

USE LINK ENTERPRISE CO.,LTD.

THAI USE LINK ENTERPRISE CO.,LTD.

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SPECIFICATION FOR APPROVAL

PARTS NAME : *Wireless LAN Antenna*

TYPE NO : *UC-150*

CUSTOMER P/N :

DATE : *October.07,2005*

CUSTOMER APPROVAL & COMMENT

<i>FULL NAME</i>	<i>POSITION</i>	<i>SIGNATURE</i>	<i>COMPANY STAMP</i>	<i>COMMENT</i>
		<i>DATE :</i>		
RECOGNIZED		ENGINEERING		QC CHECK

USE LINK ENTERPRISE CO.,LTD.

ANTENNA SPECIFICATIONS FOR APPROVAL

1 GENERAL DESCRIPTION

1.1 Type No. : **UC-150**

1.2 Customer P/N :

2 DESCRIPTION & APPLICATION

This antenna assembly is designed for use in portable.

Communications equipment over a temperature range.

Of -20 °C to +70 °C in an indoor / outdoor environment.

3 ELECTRICAL CHARACTERISTICS

3.1 Frequency Range : 2.4 ~ 2.4835 Ghz

3.2 Cable : Mini Coaxial Cable 1.13

3.3 Connector : I-Pex

3.4 V.S.W.R : 2.0:1.0 or less

3.5 Return Loss : -10 dB Maximum

3.6 Impedance : 50 Ω Nominal

3.7 Gain : 2.0 dBi (Typ)

3.8 Polarization : Vertical

3.9 Radiation Pattern : Near omni-directional in the horizontal plane

3.10 Admitted Power : 1W

3.11 Electrical Wave : 1/2 λ Dipole

4 ENVIRONMENTAL CHARACTERISTICS

4.1 High temperature/Humidity Operating test

4.1.1 Temperature : +60 °C \pm 2 °C

4.1.2 Humidity : 90 ~ 95% RH

4.1.3 Time : 24hrs

4.2 Low temperature/Humidity Operating test

4.2.1 Temperature : -20 °C \pm 2 °C

4.2.2 Humidity : 0% RH

4.2.3 Time : 24hrs

4.3 High temperature/Humidity Storage

4.3.1 Temperature : +80 \pm 2 °C

4.3.2 Humidity : 90 ~ 95% RH

4.3.3 Time : 88hrs

4.4 Low temperature/Humidity Storage

4.4.1 Temperature : $-40 \pm 2^{\circ}\text{C}$

4.4.2 Humidity : 0% RH

4.4.3 Time : 28hrs

4.5 Temperature Cycle Operating Test

4.5.1 temperature : $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$

4.5.2 Duration : ● 88 Hours

● 45mia/dwelling@ -40°C ,

● 10°C per min./transition from -20°C to 70°C

● 45mia/dwelling@ 75°C ,

4.6 Temperature Shock Test

4.6.1 Temperature : $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$

4.6.2 Time : 30 minutia/dwelling , 5 minutia/dwelling , 24 cycles

5 QUALIFICATION TESTING

5.1 Qualification testing, all product shall be able to withstand the following testing.

5.2 Physical dimensions identified within this specification.

6 INSPECTION STANDARD

6.1 Dimension to use the special inspection level of S-4 , AQL 1.0 .

6.2 Appearance to use MIL-STD-105DII AQL1.0 .

6.3 Mechanical Capability : Per lot Sampling, $n=5$, Ac 0 , Re 1 .

6.4 Environmental test : Per lot Sampling, $n=3$, Ac 0 , Re 1 .

7 PACKING STYLE

If customer has no specific request by the customer, all according to our standard Packing specification.

8 OTHERS

Any changes in this specification should be agreed by both parties.

Wireless Lan Antenna

For 2,400~2,4835MHz

Type No. : Uc-150

Electrical Specification

<i>Frequency range</i>	<i>2.4~ 2.4835 GHz</i>
<i>Cable</i>	<i>Mini Coaxial Cable 1.13</i>
<i>Connector</i>	<i>I-Pex</i>
<i>V.S.W.R</i>	<i>2.0:1.0 or less</i>
<i>Return Loss</i>	<i>-10 dB Maximum</i>
<i>Impedance</i>	<i>50 Ω Nominal</i>
<i>Gain</i>	<i>2.0 dBi (Typ)</i>
<i>Admitted Power</i>	<i>1W</i>
<i>Electrical Wave</i>	<i>1/2λ Dipole</i>



USE LINK ENTERPRISE CO.,LTD..

TEST REPORT

1.MODEL: UC-150

2.QUANTITY: 5 Pcs

3.DATE OF TESTING: October.07,2005

4.TESTING ITEM: PULL TEST

5.TESTING EQUIPMENT: UB--016 (PUSH-PULL SCALE FB30K)

*6.TESTING CONDITIONS: Antenna must withstand a 3 kgf tensile
Load applied to tube for 30 seconds.
No part of the antenna may be pulled out of
The assembly or from the housing.*



7.TESTING RESULT:

<i>Sample</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>OK or NG</i>	<i>OK</i>	<i>OK</i>	<i>OK</i>	<i>OK</i>	<i>OK</i>

DEPT.MANAGER:

TESTER:

USE LINK ENTERPRISE CO.,LTD.

TEST REPORT

- 1.MODEL: US-099*
- 2.QUANTITY: 5 Pcs*
- 3.DATE OF TESTING: October.07,2005*
- 4.TESTING ITEM: TORQUE TEST*
- 5.TESTING EQUIPMENT: UB-001 (MECHANICAL TORQUE METER 2-TM30)*
- 6.TESTING CONDITIONS: 3 KGF-CM NO DAMAGE HAPPENED.*



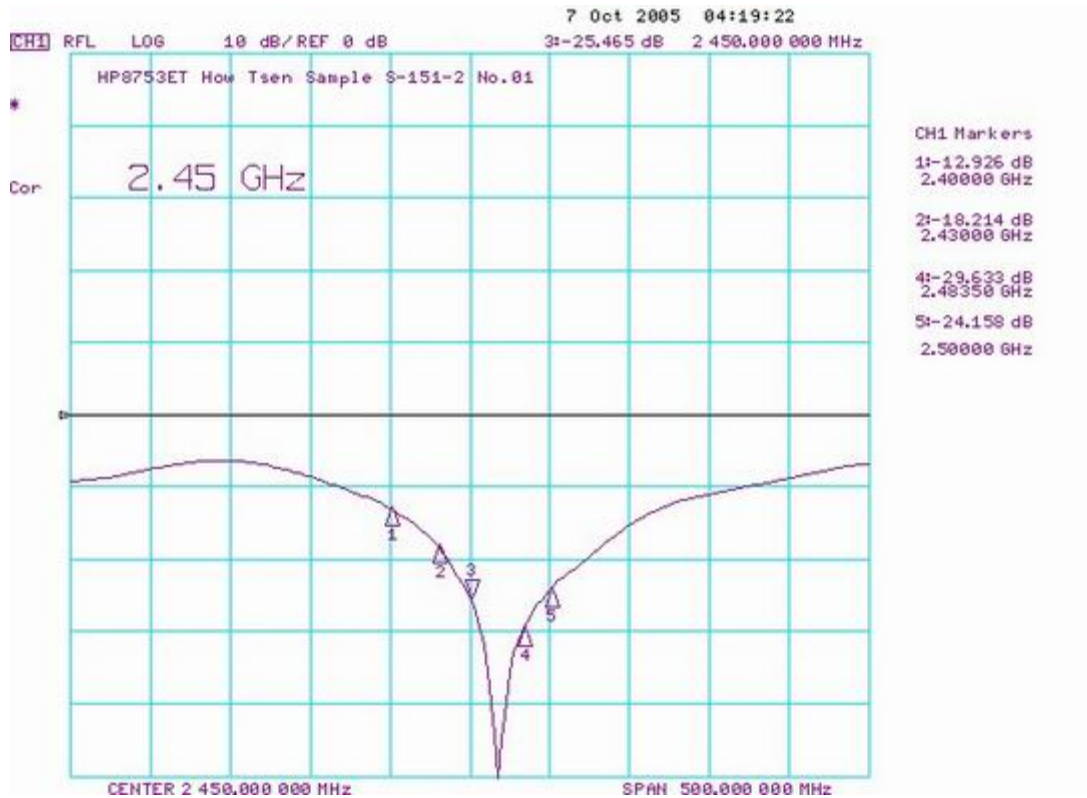
7.TESTING RESULT:

<i>Sample</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>OK or NG</i>	<i>OK</i>	<i>OK</i>	<i>OK</i>	<i>OK</i>	<i>OK</i>

