



Specifications Sheet

Object	Internal Antenna	Page	1 of 10
Customer	MMC	Date	December 3, 2004
System	W-LAN	Rev.	A
Model Name	W4E-WO-31	Written by	W. I. KWAK

Electrical Specifications

Frequency Range (MHz)	2400 □ 2483.5	
Band Width (MHz)	83.5	
V.S.W.R (Min)	1.9 : 1	
Gain (Max)	5.47 ± 1 (dBi)	
Input Impedance	50 (Ω)	
Polarization	Linear	

Mechanical Specifications

Antenna Size (Width x Length x Height)	170 × 11 mm
Weight	N / A
Radiator Material	Copper
Operation Temperature	- 30 □ 90 ()
Operation Humidity	10 □ 90 (%)

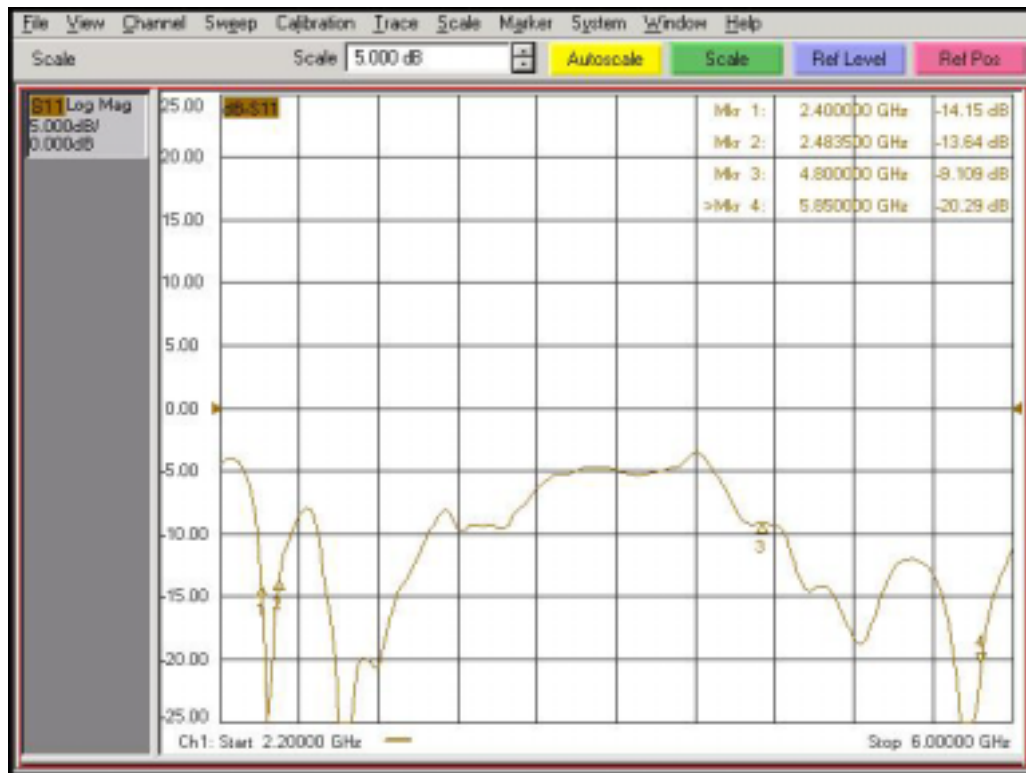
Option	
Remarks	

WINiZEN Co., Ltd.

