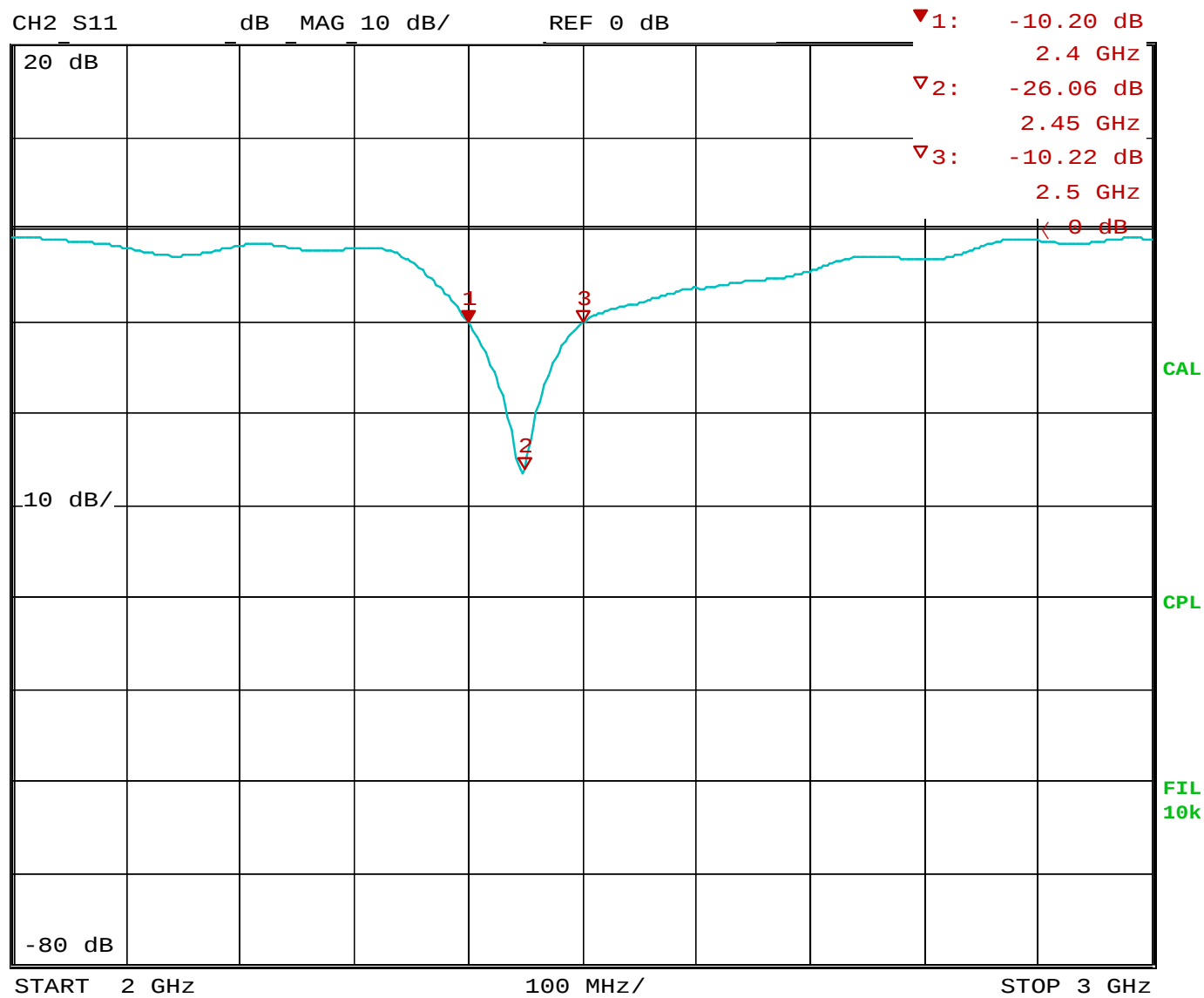


Electrical Properties

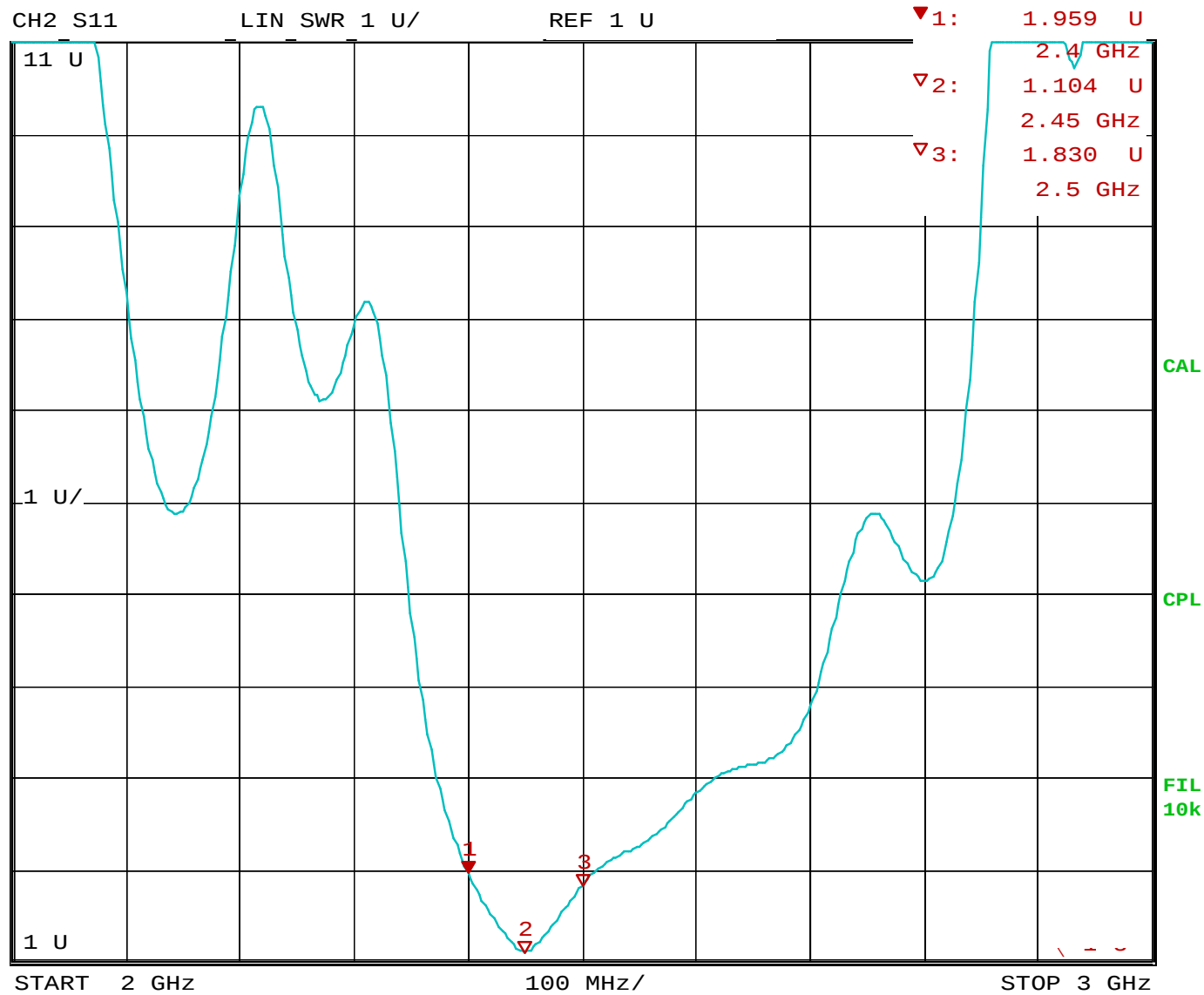
Return Loss



Date: 8.AUG.03 14:24:35

Electrical Properties

V.S.W.R



Date: 8.AUG.03 14:25:09

Electrical Properties

Radiation Pattern – H Plane

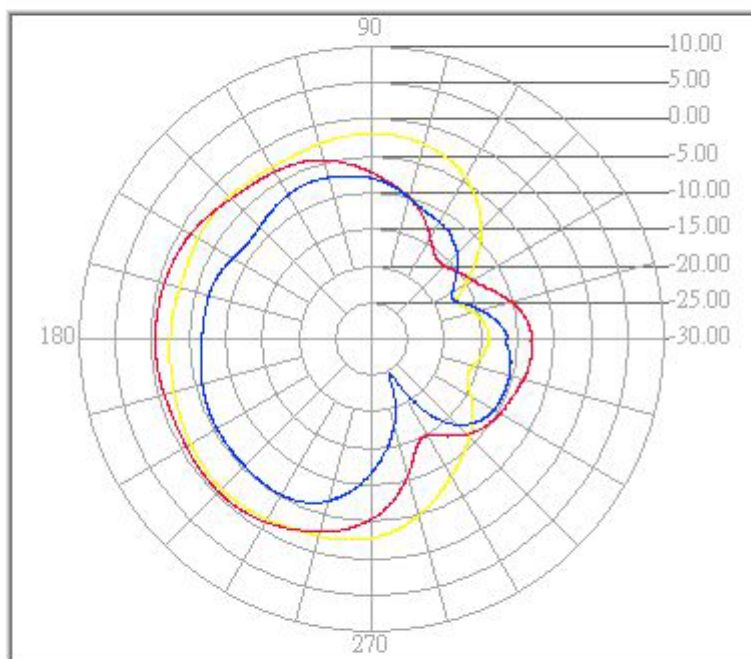


萬旭電業股份有限公司

Model No: SAW0176A

Antenna Position: Vertical

Test Mode: H-PLANE



Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
2400.00	-0.96	225.04	-3.93
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
2450.00	-0.40	181.09	-4.21