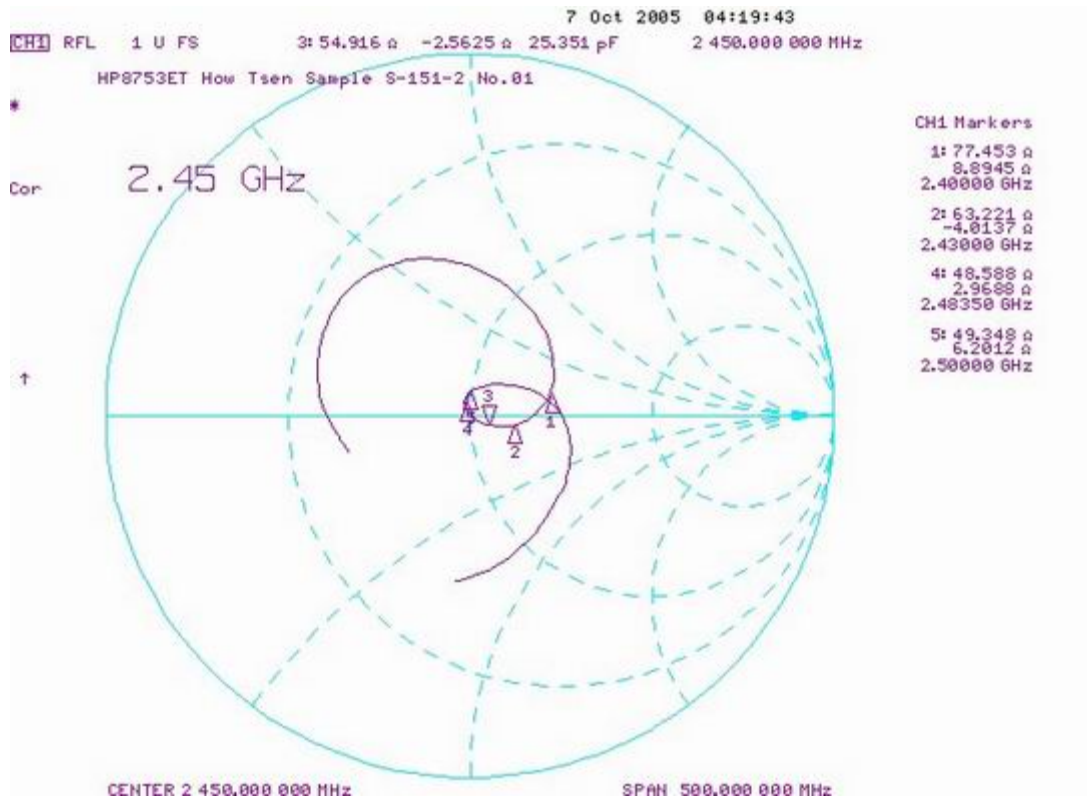
DEPT.MANAGER:

TESTER:

Return Loss



Smith Chart

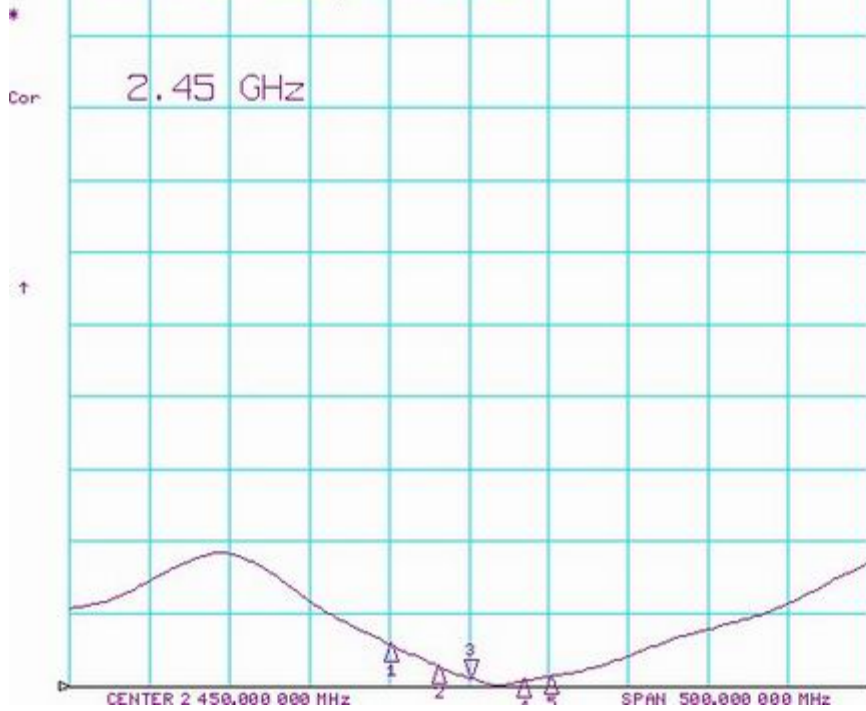


V.S.W.R

7 Oct 2005 04:20:00

CH1 RFL SWR 1 / REF 1 3: 1.1124 2 450.000 000 MHz

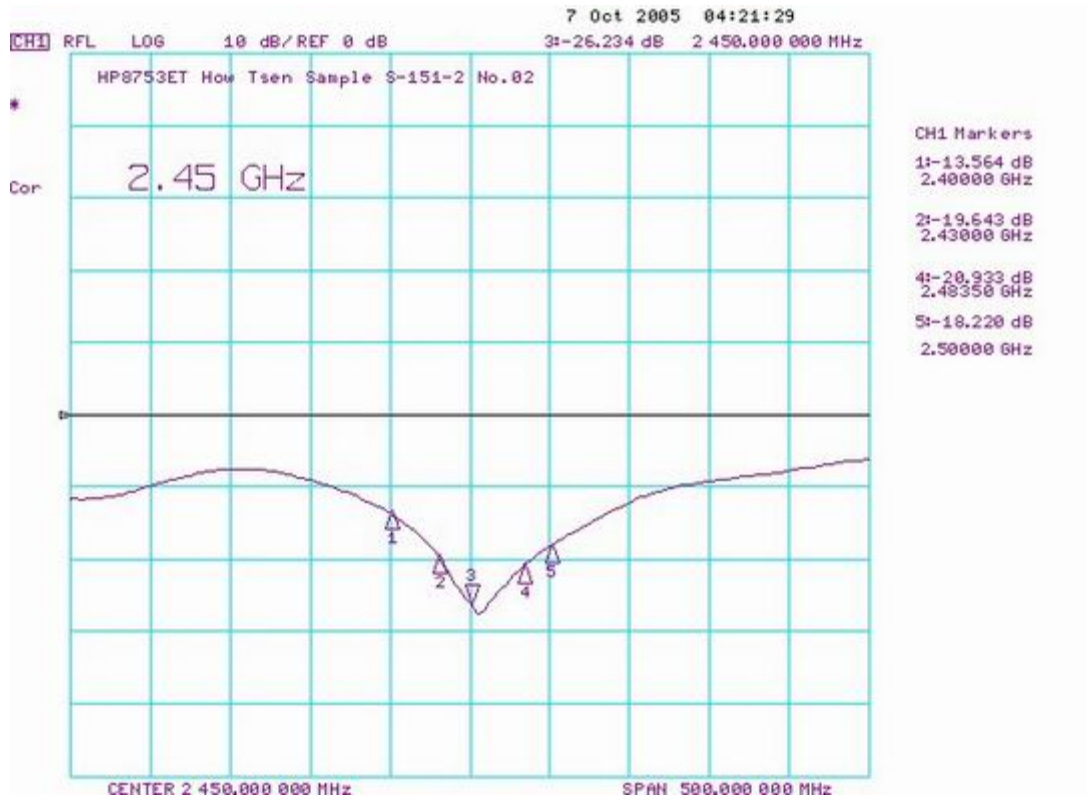
HP8753ET How Tsen Sample S-151-2 No.01



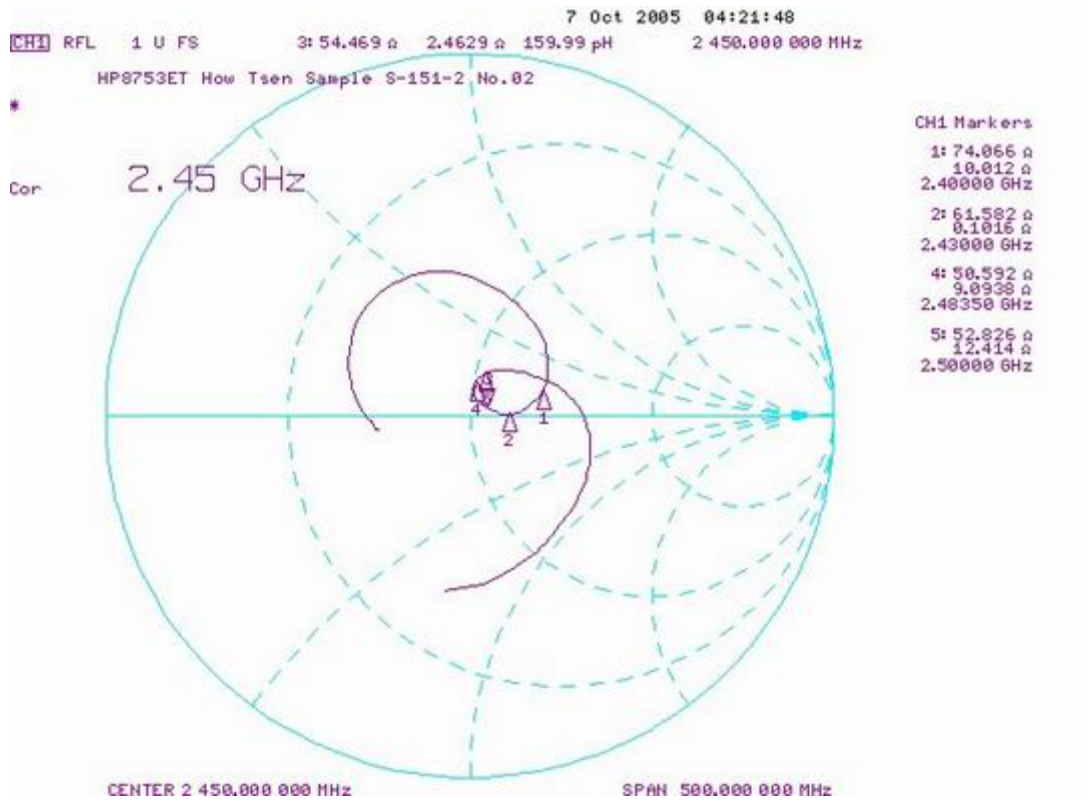
CH1 Markers

- 1: 1.5855
2.48000 GHz
- 2: 1.2909
2.43000 GHz
- 4: 1.0693
2.48350 GHz
- 5: 1.1337
2.50000 GHz