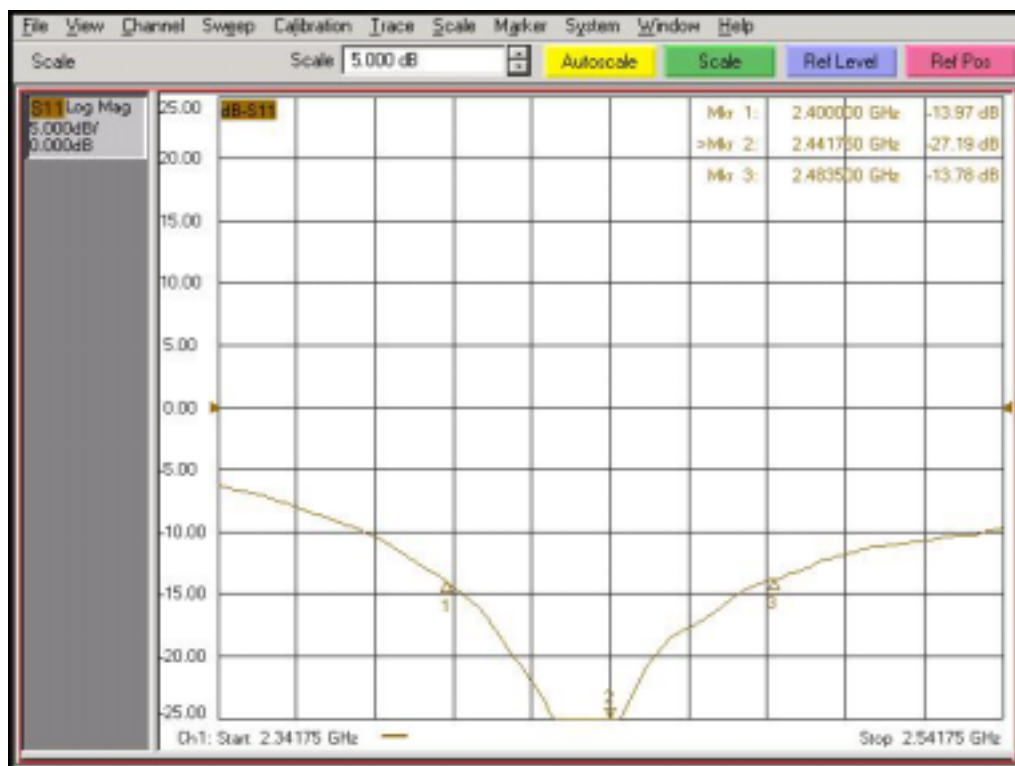


Fig 1. Return Loss (Agilent E8357A 300KHz – 6GHz PNA Series Network Analyzer)