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
2490.00	-5.26	235.95	-8.74

Test engineer: _____

Test date: 2003/8/8 at PM 02:41

Electrical Properties

Radiation Pattern – E Plane

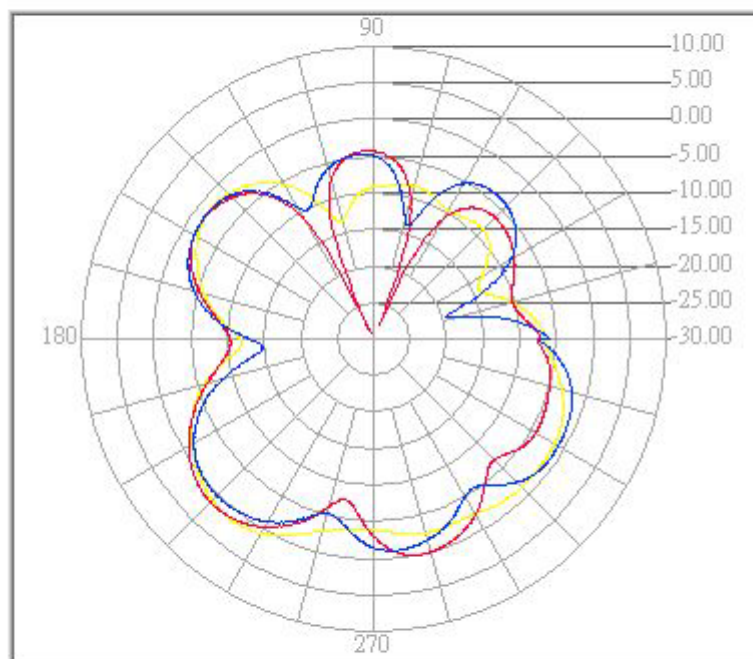


萬旭電業股份有限公司

Model No: SAW0176A

Antenna Position: Horizontal

Test Mode: E-PLANE



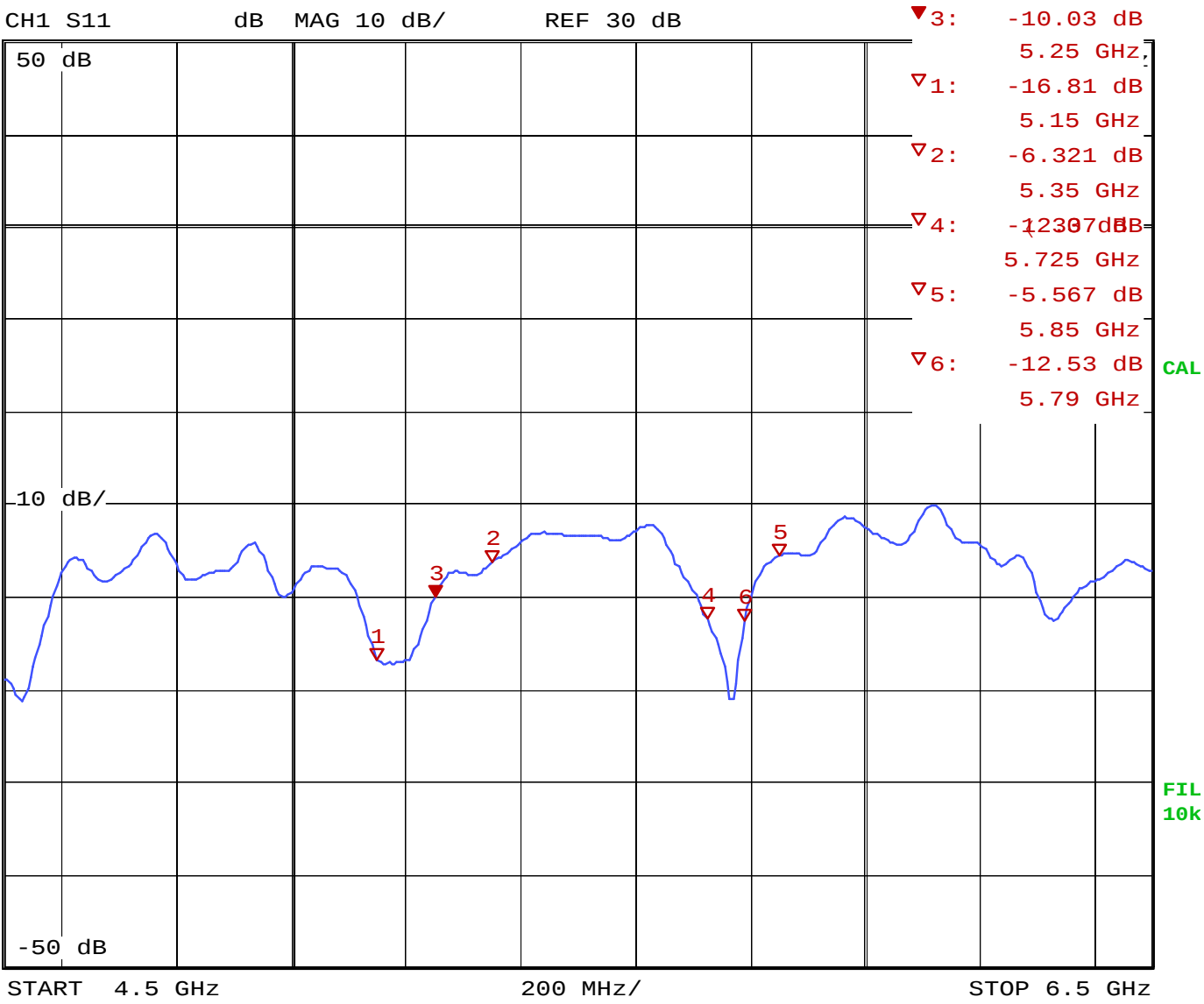
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
2400.00	1.49	230.90	-3.70
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
2450.00	1.57	225.93	-3.91
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
2490.00	0.30	225.00	-3.71

