

# JRC SAW FILTER

## NSVA397

Application

### 422.2MHz Specified Low Power Radio Station

Electrical Specification: (Table 1)

The device characteristics are measured in the circuit shown in Fig.1.

Table 1. Electrical Specifications

Item	Spec.	
Input and Output Impedance	50Ω	
Nominal Center Frequency (f0)	422.2MHz	
Insertion Loss	421.7~422.7MHz	3.0dB max.
Response Variation	421.7~422.7MHz	1.5dB max.
Input and Output VSWR	421.7~422.7MHz	2.5 max.
Out of Band Rejection (Relative to Through Level)	400.8MHz	50dB min.
	443.6MHz	50dB min.

(Operating Temperature Range: -10~+60°C)

Maximum Rating: (Table 2)

Table 2. Maximum Ratings

Item	Rating
Maximum Input Power	+20dBm
Maximum DC Voltage	7.5V
Operating Temperature Range	-10~+60°C
Storage Temperature	-20~+70°C

Mechanical Specifications: (Fig.2)

Package is designed as small as 5.2x4.5x1.5[mm<sup>3</sup>] for SMD (Surface Mount Device) type.

#### Notice:

This part is electrostatic discharge sensitive and may be damaged by improper handling.

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[http://www.jrc.co.jp/product/comm/deveice/saw/saw\\_top.html](http://www.jrc.co.jp/product/comm/deveice/saw/saw_top.html) (Japanese)

[http://www.jrc.co.jp/product/comm/device/saw/saw\\_top\\_e.html](http://www.jrc.co.jp/product/comm/device/saw/saw_top_e.html) (English)

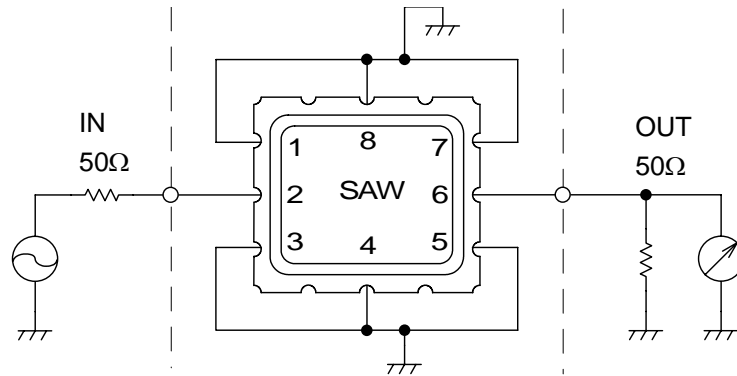


Fig.1 Measuring circuit

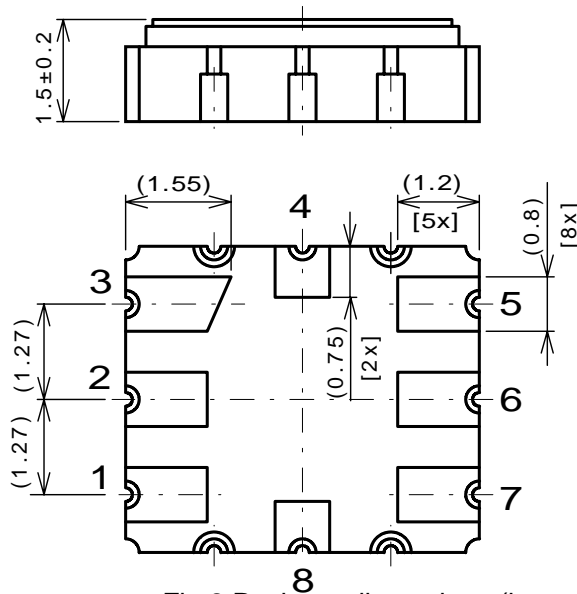
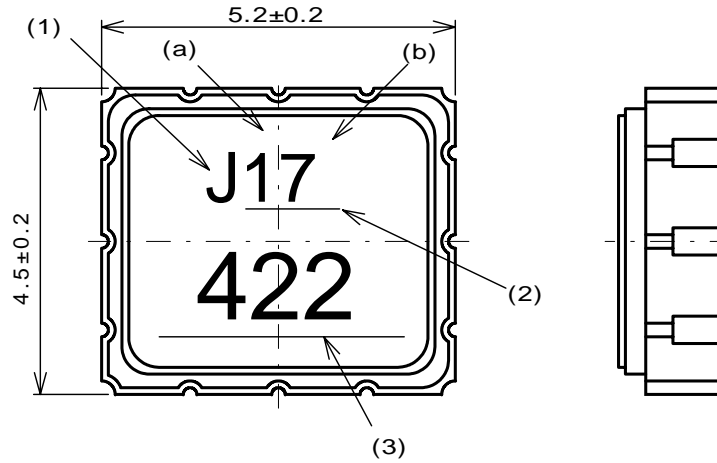