a. 2400 MHz – 5850 MHz



b. 2400 MHz – 2483.5 MHz

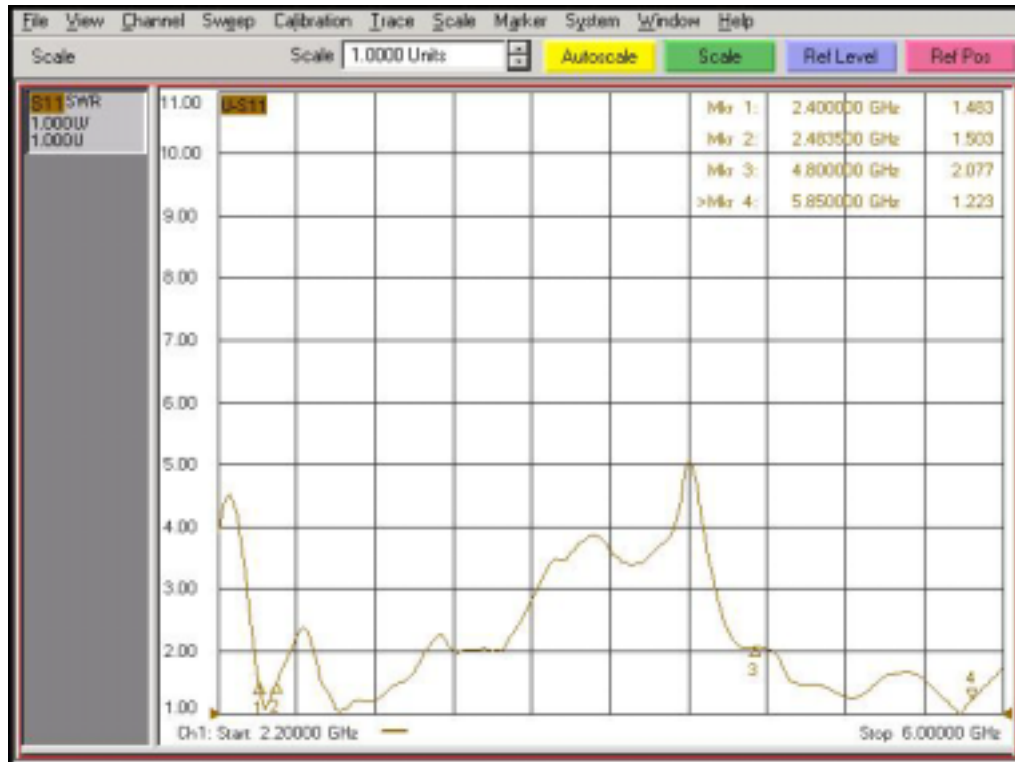




c

Fig 2. V.S.W.R (Agilent E8357A 300KHz – 6GHz PNA Series Network Analyzer)