Test engineer: _____

Test date: 2003/8/8 at PM 02:36

Electrical Properties

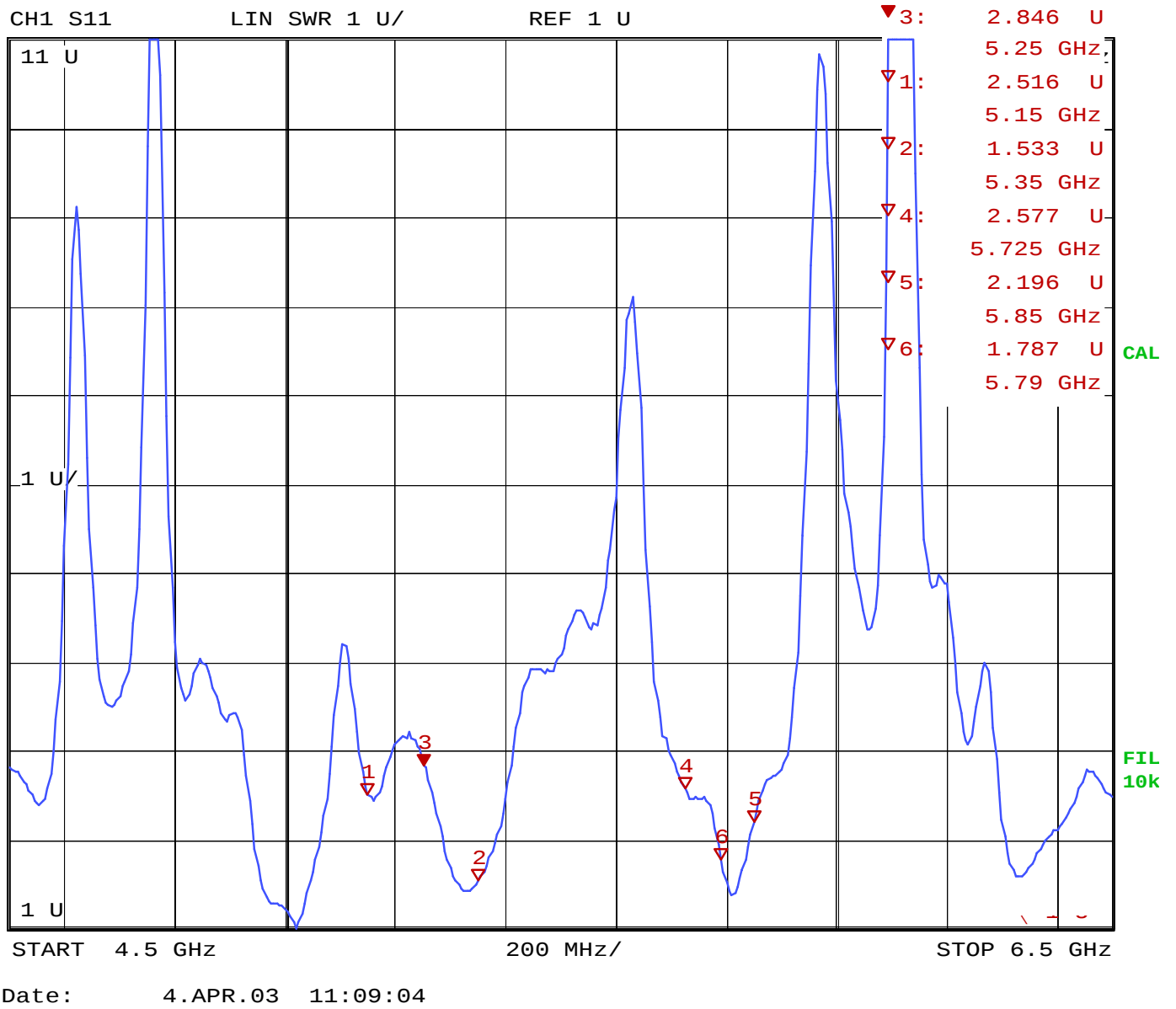
Return Loss



Date: 4.APR.03 11:00:45

Electrical Properties

V.S.W.R



Electrical Properties

Radiation Pattern –XY Plane

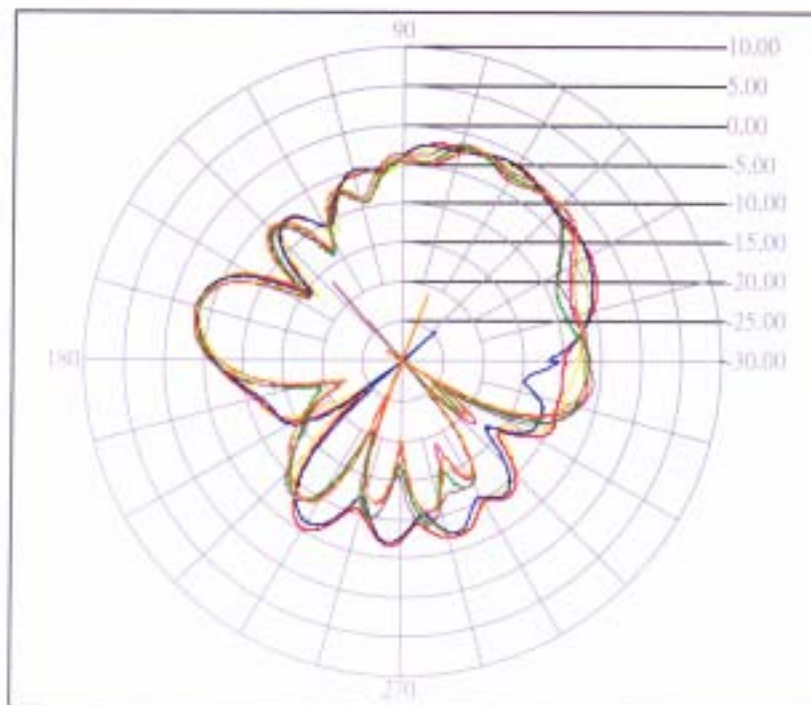


萬旭電業股份有限公司

Model No: RFW0054A

Antenna Position: Horizontal

Test Mode: XY-PLANE



Test engineer: _____

Test date: 2003/4/3 at AM 10:02

Freq(MHz)	peak(dBi)
5150.00	-1.87
Angle(o)	Avg(dBi)
56.94	-6.39
Freq(MHz)	peak(dBi)
5200.00	-1.23
Angle(o)	Avg(dBi)
61.30	-6.08
Freq(MHz)	peak(dBi)
5250.00	-1.26
Angle(o)	Avg(dBi)
62.23	-6.36
Freq(MHz)	peak(dBi)
5750.00	-1.77
Angle(o)	Avg(dBi)
69.70	-7.37
Freq(MHz)	peak(dBi)
5800.00	-1.65
Angle(o)	Avg(dBi)
71.56	-7.37
Freq(MHz)	peak(dBi)
5850.00	-1.39
Angle(o)	Avg(dBi)
72.50	-6.93
Freq(MHz)	peak(dBi)
5725.00	-1.63
Angle(o)	Avg(dBi)
69.08	-7.18

