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W8E-UP0-30
EP42-00033A()
UPCS Dipole Antenna



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Item Code

TNA-2210



1. Specifications

Specifications	
Electrical Specifications	Frequency Range
	1850 ~ 1990 MHz
Band Width	140 (MHz)
V.S.W.R (Min)	2.5 : 1
Gain (Max)	2 ± 1 (dBi)
Input Impedance	50 (Ω)
Polarization	Linear
Mechanical Specifications	
Antenna Size	See drawing
Connector	SMA Male
Operation Temperature	-20 ~ 60 ()
Operation Humidity	10 ~ 90 (%)
Option	
Others	



3. Test Method

3-1. Test Equipments

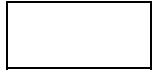
Network Analyzer	Agilent E8357A
Calibration Kit	Agilent E8357A
Adaptor	SMA Type Female ↔ SMA male
Measurement Cable	SPS-2801-400-SPS(Insulated Wire Inc.)

3-2. Test Equipment Setting

Display	Dual Channel : On Split Display : On
Menu	Number of Points : 201 Power : 0 dBm
Measure	Channel 1 : S11 Channel 2 : S21

3-3. Calibration

Calibration-	Cal. Kit : 50 Ω Calibration menu → Full-2 Port Reflection Forward : Open → Short → Load Reverse : Open → Short → Load Done Transmission Do Both → FWD + REV Done Isolation Omit Isolation Done
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4. Test Procedure

4-1. V.S.W.R

Step 1.

Connect the antenna to Port 1 of the Network Analyzer with a Cable Assembly.

Step 2.

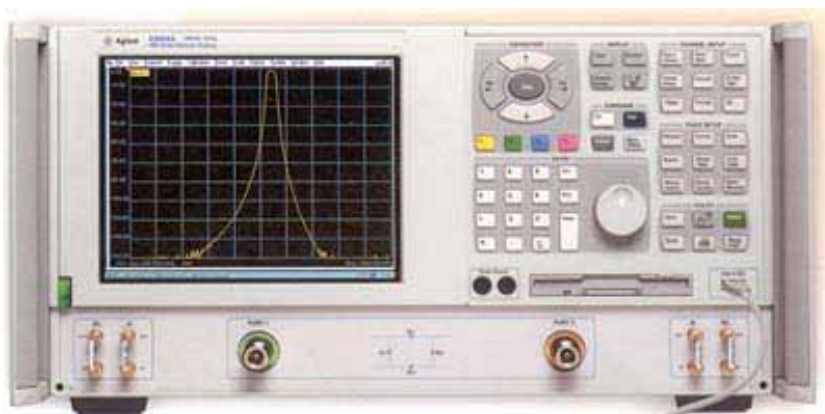
Set Marker Pointer of the Network Analyzer to the target frequency.

Step 3.

Measure and check if the V.S.W.R. values are within the spec.

Step 4.

Record Data.





4-2. Gain and Radiation Patterns

Step 1

Calibrate the Anechoic Chamber and Measurement System with a Dipole Antenna and a Horn Antenna. Prepare the Software Program to control the system.

Step 2.

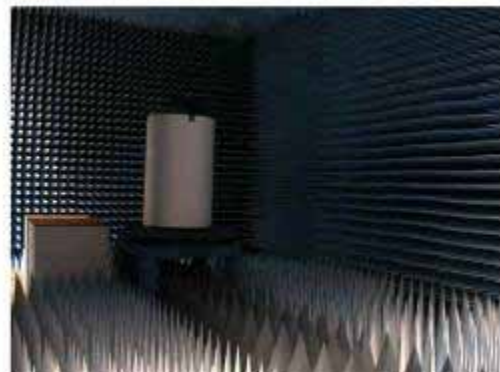
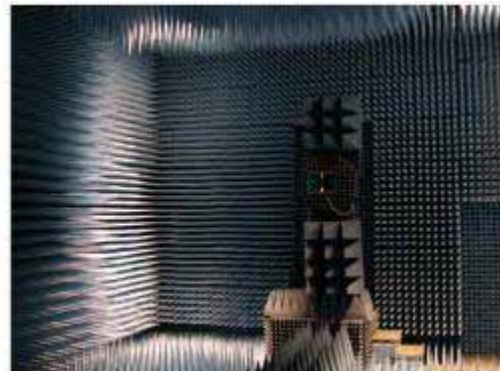
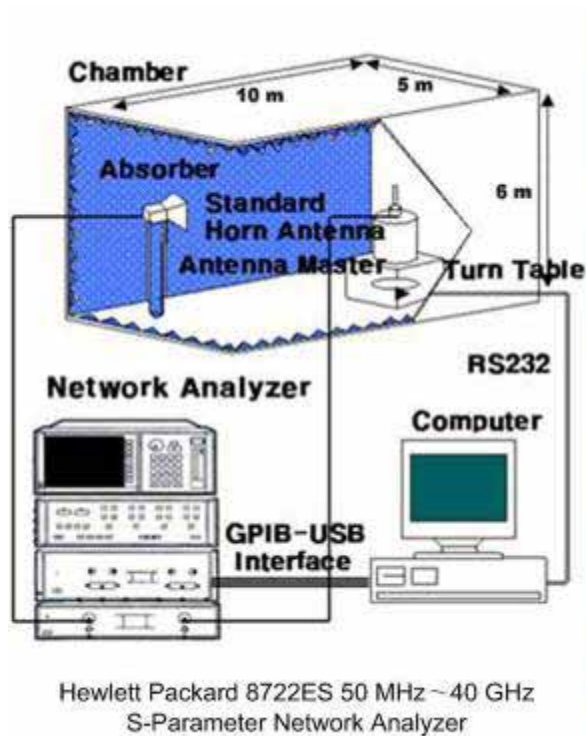
Place the Antenna for measurement, on the location within the Anechoic Chamber.