Return Loss



Smith Chart



V.S.W.R

7 Oct 2005 04:22:05

CH1 RFL SWR 1 / REF 1 3: 1.1029 2 450.000 000 MHz

HP8753ET How Tsen Sample S-151-2 No.02



CH1 Markers

1: 1.5327

2.40000 GHz

2: 1.2307

2.43000 GHz

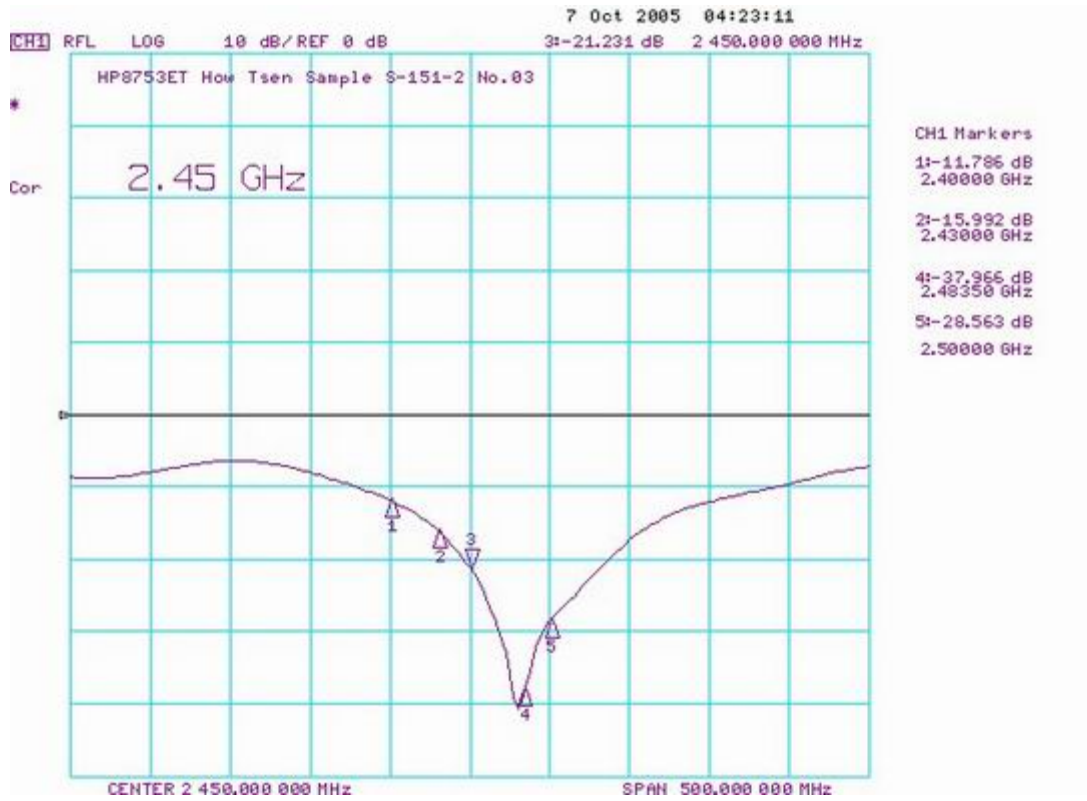
4: 1.1979

2.48350 GHz

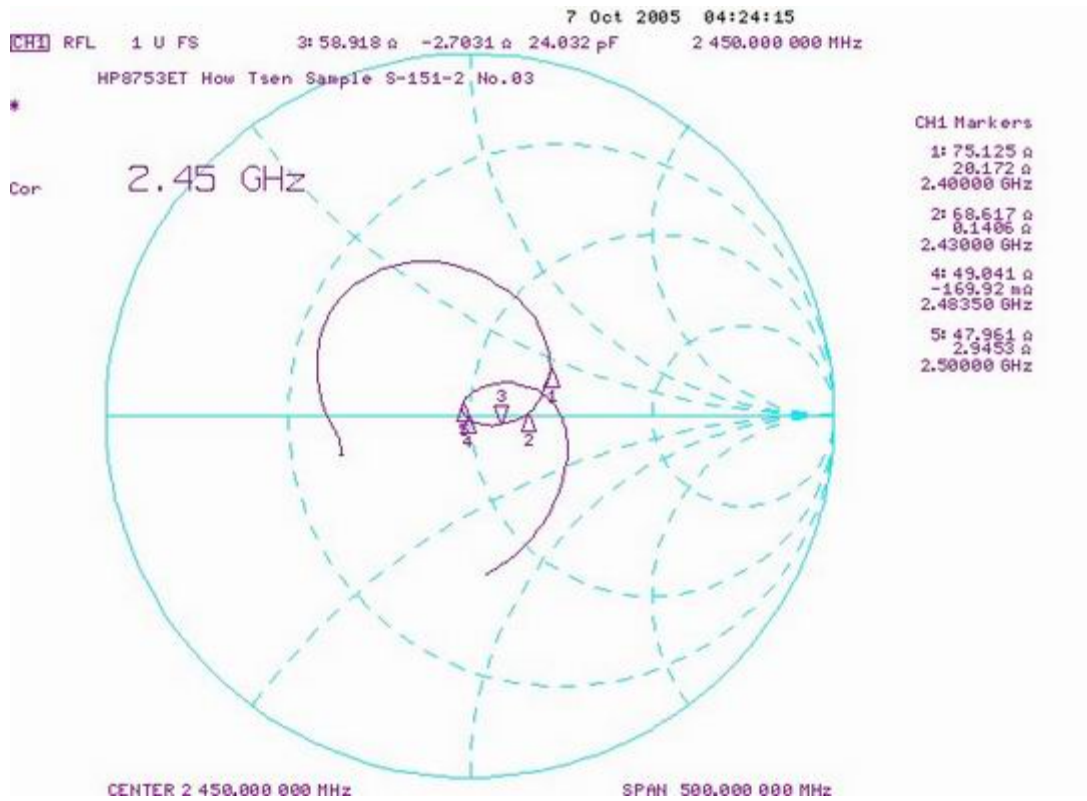
5: 1.2001

2.50000 GHz

Return Loss



Smith Chart



V.S.W.R

7 Oct 2005 04:24:32

CH1 RFL SWR 1 / REF 1 3: 1.1891 2 450.000 000 MHz

HP8753ET How Tsen Sample S-151-2 No.03