Electrical Properties

Radiation Pattern –YZ- Plane

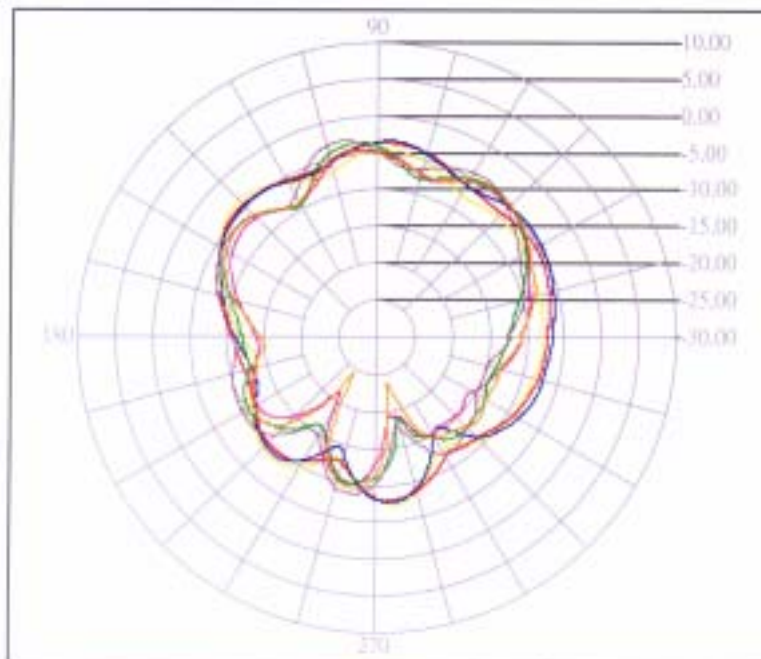


萬旭電業股份有限公司

Model No: RFW0054A

Antenna Position: Vertical

Test Mode: YZ-PLANE



Test engineer: _____

Test date: 2003/4/3 at AM 10:01

Freq(MHz)	peak(dBi)
5150.00	-3.97
Angle(o)	Avg(dBi)
135.81	-7.69
Freq(MHz)	peak(dBi)
5200.00	-3.62
Angle(o)	Avg(dBi)
86.10	-7.17
Freq(MHz)	peak(dBi)
5250.00	-3.35
Angle(o)	Avg(dBi)
84.80	-7.06
Freq(MHz)	peak(dBi)
5750.00	-4.61
Angle(o)	Avg(dBi)
94.55	-9.18
Freq(MHz)	peak(dBi)
5800.00	-3.48
Angle(o)	Avg(dBi)
96.50	-8.70
Freq(MHz)	peak(dBi)
5850.00	-2.95
Angle(o)	Avg(dBi)
102.02	-8.19
Freq(MHz)	peak(dBi)
5725.00	-4.42
Angle(o)	Avg(dBi)
98.12	-8.85

RF Antenna Cable Assembly

Specification

1. Electrical Properties :

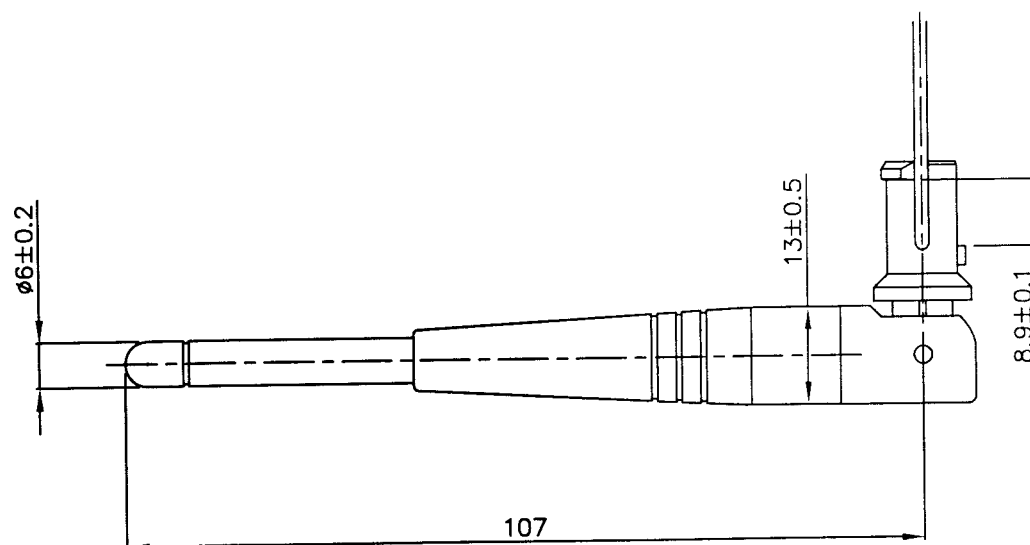
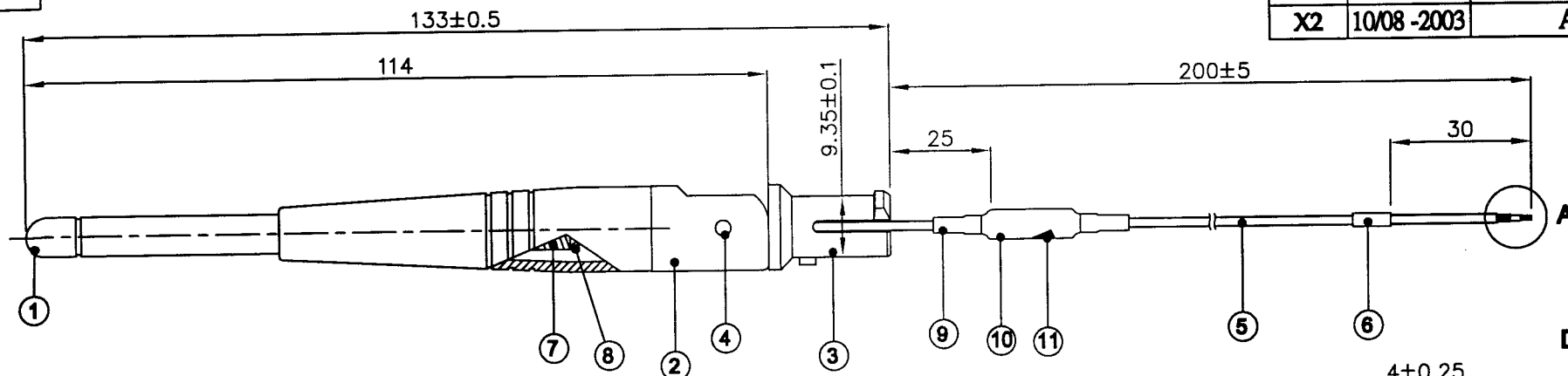
- 1.1 Frequency Rang..... 2.4GHz ~ 2.5GHz
- 1.2 Impedance 50Ω Nominal
- 1.3 VSWR 1.92 Max.
- 1.4 Return Loss..... -10dB Maximum
- 1.5 Electrical Wave..... $1/2 \lambda$ Diople
- 1.6 Gain..... 1.8 dBi
- 1.7 Admitted Power..... 1W