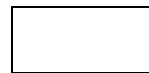
Step 3.

Start the Software Program and Measurement.

Step 4.

Measure and record Data.





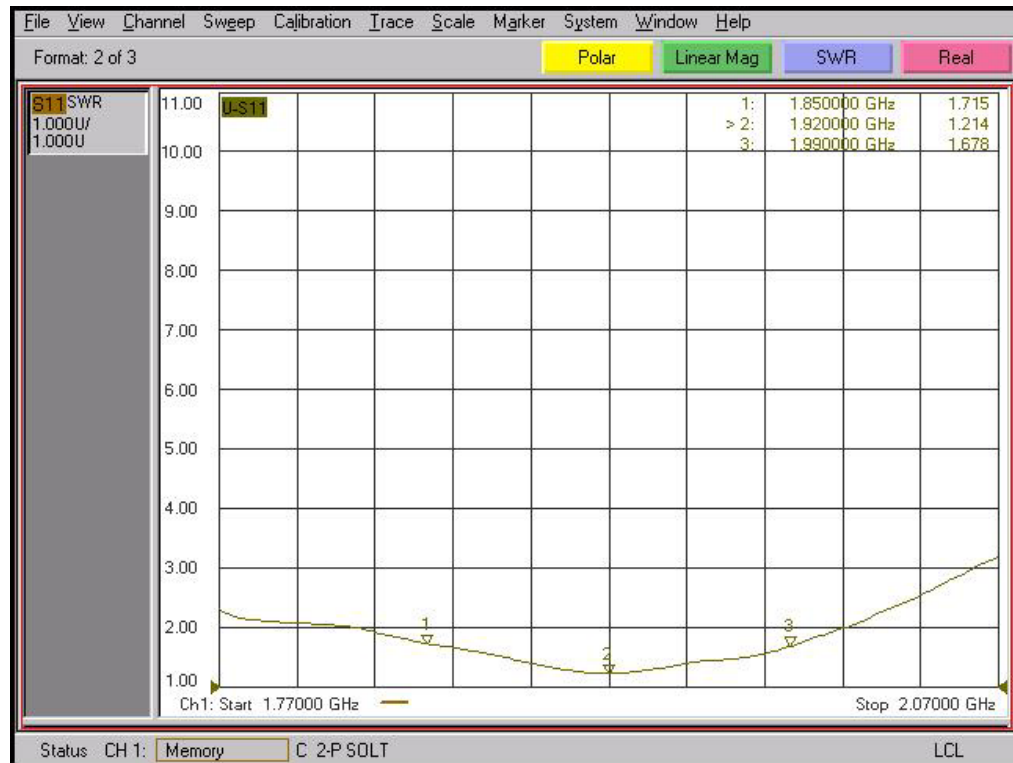
5. Measurement Data

Model Name	W8E-UPO-30		
Engineer	W.I.Kwak		
Antenna	UPCS Dipole Antenna		
Frequency	1850 MHz ~ 1990 MHz		