CH1 Markers

1: 1.6827

2: 1.3740

4: 1.0215

5: 1.0763

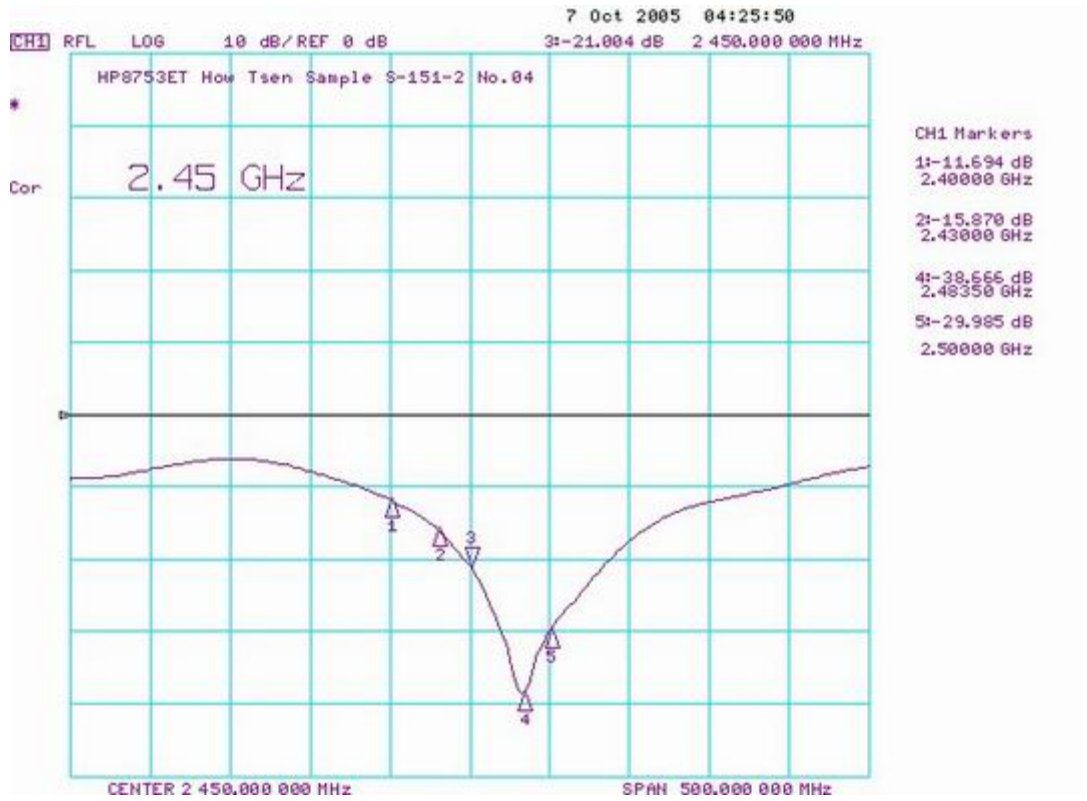
2.48000 GHz

2.43000 GHz

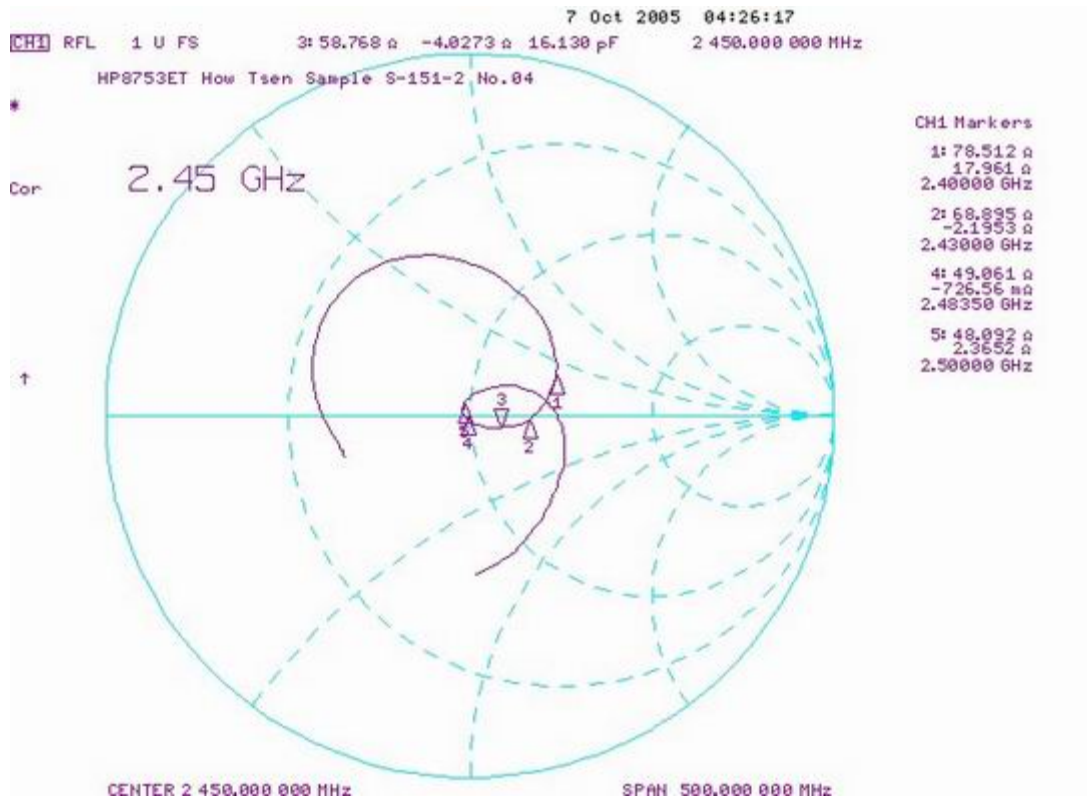
2.48350 GHz

2.50000 GHz

Return Loss



Smith Chart

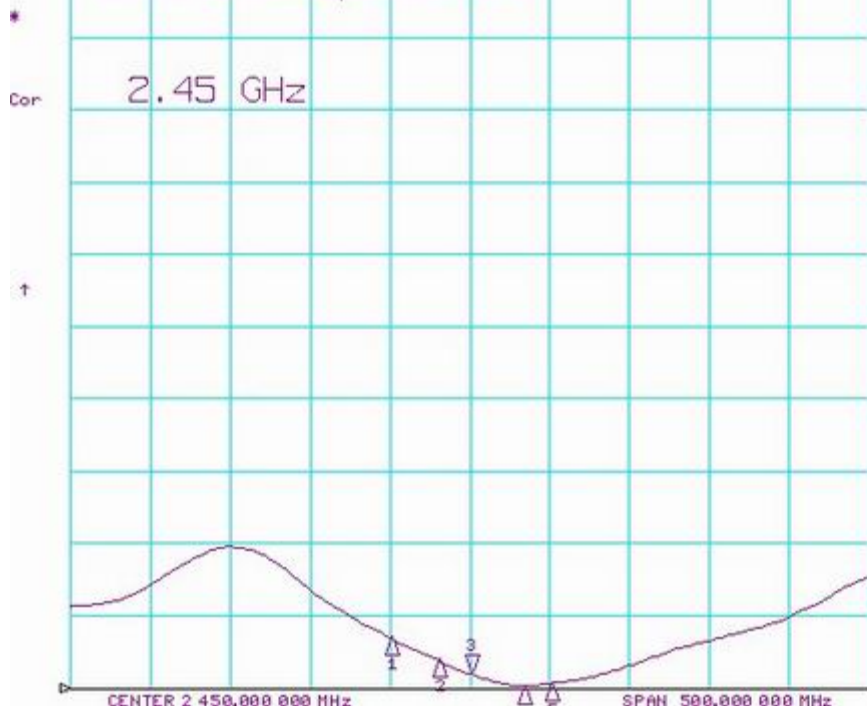


V.S.W.R

7 Oct 2005 04:26:36

CH1 RFL SWR 1 / REF 1 3: 1.1947 2 450.000 000 MHz

HP8753ET How Tsen Sample S-151-2 No.04



CH1 Markers

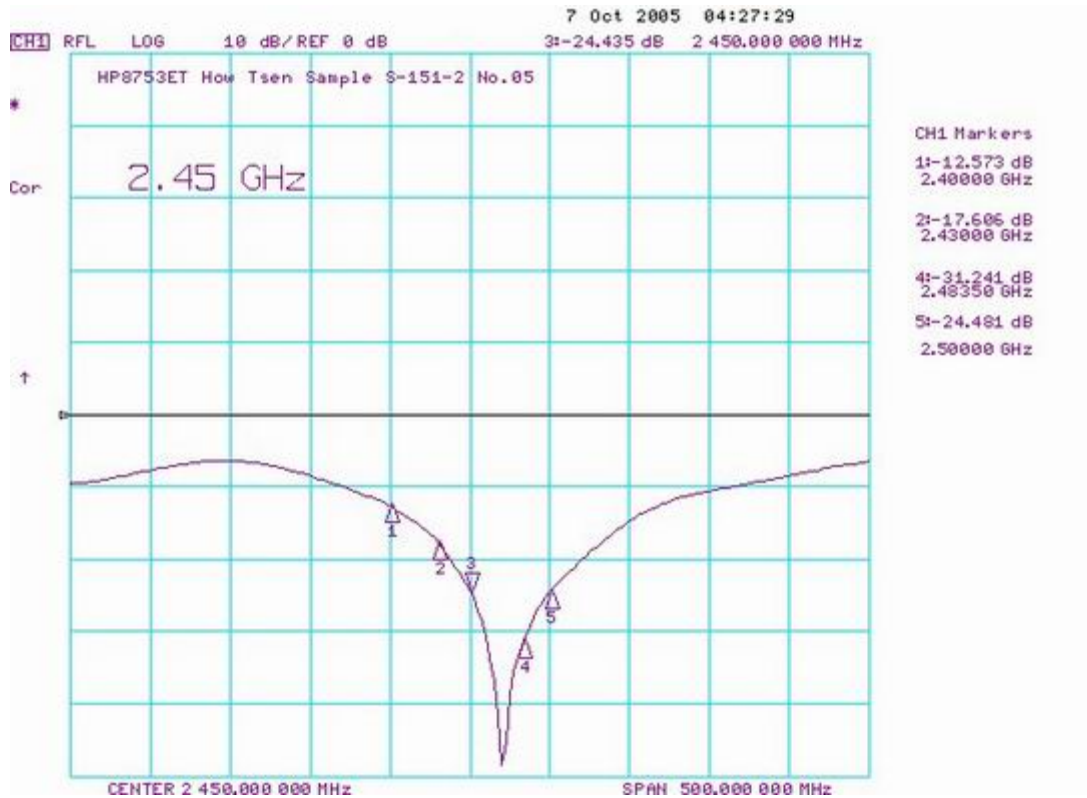
1: 1.7044
2.40000 GHz

2: 1.3921