2. Physical Properties :

- 2.1 Cable..... RG-178 Cable
- 2.2 Antenna Cover..... TPE
- 2.3 Antenna Base..... PC
- 2.4 Operating Temp. -20°C ~ +65°C
- 2.5 Storage Temp. -30°C ~ +75°C
- 2.6 Color Black

CG-xx

REV	DATE	DESCRIPTION
X1	09/18 -2003	New Issue
X2	10/08 -2003	Added Core



NO	DESCRIPTION	QTY	REMARK
11	Core	RH 4.6*2*11	1
10	Tube	Heat Shrink Tube	1
9	Tube	Heat Shrink Tube	2
8	Insulator	ABS Compound , White	1
7	Ground Tube	Brass ; Ni Plated	1
6	Tube	Heat Shrink Tube : Black	1
5	Cable	RG-178 Coaxial Cable	1
4	Rivet	Brass Plated (Black)	2
3	Antenna Base	PC Color:Black	1
2	Antenna Base	PC Color:Black	1
1	Antenna Body	TPE Color:Black	1

CUSTOMER'S SINGATURE

XXX	±3.0	APPROVED
XX	±2.0	Wing from 21/9/03
X	±1.0	CHECKED
X	±0.5	10/08/03
XX	±0.1	DRAWING
⊕		10/08/03

CUSTOMER : 友訊科技股份有限公司

PART NO :

PARTNAME: 2.4G RF Antenna Assembly

W.Y P/NO : C037-510480-A

REV UNIT FILE :

X2 m/m SHEET: 1/1

Wha Yu
INDUSTRIAL CO.,LTD.

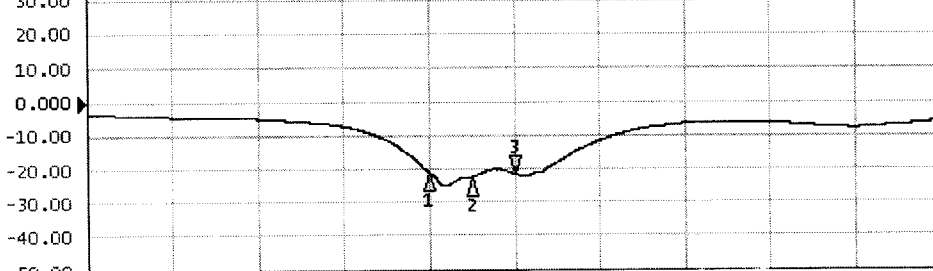
譚裕實業股份有限公司

THIS DRAWING, AND ITS INHERANT DESIGN CONCEPTS,
ARE THE PROPERTY OF WHA YU AND AS SUCH MAY NOT
BE COPIED, REPRODUCED, OR GIVEN TO THIRD PARTIES
WITHOUT THE WRITTEN CONSENT OF WHA YU.

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

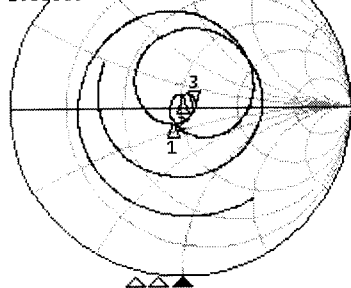
Tr1 S22 Log Mag 10.00dB/ Ref 0.000dB [F2]

1	2.400000000	GHz	-21.204	dB
2	2.450000000	GHz	-22.560	dB
>3	2.500000000	GHz	-21.663	dB



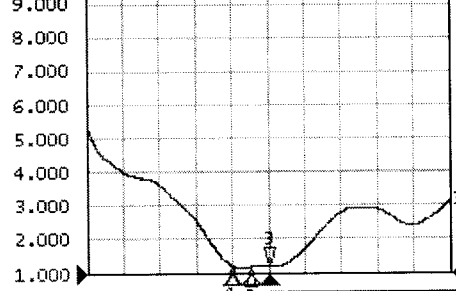
Tr2 S22 Smith (R+jX) Scale 1.000U [F2]

	Frequency (GHz)	Resistance (Ω)	Reactance (Ω)
1	2.400000000	45.383	-6.9131
2	2.450000000	50.723	7.4871
>3	2.500000000	58.742	-2.0594



Tr3 S22 SWR 1.000/ Ref 1.000 [F2]