a. 2400 MHz – 5850 MHz





b. 2400 MHz 2483.5 MHz

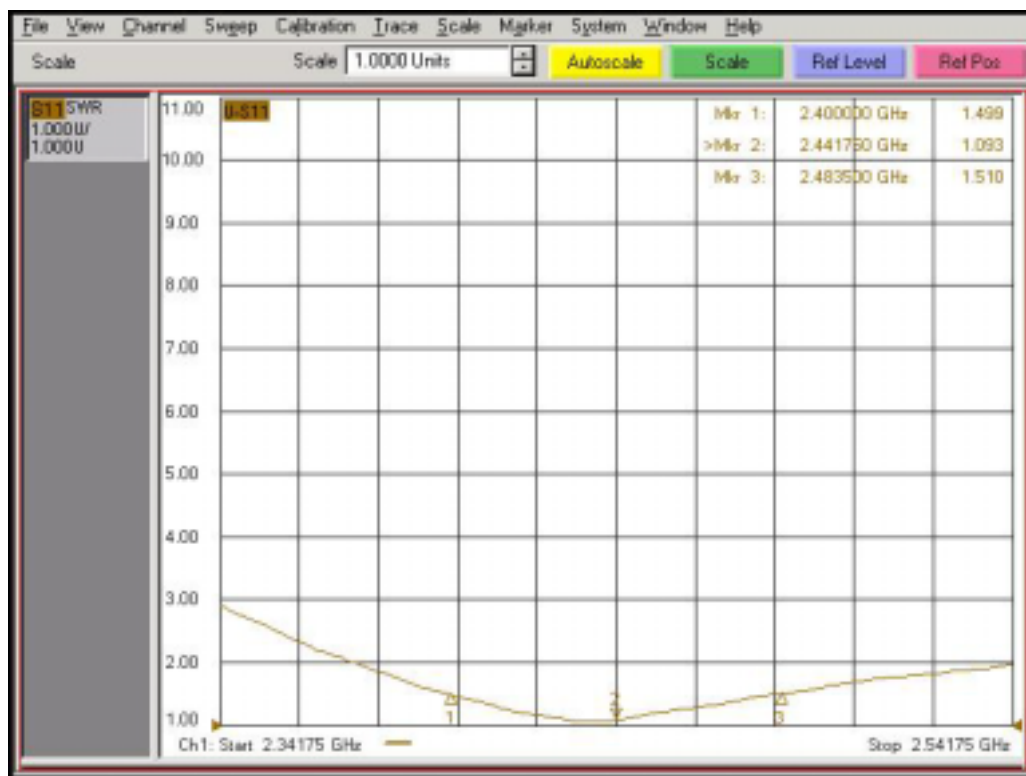
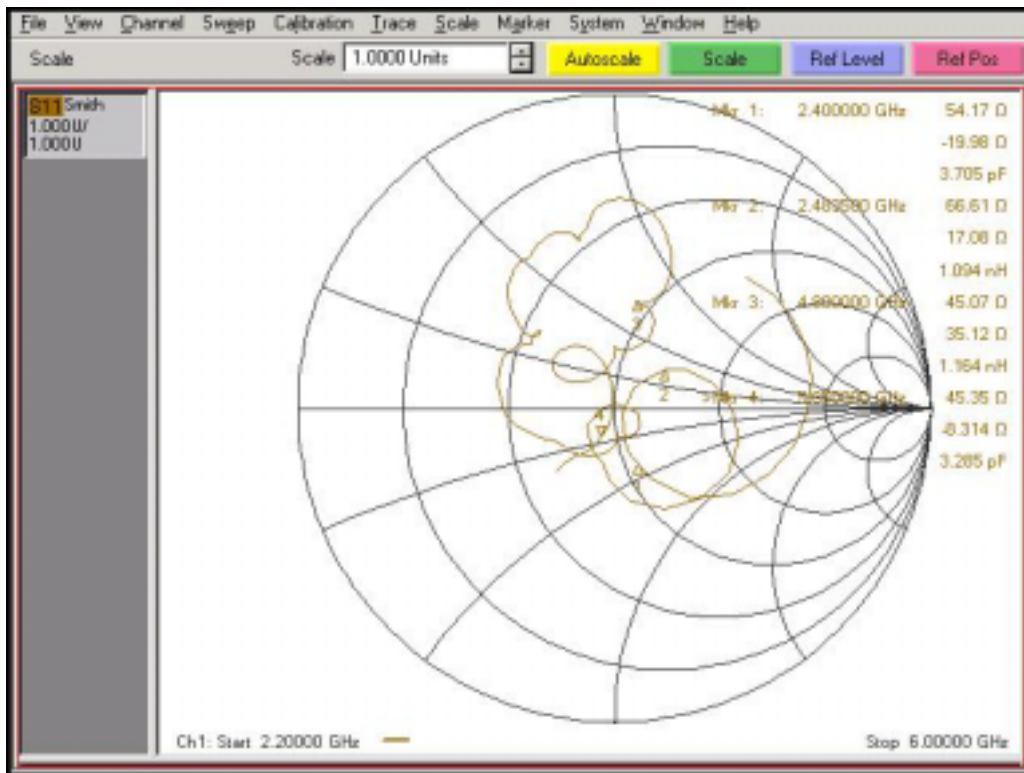
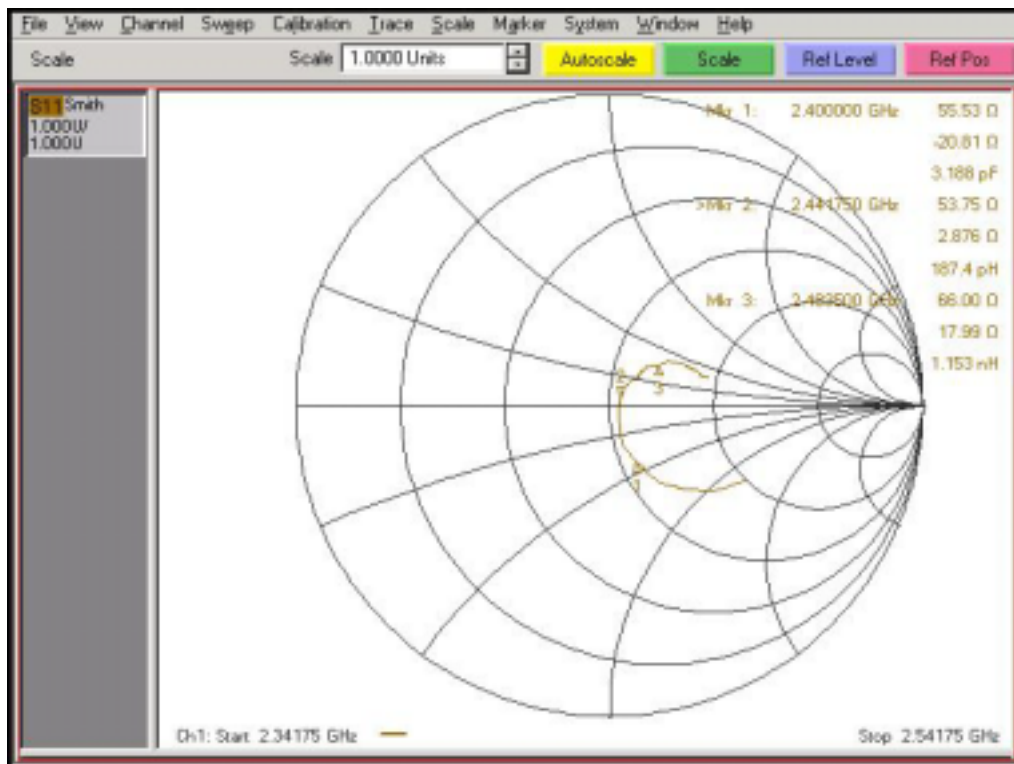