2.43000 GHz

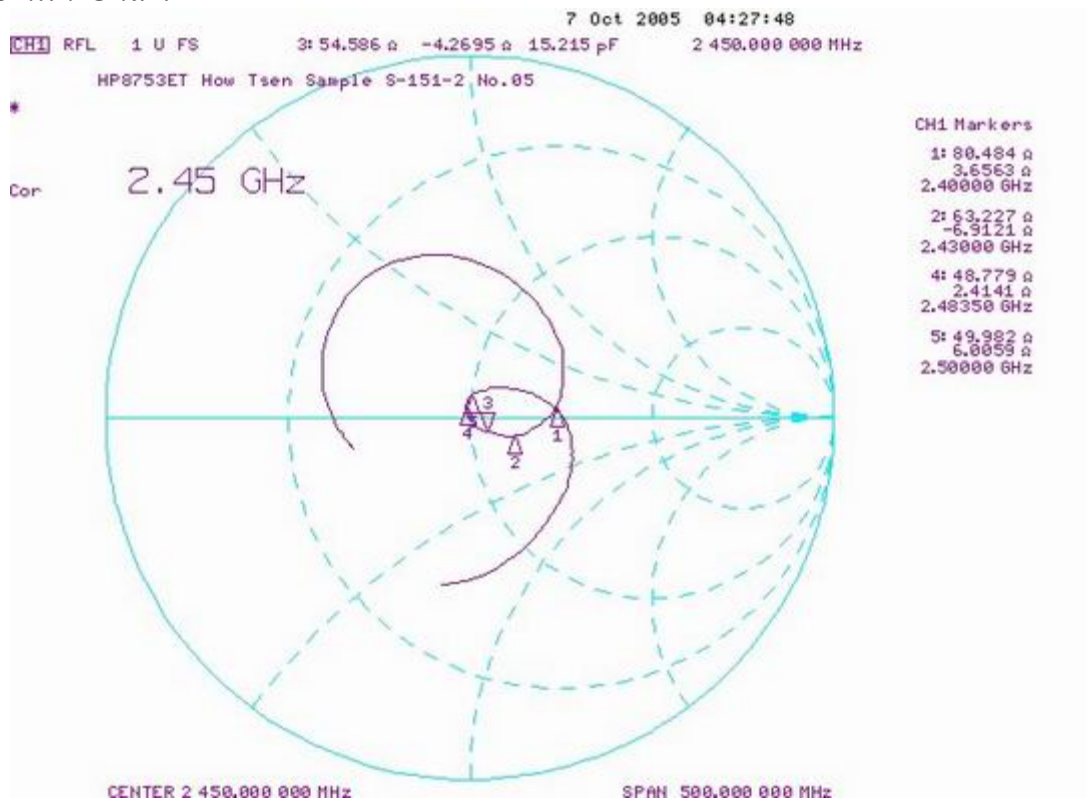
4: 1.0236
2.48350 GHz

5: 1.0659
2.50000 GHz

Return Loss



Smith Chart

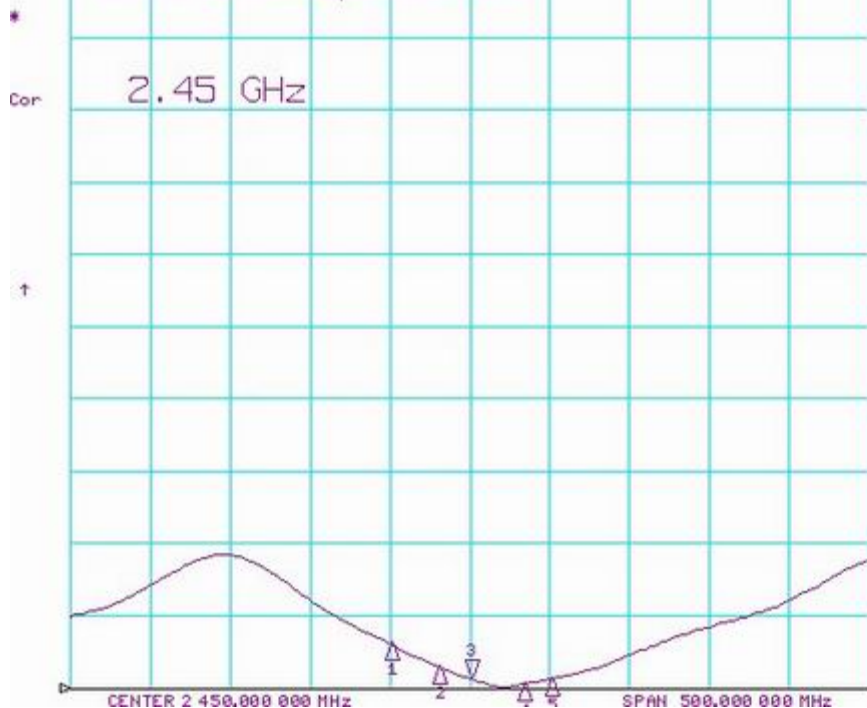


V.S.W.R

7 Oct 2005 04:28:07

CH1 RFL SWR 1 / REF 1 3: 1.1201 2 450.000 000 MHz

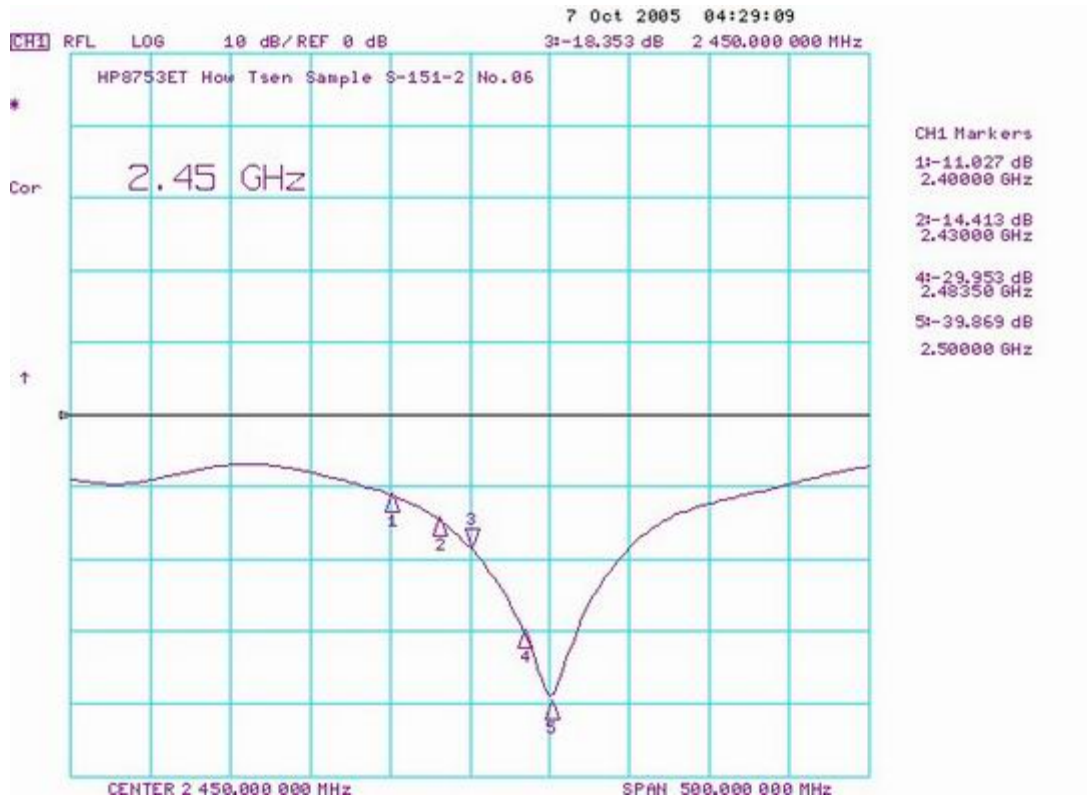
HP8753ET How Tsen Sample S-151-2 No.05



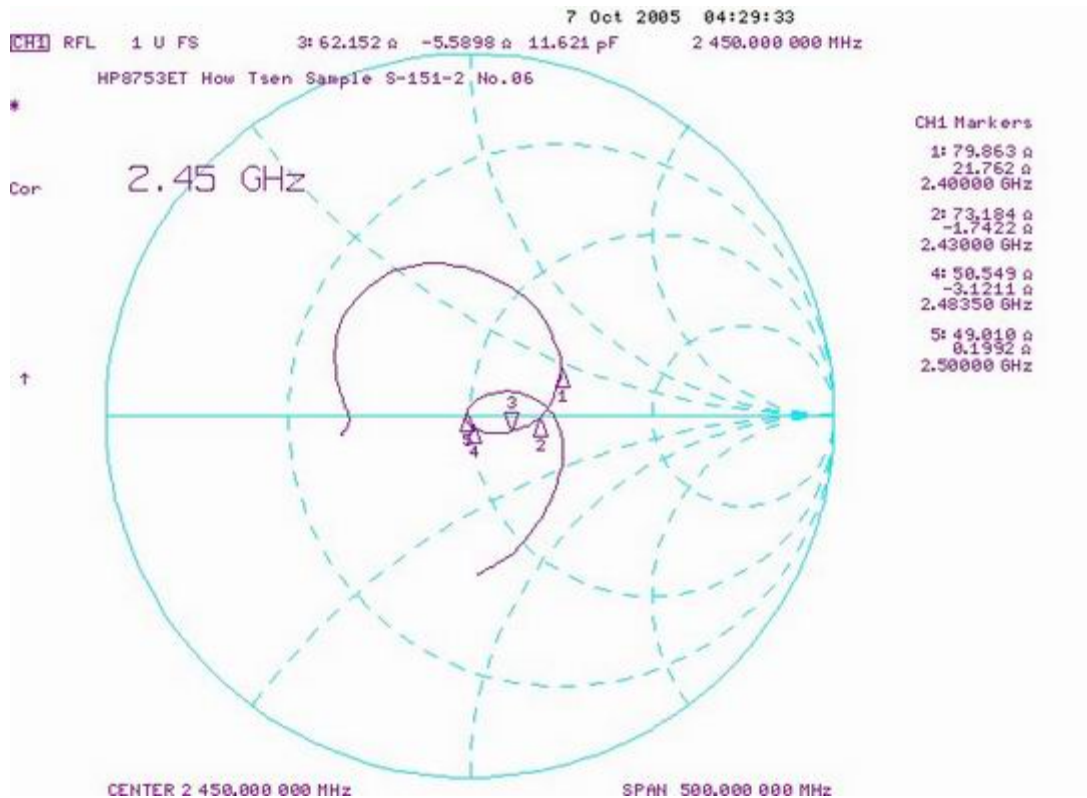
CH1 Markers

- 1: 1.6163
2.40000 GHz
- 2: 1.3035
2.43000 GHz
- 4: 1.0563
2.48350 GHz
- 5: 1.1270
2.50000 GHz