1	2.400000000	GHz	1.1907
2	2.450000000	GHz	1.1609
>3	2.500000000	GHz	1.1800



1 Start 2 GHz

IFBW 70 kHz

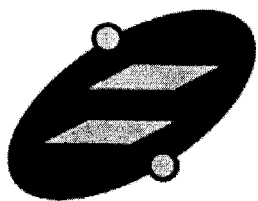
Stop 3 GHz

Extensions

ON

Extension Port 1
3.3000 ps

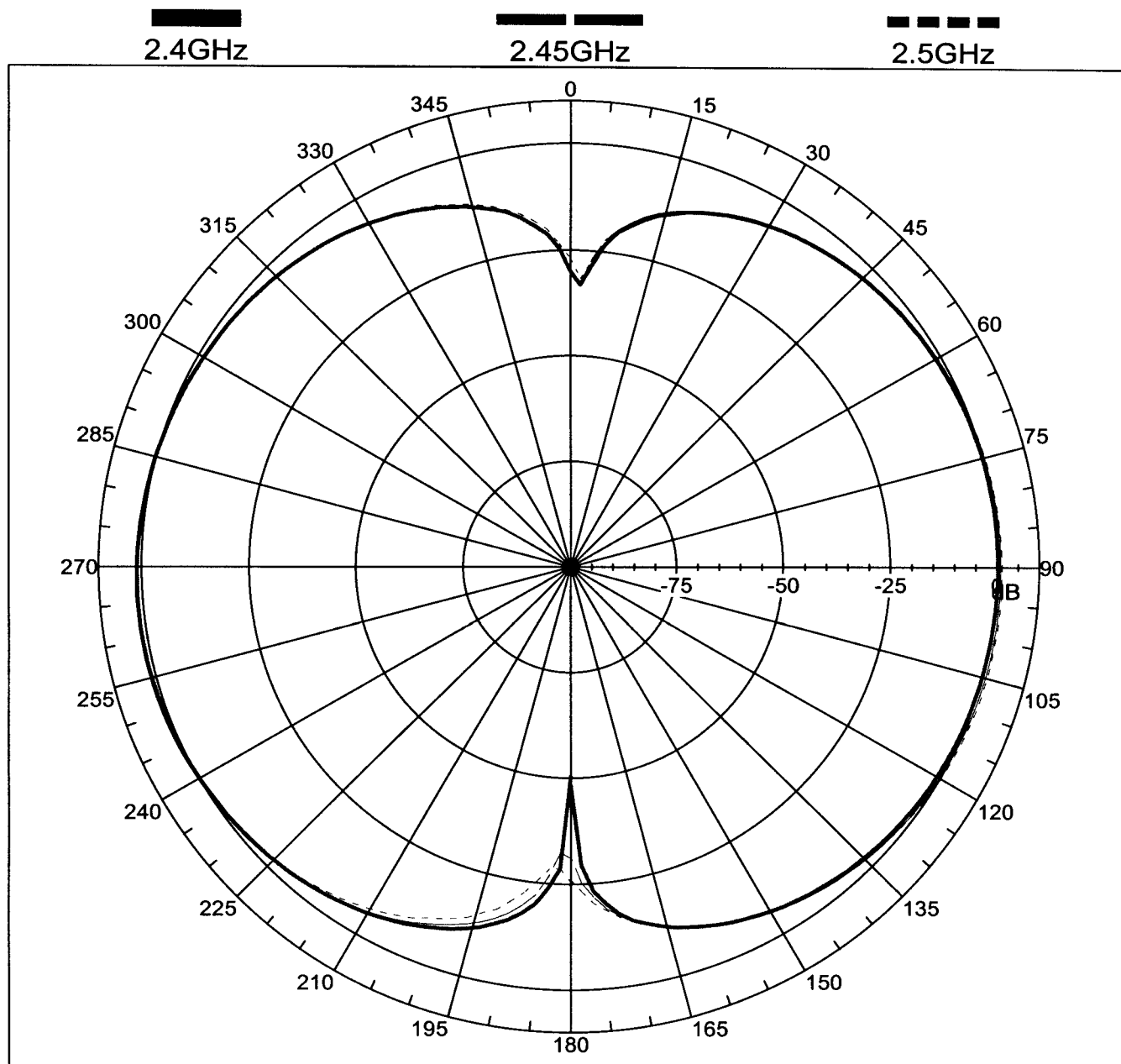
Return

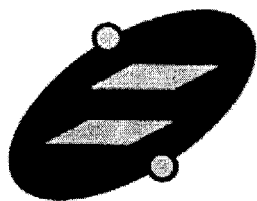


譚裕實業股份有限公司

WHA YU INDUSTRIAL CO., LTD

Far-field amplitude of 2.4GHz small dipole antenna-E-plane.nsi

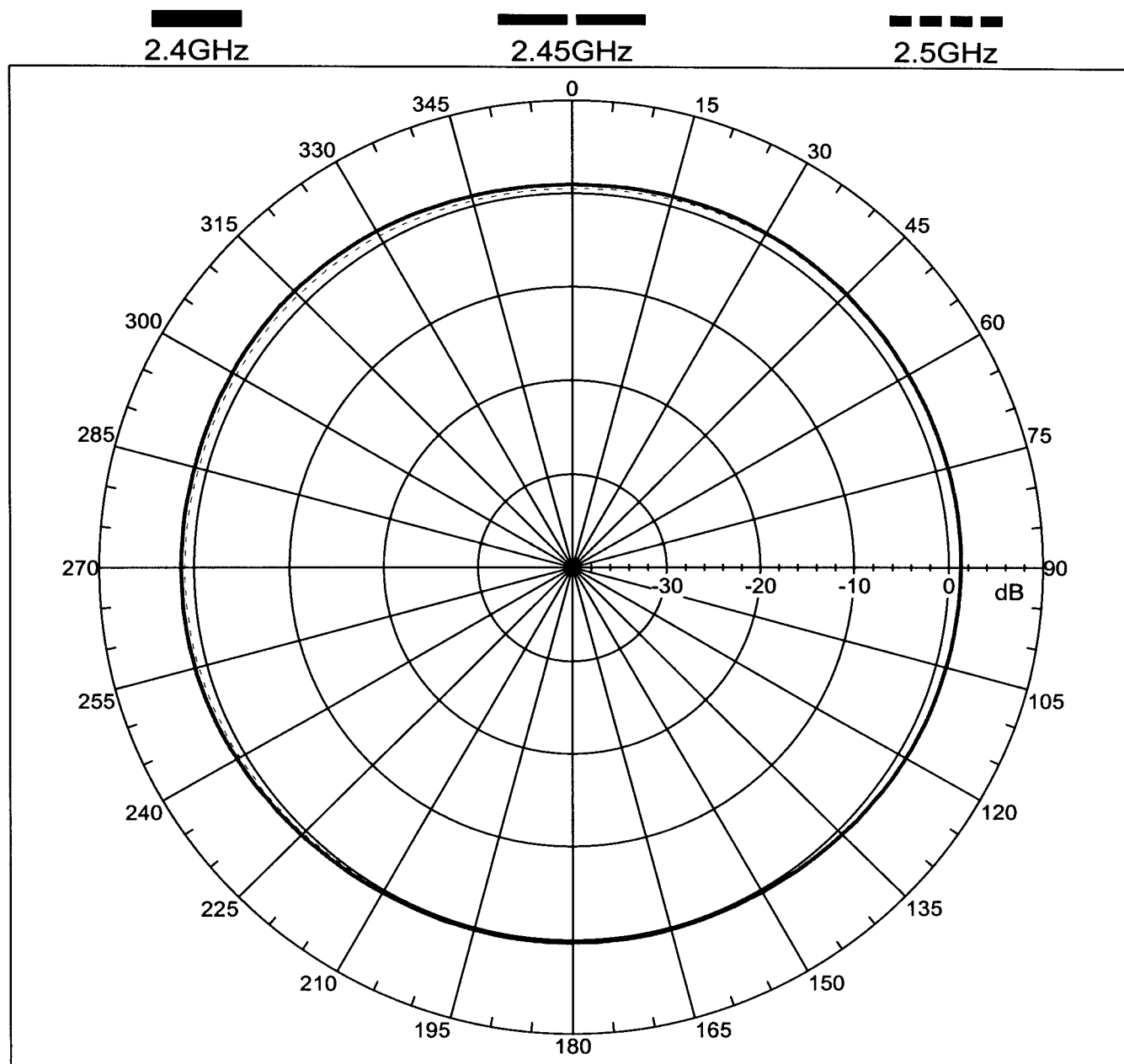




譚裕實業股份有限公司

WHA YU INDUSTRIAL CO., LTD

Far-field amplitude of 2.4GHz small dipole antenna-H-plane.nsi



RF Antenna Cable Assembly

Specification

1. Electrical Properties :

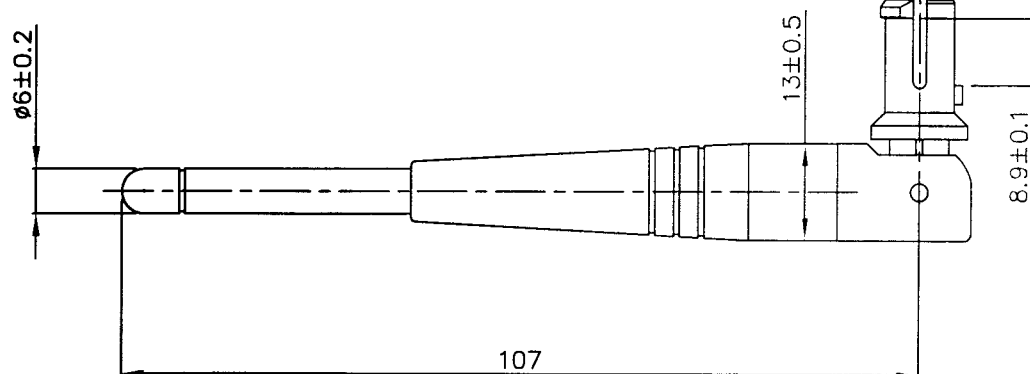
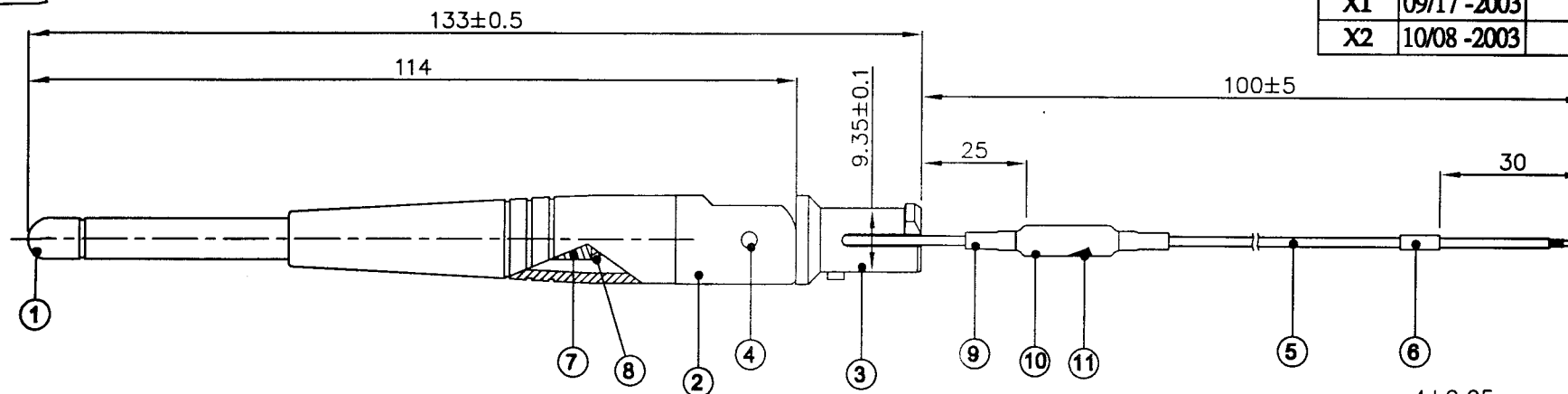
- 1.1 Frequency Rang.....4.9GHz ~ 5.825GHz
- 1.2 Impedance 50 Ω Nominal
- 1.3 VSWR 1.92 Max.
- 1.4 Return Loss.....-10 dB Maximum
- 1.5 Gain.....2 dBi
- 1.6 Admitted Power..... 1W
- 1.7 Polarization..... Linear Vertical

2. Physical Properties :

- 2.1 Cable..... RG-178 Cable
- 2.2 Antenna Cover..... TPE
- 2.3 Antenna Base.....PC
- 2.4 Operating Temp. -20°C ~ +65°C
- 2.5 Storage Temp. -30°C ~ +75°C
- 2.6 Color Black

CG-xx

REV	DATE	DESCRIPTION
X1	09/17 -2003	New Issue
X2	10/08 -2003	Added Core



11	Core	RH 4.6*2*11	1	
10	Tube	Heat Shrink Tube	1	
9	Tube	Heat Shrink Tube	2	