Fig 3. Smith Chart (Agilent E8357A 300KHz – 6GHz PNA Series Network Analyzer)

a. 2400 MHz – 5850 MHz

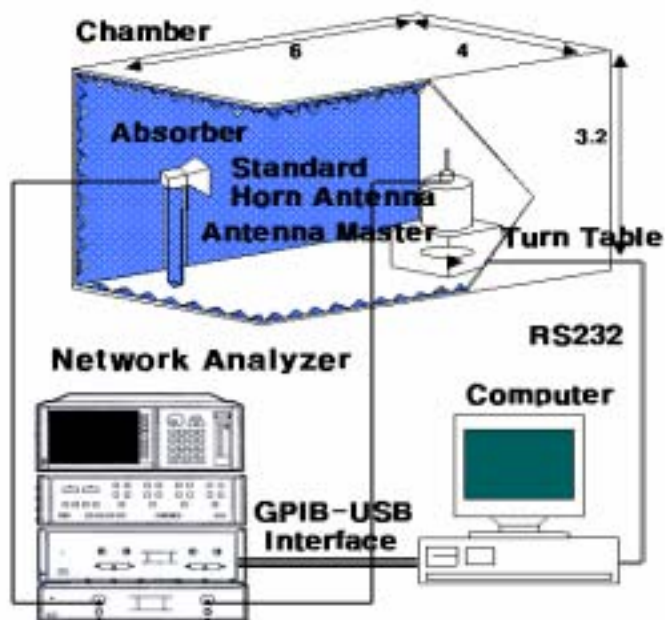


b. 2400 MHz – 2483.5 MHz



ig 4. Measurement Configuration

(Hewlett Packard 8722ES 50 MHz 40 GHz S-Parameter Network Analyzer)