Return Loss



Smith Chart

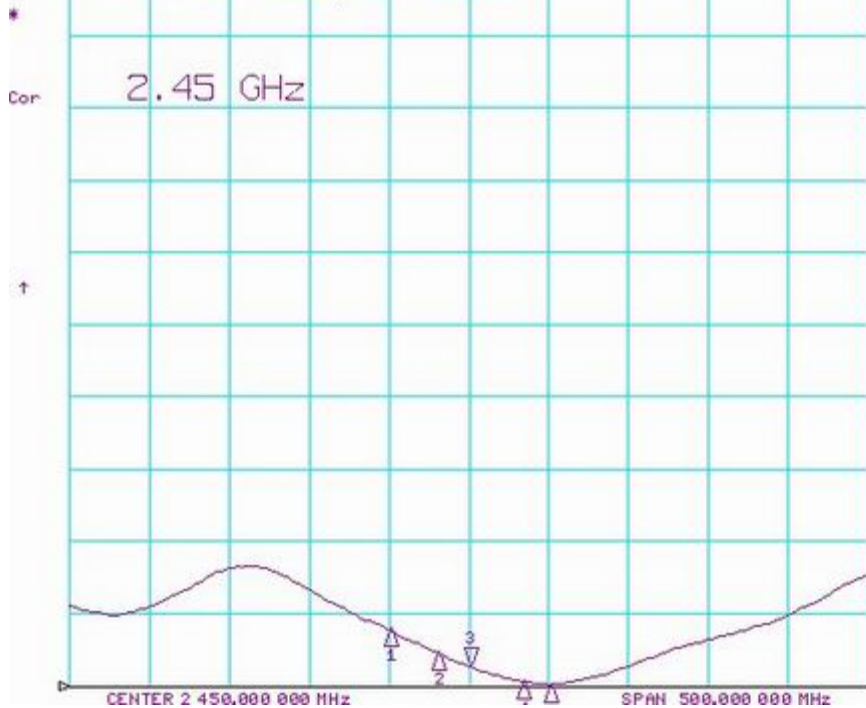


V.S.W.R

7 Oct 2005 04:29:51

CH1 RFL SWR 1 / REF 1 3: 1.2704 2 450.000 000 MHz

HP8753ET How Tsen Sample S-151-2 No.06



CH1 Markers

1: 1.7807

2.48000 GHz

2: 1.4635

2.43000 GHz

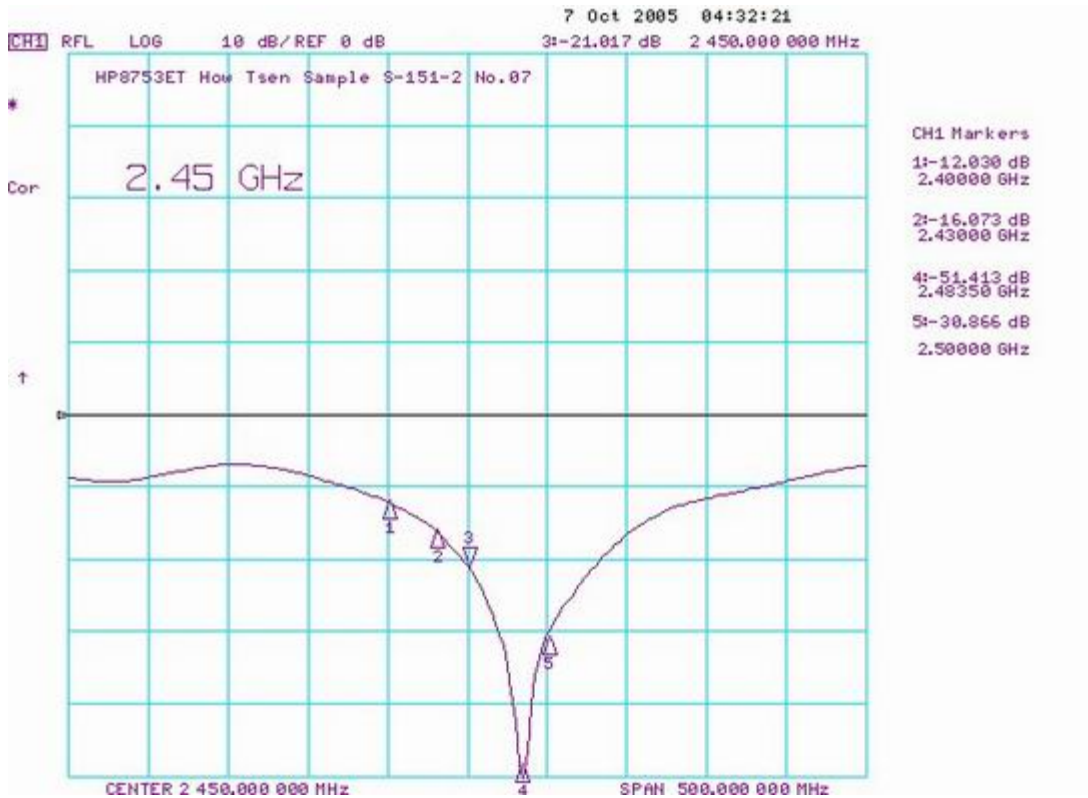
4: 1.0635

2.48350 GHz

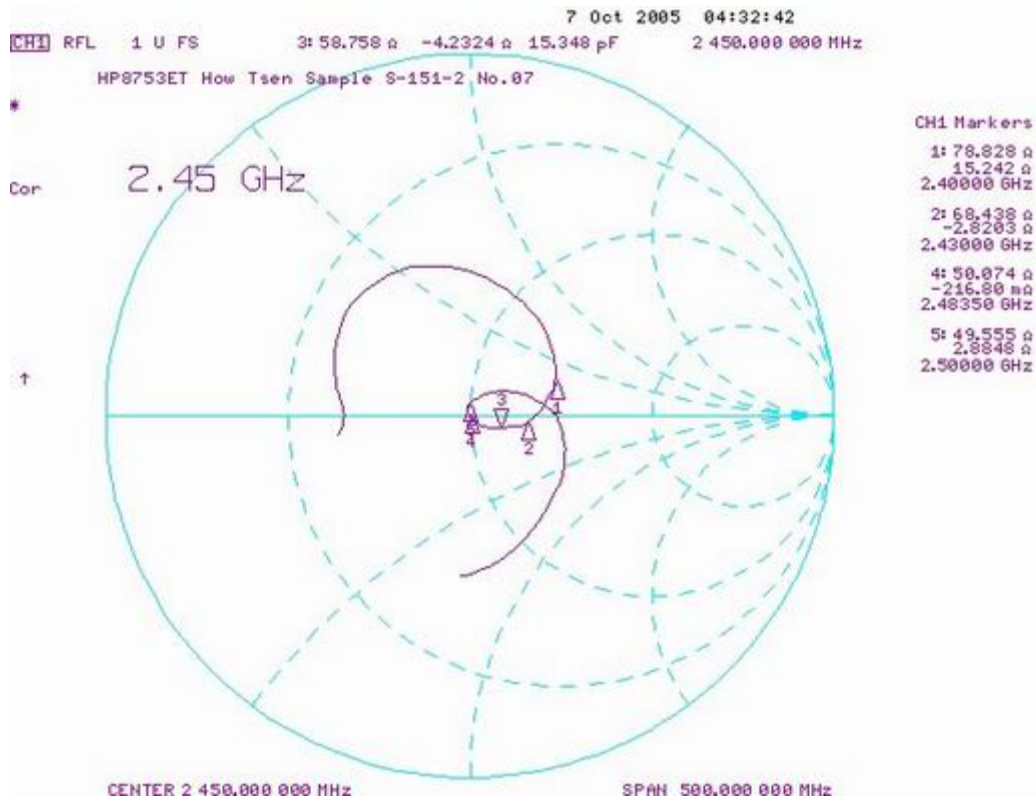
5: 1.0219

2.50000 GHz

Return Loss



Smith Chart



V.S.W.R

7 Oct 2005 04:33:01

CH1 RFL SWR 1 / REF 1 3: 1.1967 2 450.000 000 MHz