8	Insulator	ABS Compound , White	1	
7	Ground Tube	Brass ; Ni Plated	1	
6	Tube	Heat Shrink Tube : Red	1	
5	Cable	RG-178 Coaxial Cable	1	
4	Rivet	Brass Plated (Black)	2	
3	Antenna Base	PC Color:Black	1	
2	Antenna Base	PC Color:Black	1	
1	Antenna Body	TPE Color:Black	1	
NO	DESCRIPTION		QTY	REMARK

CUSTOMER'S SINGATURE

XXX	±3.0	APPROVED
XX	±2.0	Winston 10/8
X	±1.0	CHECKED
X	±0.5	吳忠達 10/08/03
XX	±0.1	DRAWING
⊕		10-08-03

CUSTOMER : 友訊科技股份有限公司

PART NO :

PARTNAME: 5G RF Antenna Assembly

W.Y P/NO : C037-510476-A

REV UNIT FILE :

X2 m/m SHEET : 1/1

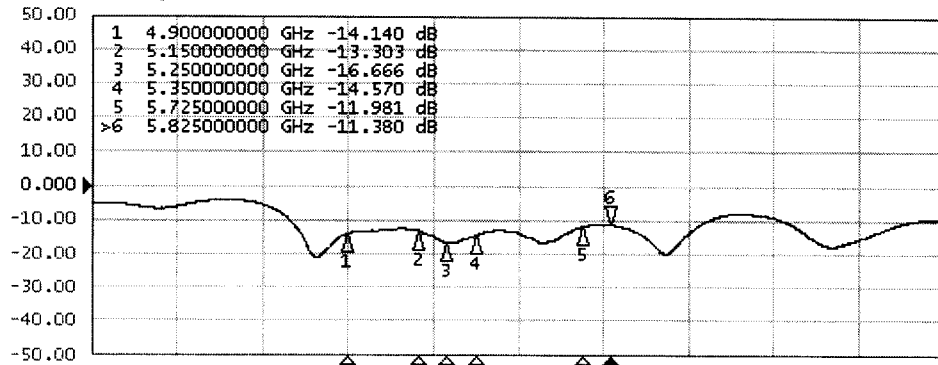
Wha Yu
INDUSTRIAL CO.,LTD.

譚裕實業股份有限公司

THIS DRAWING, AND ITS INHERANT DESIGN CONCEPTS,
ARE THE PROPERTY OF WHA YU AND AS SUCH MAY NOT
BE COPIED, REPRODUCED, OR GIVEN TO THIRD PARTIES
WITHOUT THE WRITTEN CONSENT OF WHA YU.

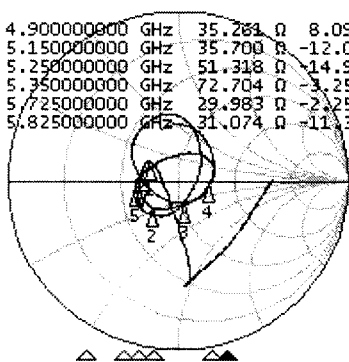
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

Tr1 S22 Log Mag 10.00dB/ Ref 0.000dB [F2]

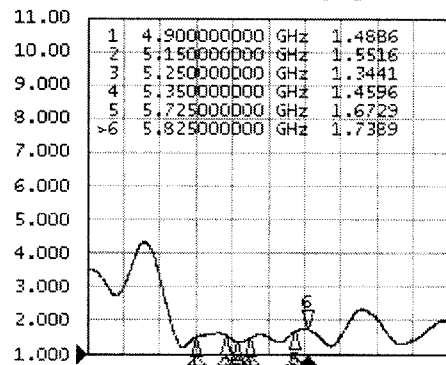


Tr2 S22 Smith (R+jX) Scale 1.000U [F2]

1	4.900000000	GHz	35.281	Ω	8.0955	Ω
2	5.150000000	GHz	35.700	Ω	-12.064	Ω
3	5.250000000	GHz	51.318	Ω	-14.974	Ω
4	5.350000000	GHz	72.704	Ω	-3.2563	Ω
5	5.725000000	GHz	29.983	Ω	-2.2592	Ω
>6	5.825000000	GHz	31.074	Ω	-11.386	Ω



Tr3 S22 SWR 1.000/ Ref 1.000 [F2]