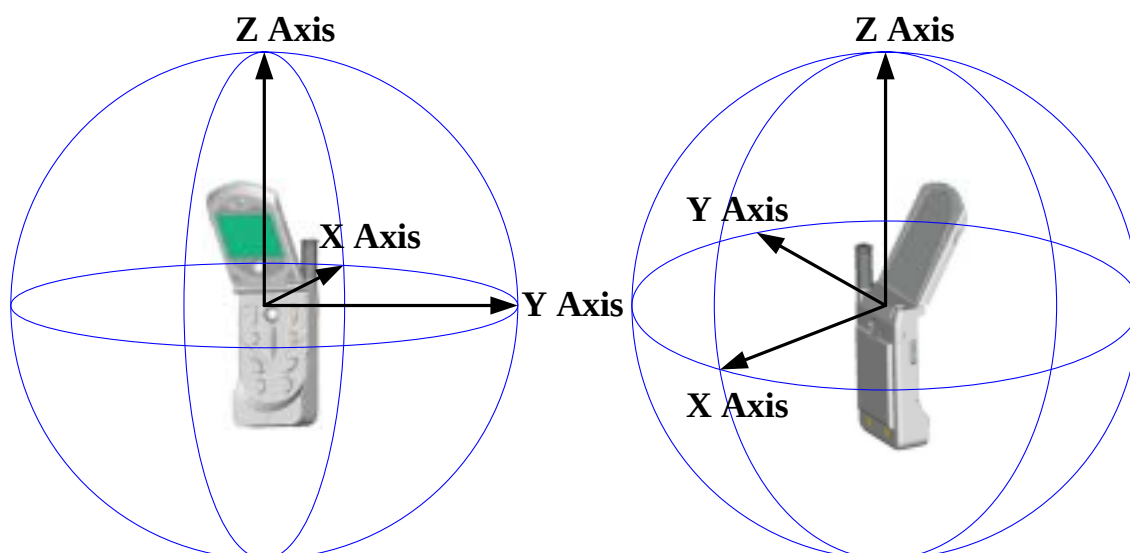


Standard Horn



Turn Table

Fig 5. Axis Definitions (Antenna Center)



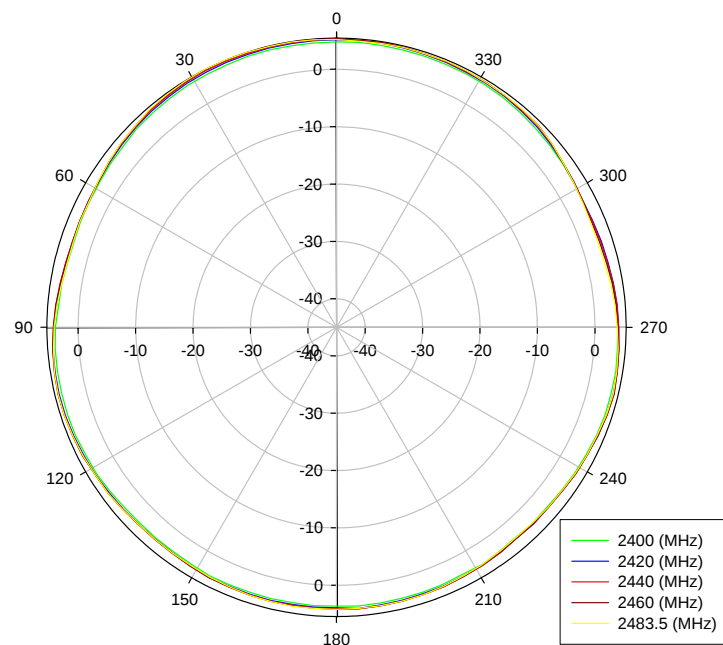
- a. Azimuth Pattern (Co-pol) : XY Plane ; Horn Antenna Polarization : Vertical
- b. Elevation Pattern (Co-pol) : XZ Plane ; Horn Antenna Polarization : Horizontal
- c. Elevation Side Pattern (Co-pol) : YZ Plane ; Horn Antenna Polarization : Horizontal