Fig.2 Package dimensions (in mm)

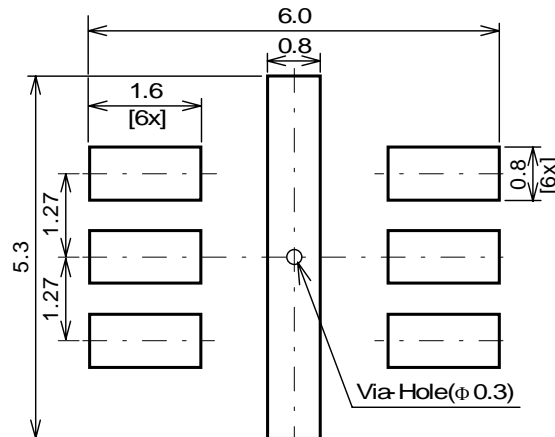


Fig.3 Desirable land area (in mm)

Marking

- (1) Manufacturer's Mark
- (2) Lot Number
  - (a) Year
  - (b) Month

\*Oct.--- X  
 Nov.--- Y  
 Dec.--- Z

- (3) Part number Mark

Pin no.	Connection
1	GND
2	IN/OUT
3	GND
4	GND
5	GND
6	OUT/IN
7	GND
8	GND

**Notice**

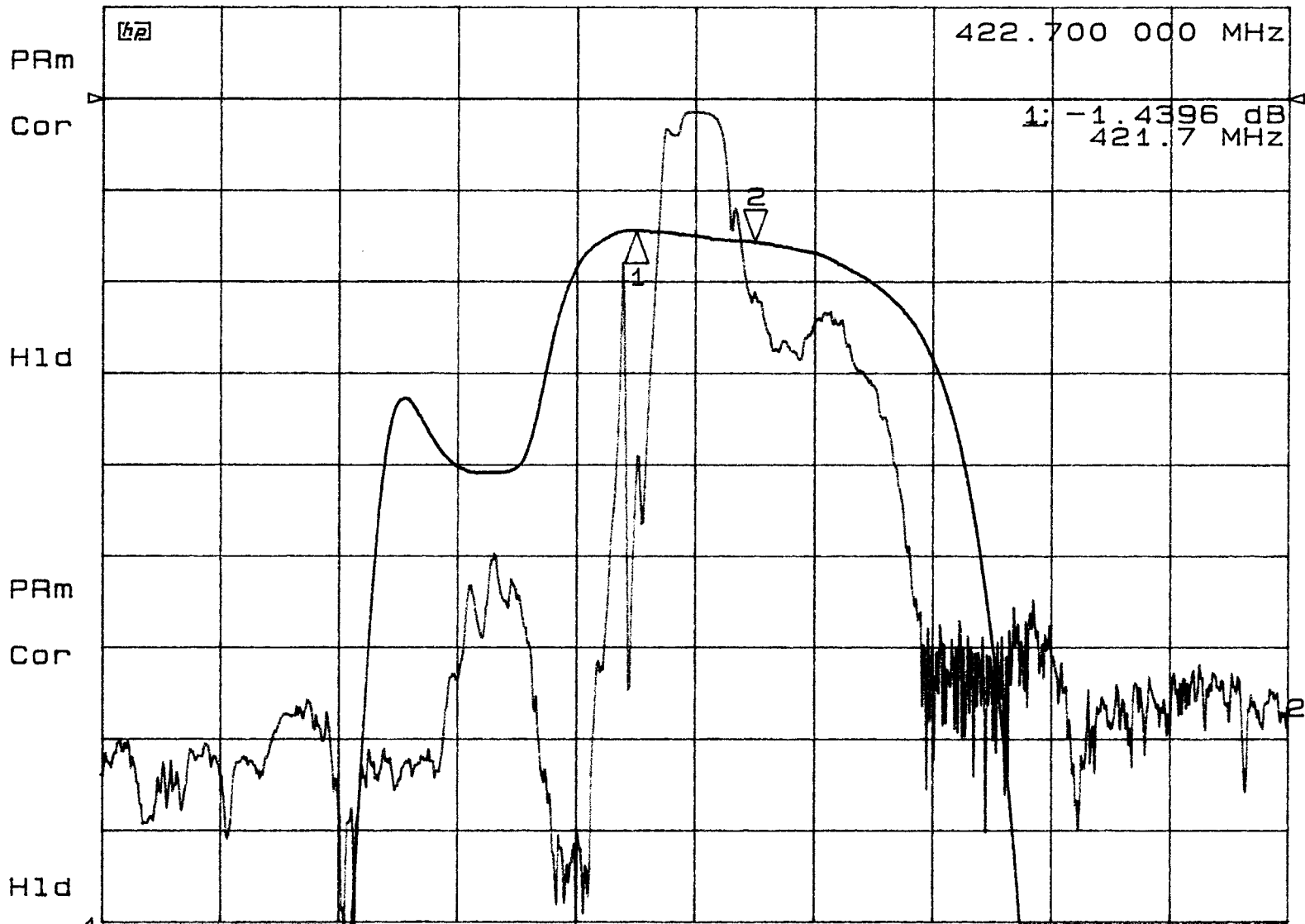
1. Use this component within operating temperature range. It might not be satisfied with electrical specification without operating temperature range. When it is used less than  $-10^{\circ}\text{C}$  or more than  $+60^{\circ}\text{C}$ , it might be a cause of degradation or destruction of the component. Even if it endures during a short time, it causes degradation of qualification.
2. When soldering iron is used, solder with the temperature at the tip of soldering iron:  $350^{\circ}\text{C}$  max., the time of soldering: 10 seconds max., the power of soldering iron: 30W max..
3. Notice that the allowed time of soldering with soldering iron is accumulated time, when soldering is repeated.
4. As rapid temperature change for cleaning after reflow soldering might be a cause of destruction clean this component after confirming that temperature of this component goes down to room temperature.
5. Confirm that there are not any influence for qualification to this component in mounting on PCB when this component is cleaned.
6. As it might be a cause of degradation or destruction to apply static electricity to this component, do not apply static electricity or excessive voltage while assembling and measuring. And do not transport this component with bare hand.
7. As it might be a cause of degradation or destruction to apply D.C. voltage between each terminal, apply D.C. voltage 7.5V max. in actual circuit.