HP8753ET How Tsen Sample S-151-2 No.07



CH1 Markers

1: 1.6713

2.40000 GHz

2: 1.3749

2.43000 GHz

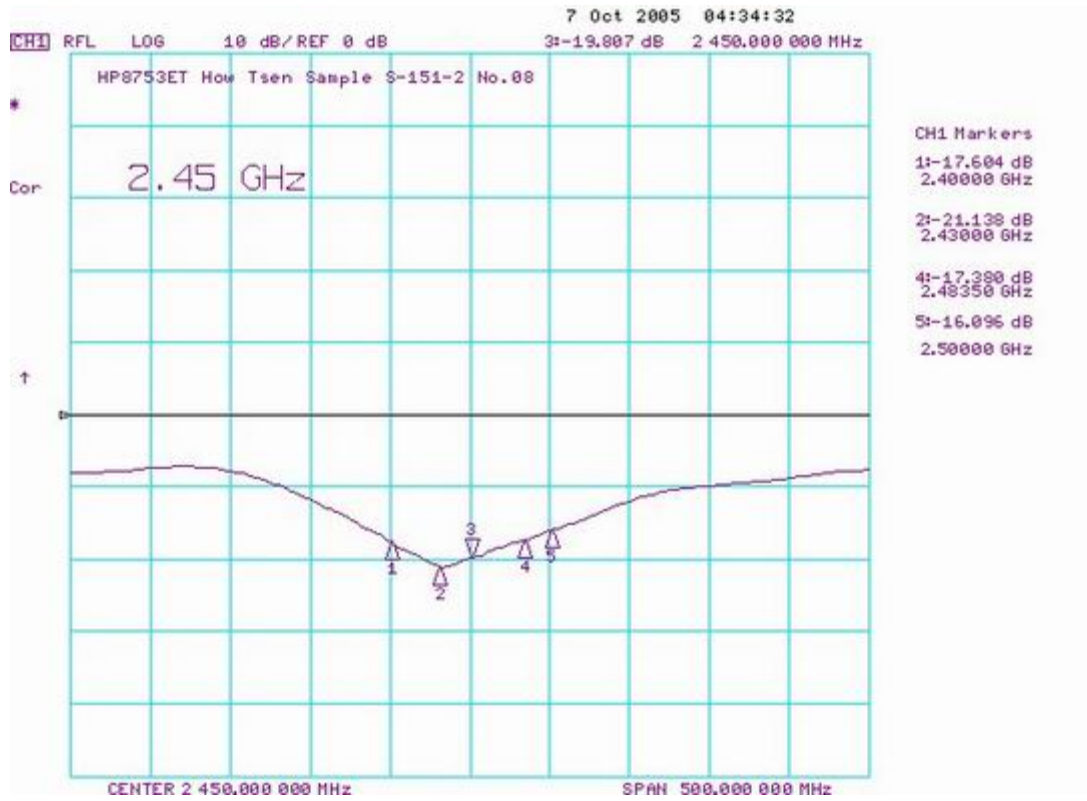
4: 1.0060

2.48350 GHz

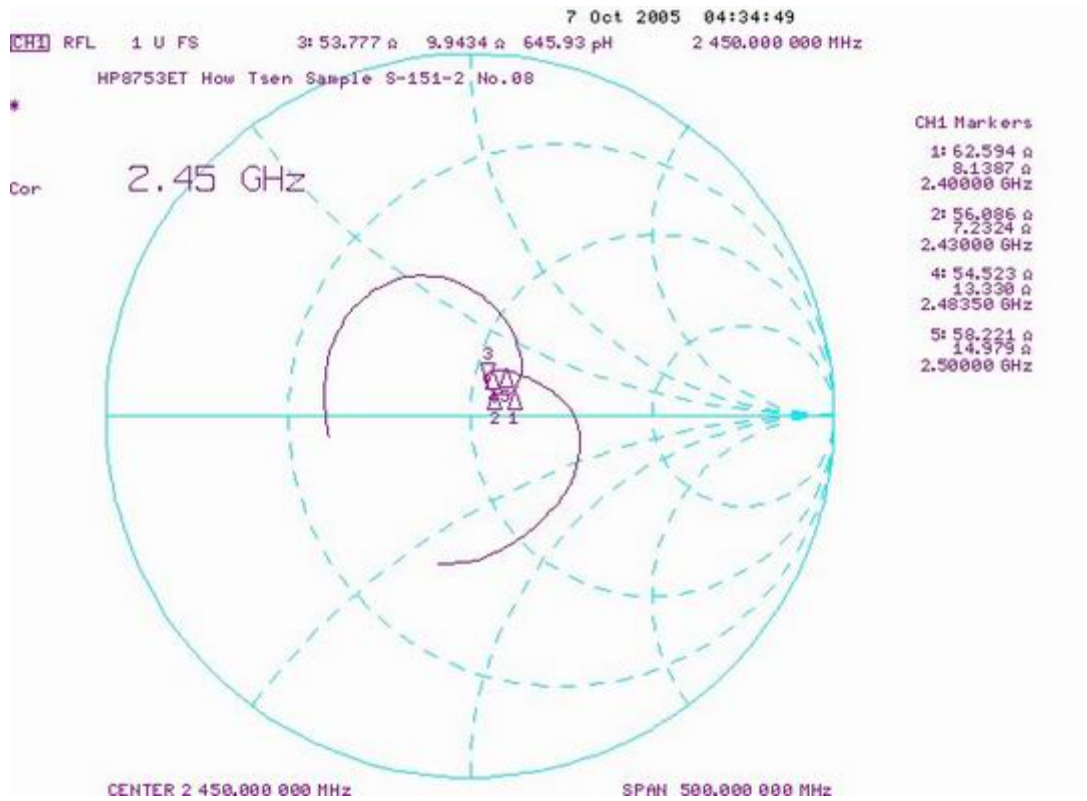
5: 1.0599

2.50000 GHz

Return Loss



Smith Chart



V.S.W.R

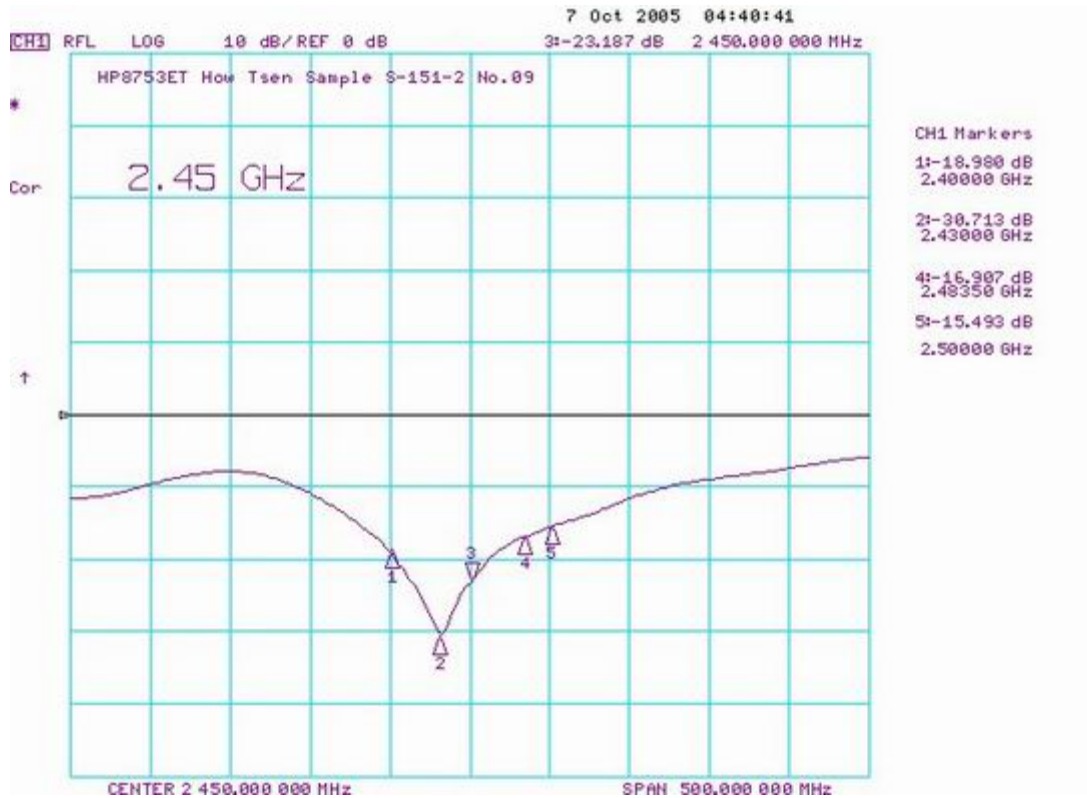
7 Oct 2005 04:35:10

CH1 RFL SWR 1 / REF 1 3: 1.2294 2 450.000 000 MHz

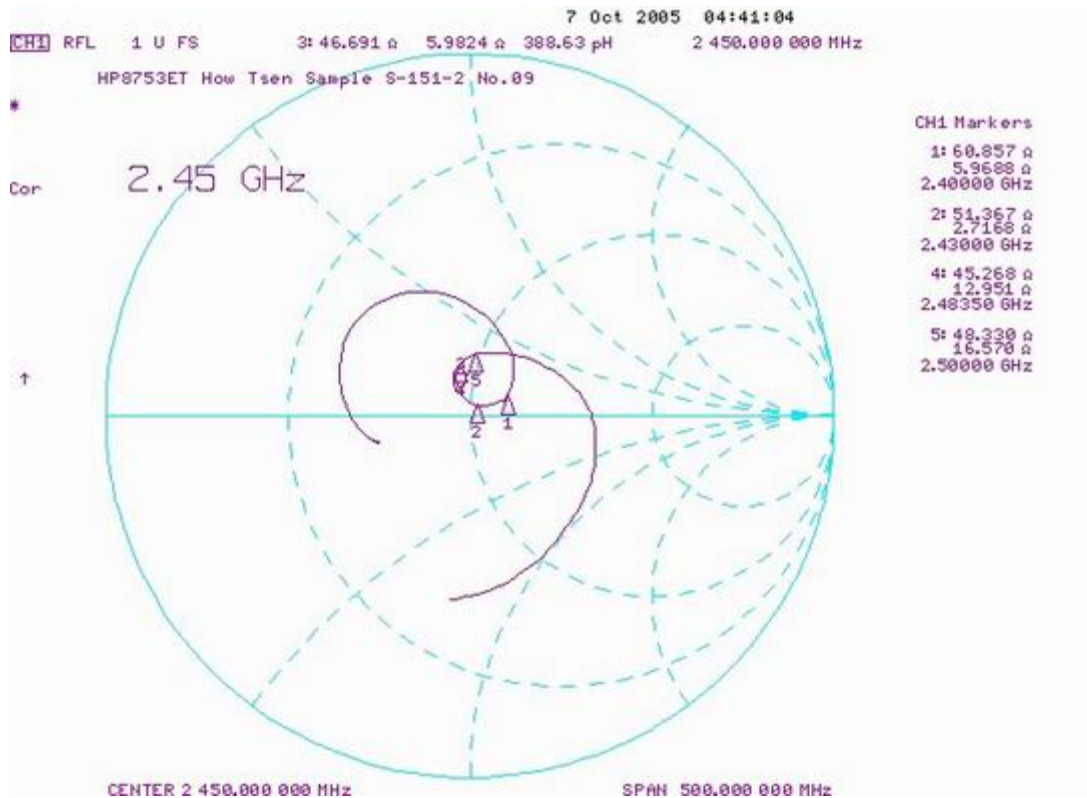
HP8753ET How Tsen Sample S-151-2 No.08