Fig 6. Gain Patterns

a. Azimuth Pattern

2400 MHz 2483.5 MHz

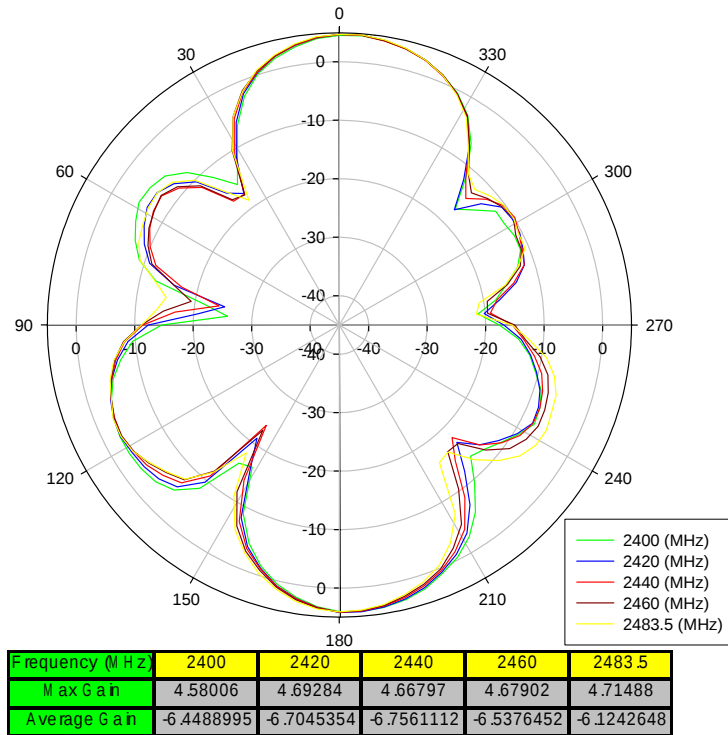


Frequency (MHz)	2400	2420	2440	2460	2483.5
Max Gain	4.84178	5.13253	5.27578	5.41378	5.47982
Average Gain	3.8803809	4.1604868	4.2388185	4.2603867	4.2030932