**Note**

1. This specification specifies the quality of this component as a single unit. Make sure that this component is evaluated and confirmed against this specification when it is mounted to your products.

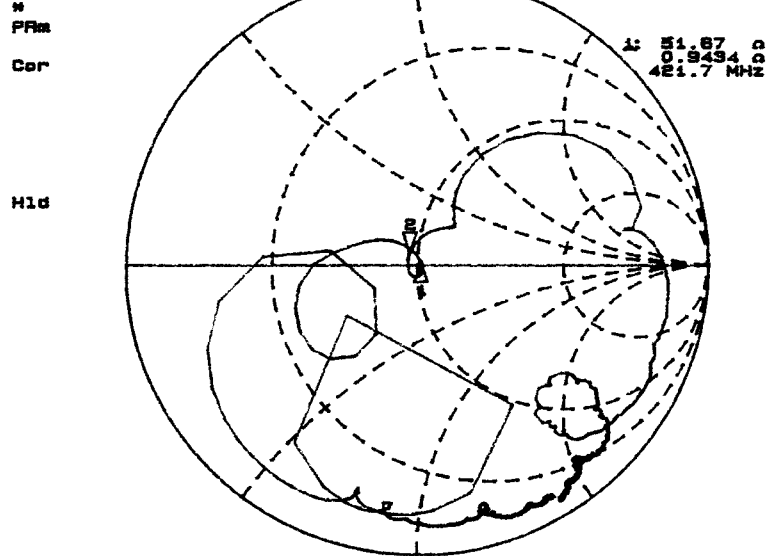
15 Mar 1997 14:45:43

CH1 S<sub>21</sub> log MAG 1 dB/ REF 0 dB 2: -1.5753 dB  
CH2 S<sub>21</sub> log MAG 10 dB/ REF 0 dB