1 Start 4 GHz

IFBW 70 kHz

Stop 7 GHz

Abort Printing

Printer Setup

Invert Image
ON

Dump
Screen Image

E5091A Setup

Misc Setup

Backlight
ON

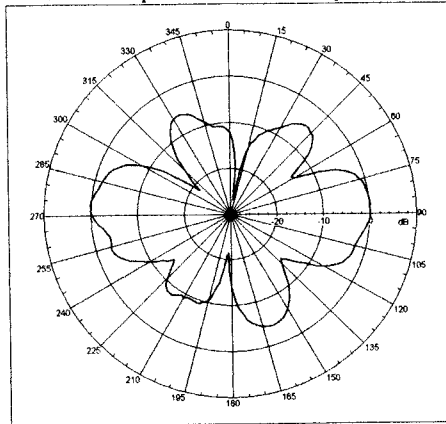
Firmware
Revision

2015-09-24 15:58

5G FB E-Pattern

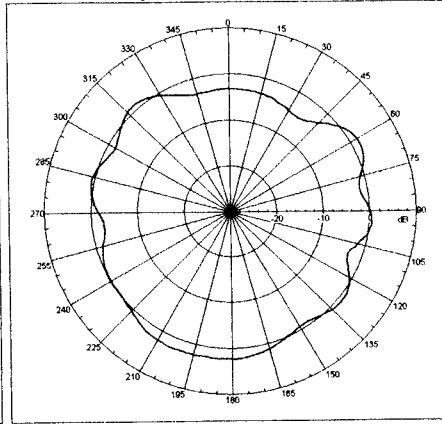
4.9GHz

Far-field amplitude of 5G FB E-pattern.nsi



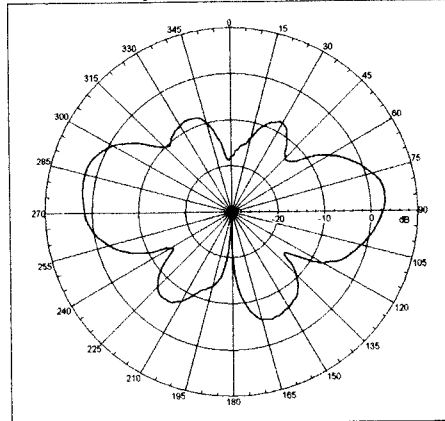
5G FB H-Pattern

Far-field amplitude of 5G FB H-pattern.nsi

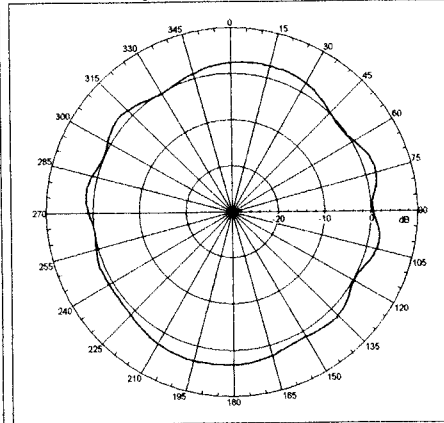


5.15GHz

Far-field amplitude of 5G FB E-pattern.nsi

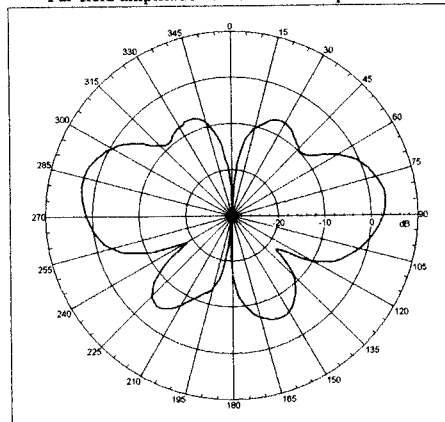


Far-field amplitude of 5G FB H-pattern.nsi

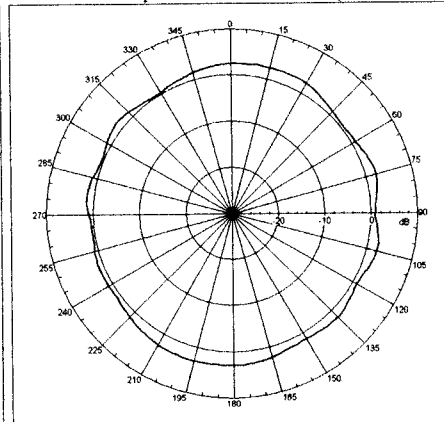


5.25GHz

Far-field amplitude of 5G FB E-pattern.nsi

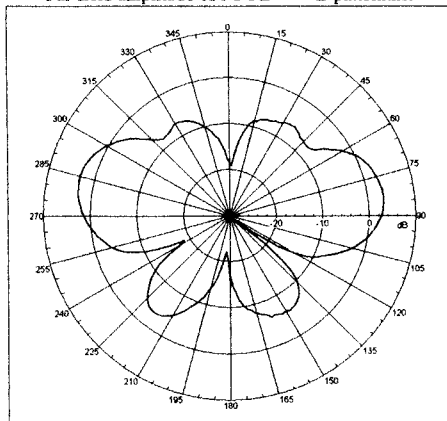


Far-field amplitude of 5G FB H-pattern.nsi

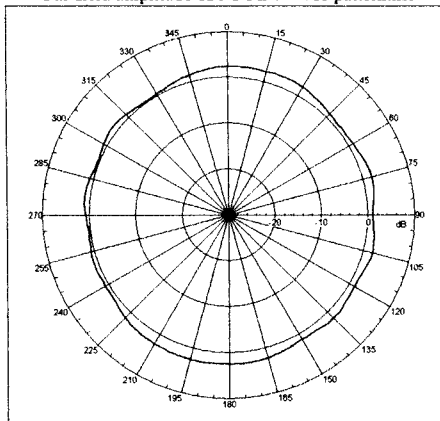


5.35GHz

Far-field amplitude of 5G FB E-pattern.nsi

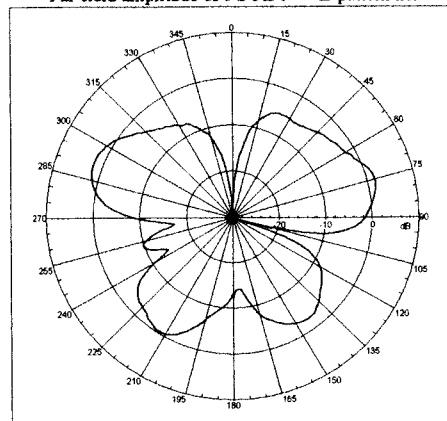


Far-field amplitude of 5G FB H-pattern.nsi

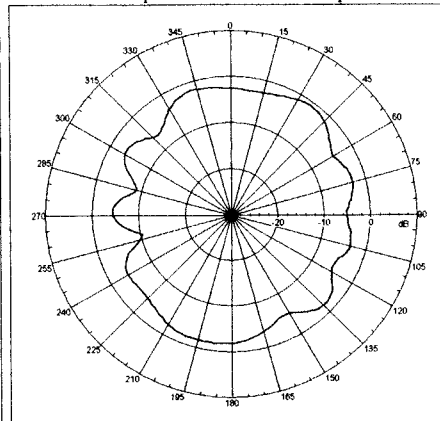


5.725GHz

Far-field amplitude of 5G FB E-pattern.nsi

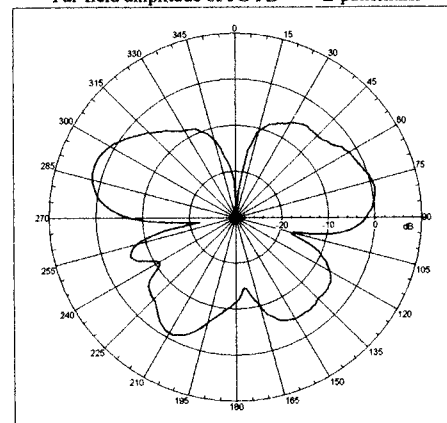


Far-field amplitude of 5G FB H-pattern.nsi



5.825GHz

Far-field amplitude of 5G FB E-pattern.nsi



Far-field amplitude of 5G FB H-pattern.nsi