Return Loss



Smith Chart



V.S.W.R

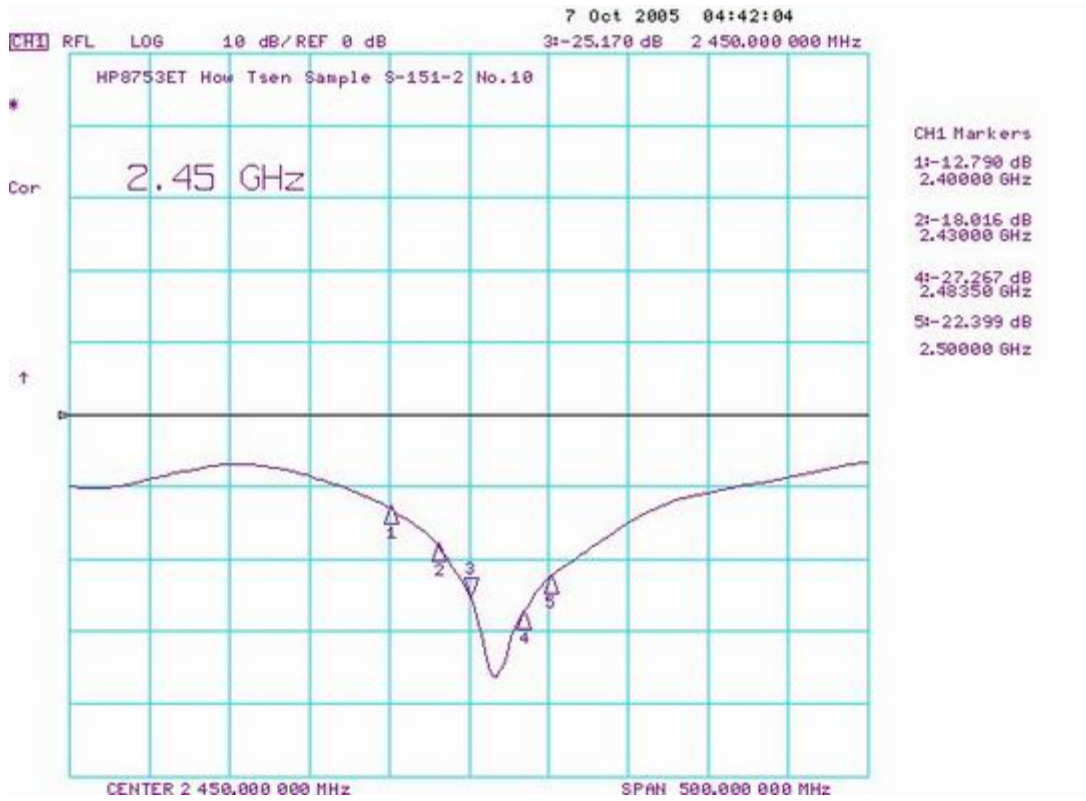
7 Oct 2005 04:41:20

CH1 RFL SWR 1 / REF 1 3: 1.1470 2 450.000 000 MHz

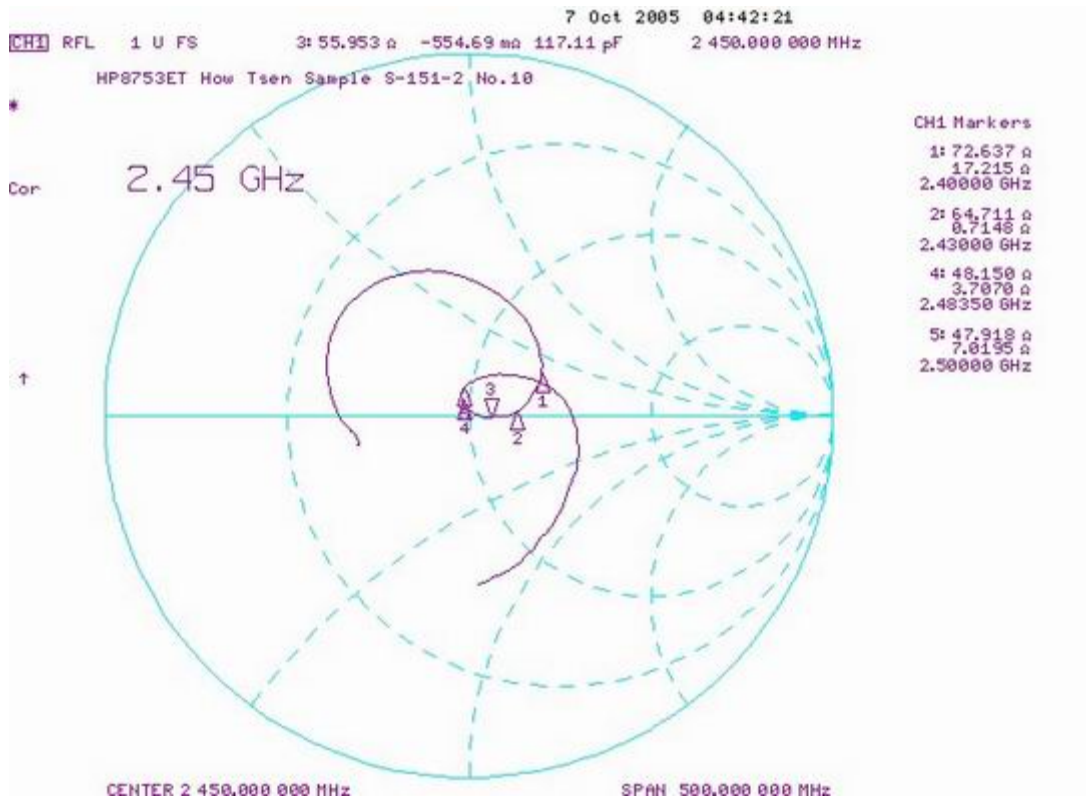
HP8753ET How Tsen Sample S-151-2 No.09



Return Loss



Smith Chart



V.S.W.R

7 Oct 2005 04:42:43

CH1 RFL SWR 1 / REF 1 3: 1.1217 2 450.000 000 MHz

HP8753ET How Tsen Sample S-151-2 No.10



CH1 Markers

1: 1.5922
2.40000 GHz

2: 1.2905
2.43000 GHz

4: 1.0838
2.48350 GHz

5: 1.1583
2.50000 GHz