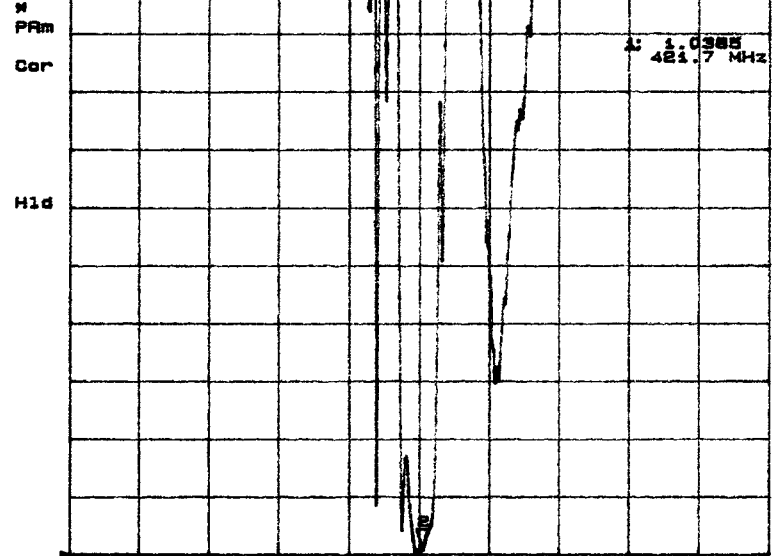
CH1 CENTER 422.200 000 MHz SPAN 10.000 000 MHz  
CH2 CENTER 422.200 000 MHz SPAN 100.000 000 MHz

CH1 S<sub>11</sub> 1 U FS 15 Mar 1997 14:55:07  
 E: 47.669 n 4.4256 n 1.6664 nH  
 422.700 000 MHz



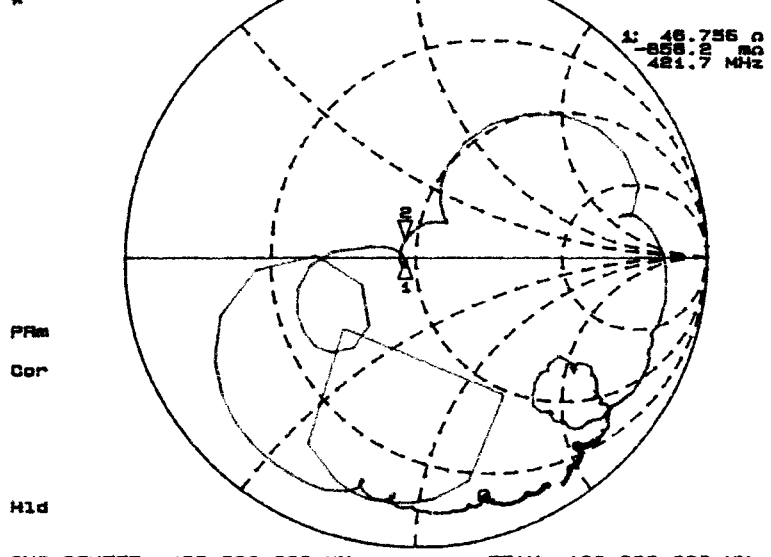
CH1 CENTER 422.200 000 MHz SPAN 100.000 000 MHz

CH1 S<sub>11</sub> SWR 1 / REF 1 15 Mar 1997 14:58:08  
 E: 1.1075  
 422.700 000 MHz



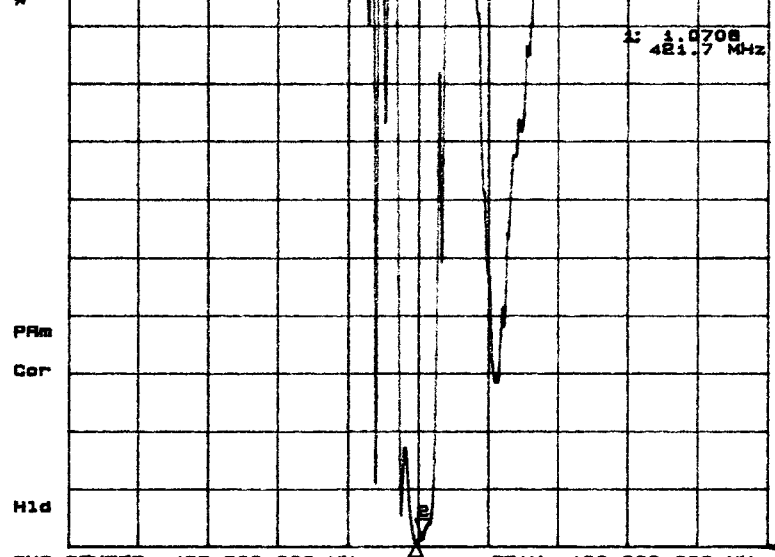
CH1 CENTER 422.200 000 MHz SPAN 100.000 000 MHz

CH2 S<sub>22</sub> 1 U FS 15 Mar 1997 15:00:29  
 E: 46.377 n 5.502 n 2.0716 nH  
 422.700 000 MHz