b. Elevation Pattern

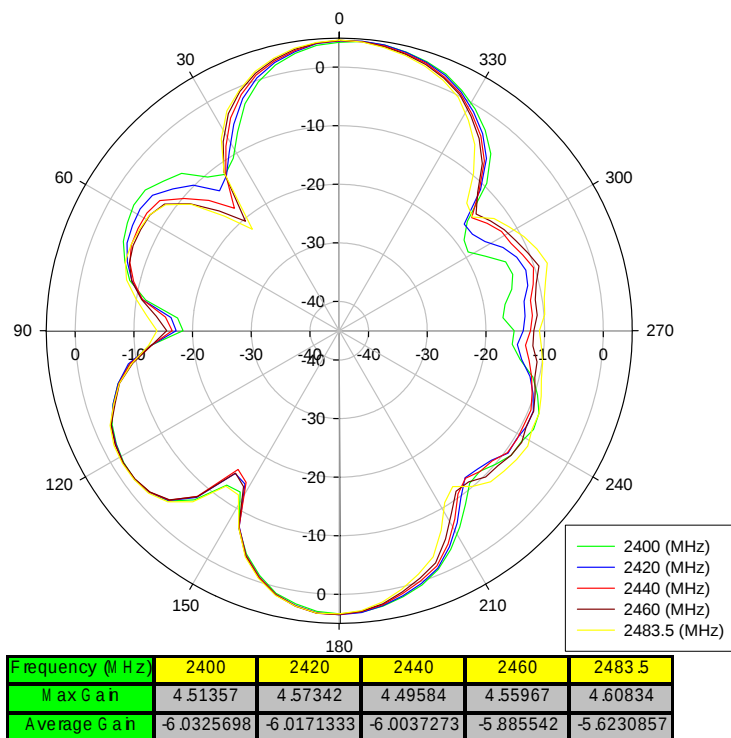
2400 MHz 2483.5 MHz



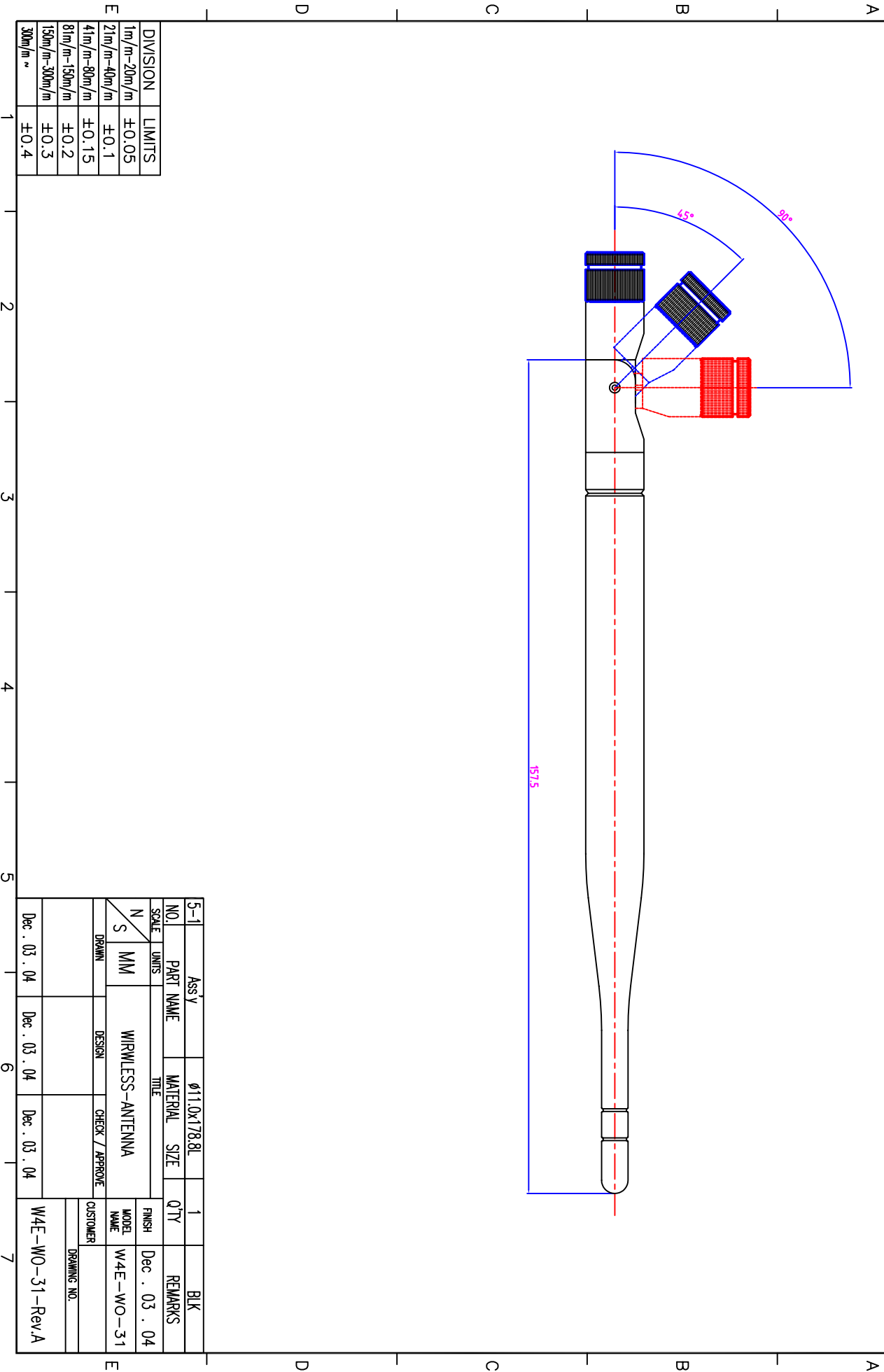


c. Elevation Side Pattern

2400 MHz 2483.5 MHz



IRVISION				CHANGE CAUSE
No.	DATE	CHANGE CONTENTS		



DIVISION	LIMITS
1m/m-20m/m	±0.05
21m/m-40m/m	±0.1
41m/m-80m/m	±0.15
81m/m-150m/m	±0.2
150m/m-300m/m	±0.3
300m/m ~	±0.4

5-1	Ass'y	Ø11.0x178.8L	1	BLK
NO.	PART NAME	MATERIAL	SIZE	QTY
SCALE	UNITS	TITLE		
N	MM	WIRELESS-ANTENNA		
S	MM	WIRELESS-ANTENNA		
DRAWN	DESIGN	CHECK / APPROVE	FINISH	
Dec . 03 . 04	Dec . 03 . 04	Dec . 03 . 04	Dec . 03 . 04	
CUSTOMER			MODEL NAME	
W4E-WO-31-Rev.A			W4E-WO-31	
DRAWING NO.			REMARKS	
W4E-WO-31-Rev.A			Dec . 03 . 04	

IRVISION EAC A4 (297 X 210)