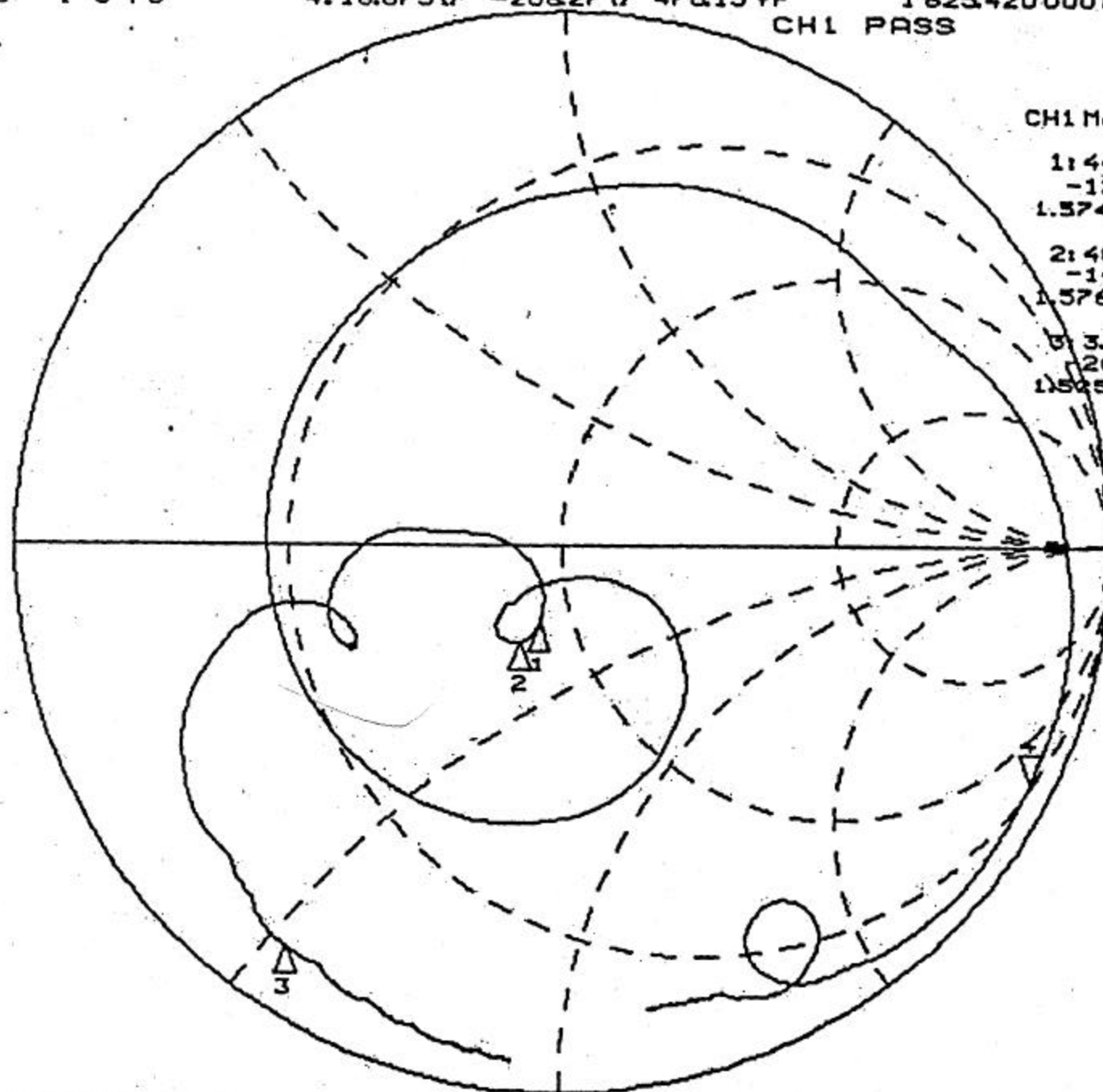
3: 3.87400

-26.1770

1.57542GHz

CENTER: 575.420000MHz

SPAN 300.000000MHz



See Detail "A"

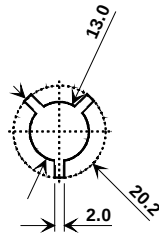
100 REF.

"B" REF.

12.0

The drawing shows a circular detail with a central hole. A vertical section line is drawn through the center. The section view on the right shows two parallel lines representing the thickness of the material. The distance between the center of the hole and the section line is labeled "100 REF.". The total width of the section is labeled "12.0". The section view is labeled "B" REF.

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

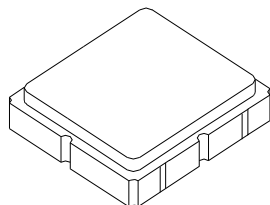


Technical drawing of a metal plate with the following dimensions and features:

- Overall Dimensions:** Width is 12.0. Total length is 1.4. A central section has a length of 5.5.
- Holes:** Eight circular holes with a diameter of $\varnothing 1.5$ are arranged in two rows of four. The horizontal spacing between hole centers is 2.0 and 4.0. The vertical spacing between the rows is 3.35.
- Pins:** Four square pins, labeled PIN #1, are located in the center of the plate. The horizontal spacing between pin centers is 3.35 and 8.0. The pin width is 1.4.
- Section A-A:** A cross-section showing a U-shaped profile with a radius of R0.3 (MAX.) and a total height of 1.4.
- Section B-B:** A cross-section showing a flat profile with a radius of R0.5 (TYP.) and a total height of 1.4.
- Other Features:** A dimension of 0.3 is shown at the top left. A dimension of 1.75 is shown at the top right. A dimension of 3.35 is shown at the bottom left. A dimension of 8.0 is shown at the bottom right. A dimension of 5.5 is shown at the bottom center. A dimension of 12.0 is shown at the bottom right. A dimension of 1.4 is shown at the bottom left. A dimension of 1.75 is shown at the top right. A dimension of 5.5 is shown at the bottom center. A dimension of 12.0 is shown at the bottom right. A dimension of 1.4 is shown at the bottom left. A dimension of 1.75 is shown at the top right. A dimension of 5.5 is shown at the bottom center. A dimension of 12.0 is shown at the bottom right. A dimension of 1.4 is shown at the bottom left.
- User Direction of Feed:** Indicated by an arrow pointing to the right.

SM3030-6 Case

6-Terminal Ceramic Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint



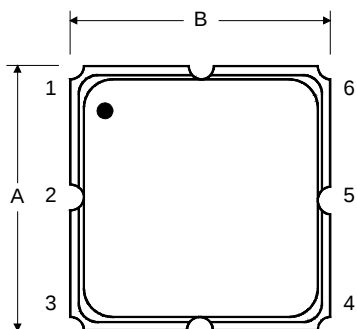
Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A		3.0			0.118	
B		3.0			0.118	
C		1.3			0.051	
D		0.9			0.035	
E		2.54			0.100	
F		1.6			0.063	
G		0.85			0.033	
H		1.5			0.059	
I		0.6			0.024	
J		1.3			0.051	

Electrical Connections

Connection		Terminals
Port 1	Single Ended Input	2
Port 2	Single Ended Output	5
	Ground	All others
Single Ended Operation Only		
Dot indicates Pin 1		

TOP VIEW



BOTTOM VIEW