CH2 CENTER 422.200 000 MHz SPAN 100.000 000 MHz

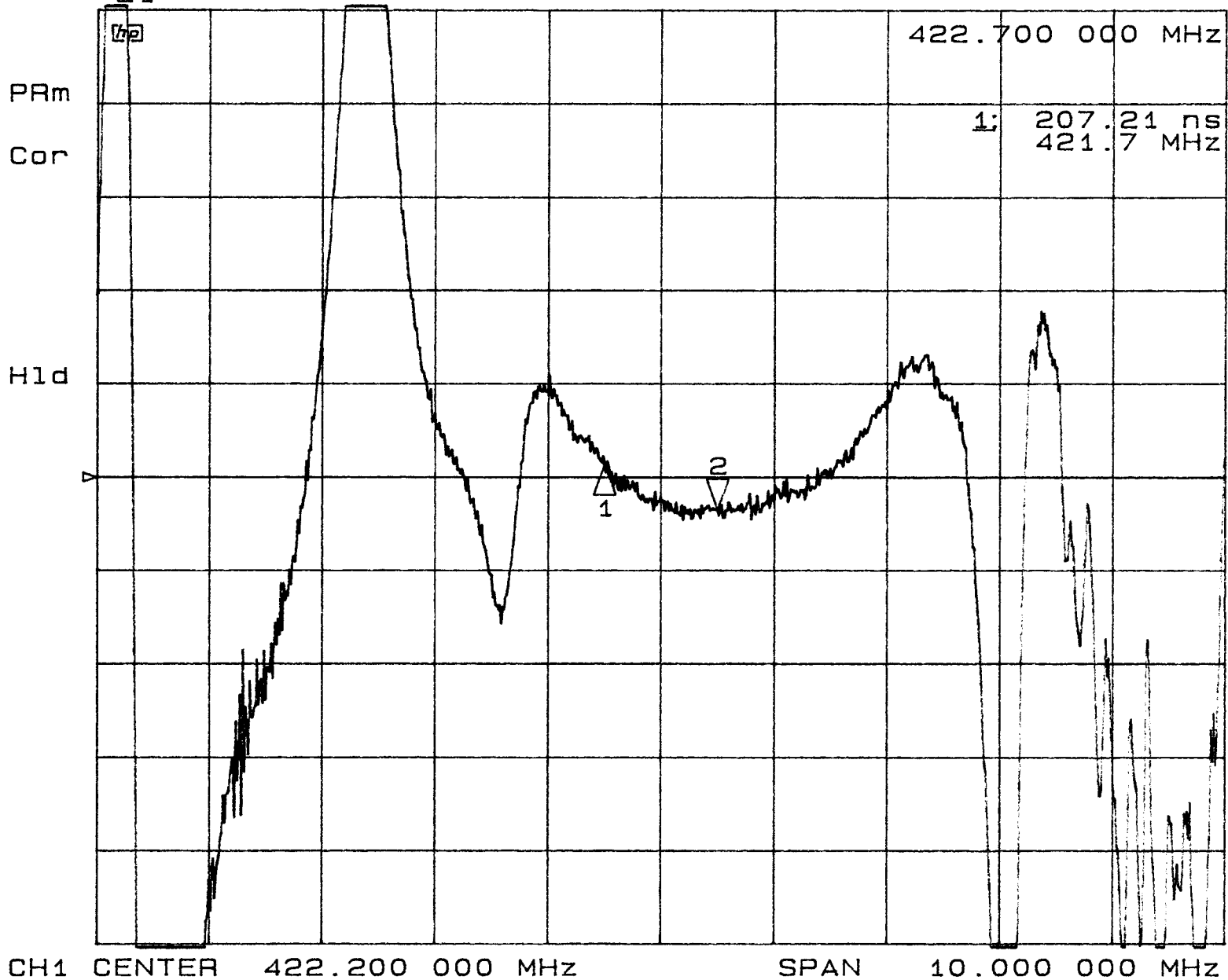
CH2 S<sub>22</sub> SWR 1 / REF 1 15 Mar 1997 15:03:20  
 E: 1.1485  
 422.700 000 MHz



CH2 CENTER 422.200 000 MHz SPAN 100.000 000 MHz

15 Mar 1997 14:51:09

CH1 S<sub>21</sub> delay 50 ns/ REF 200 ns 2: 182.5 ns



CH1 CENTER 422.200 000 MHz SPAN 10.000 000 MHz