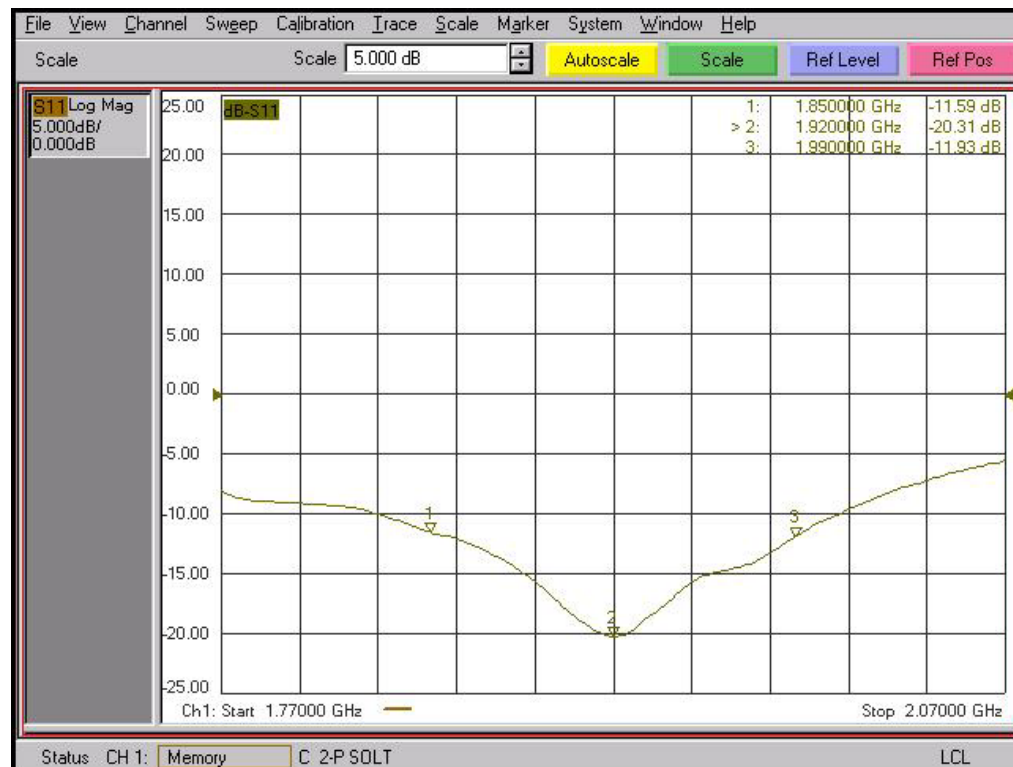
Items	Spec.	Test Result
Frequency	1850 MHz ~ 1990 MHz	OK
VSWR(Max)	2.5	OK
Gain(Max)	2 ± 1 dBi	OK



5-1 VSWR

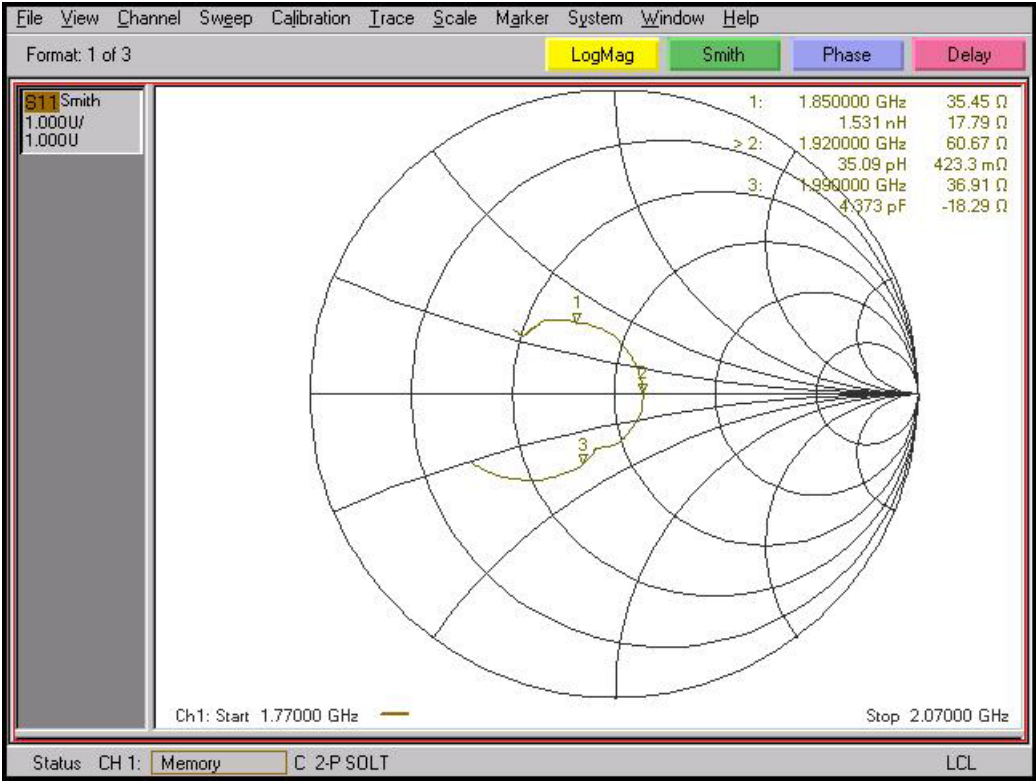


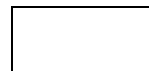
5-2 Return Loss





5-3 Smith Chart

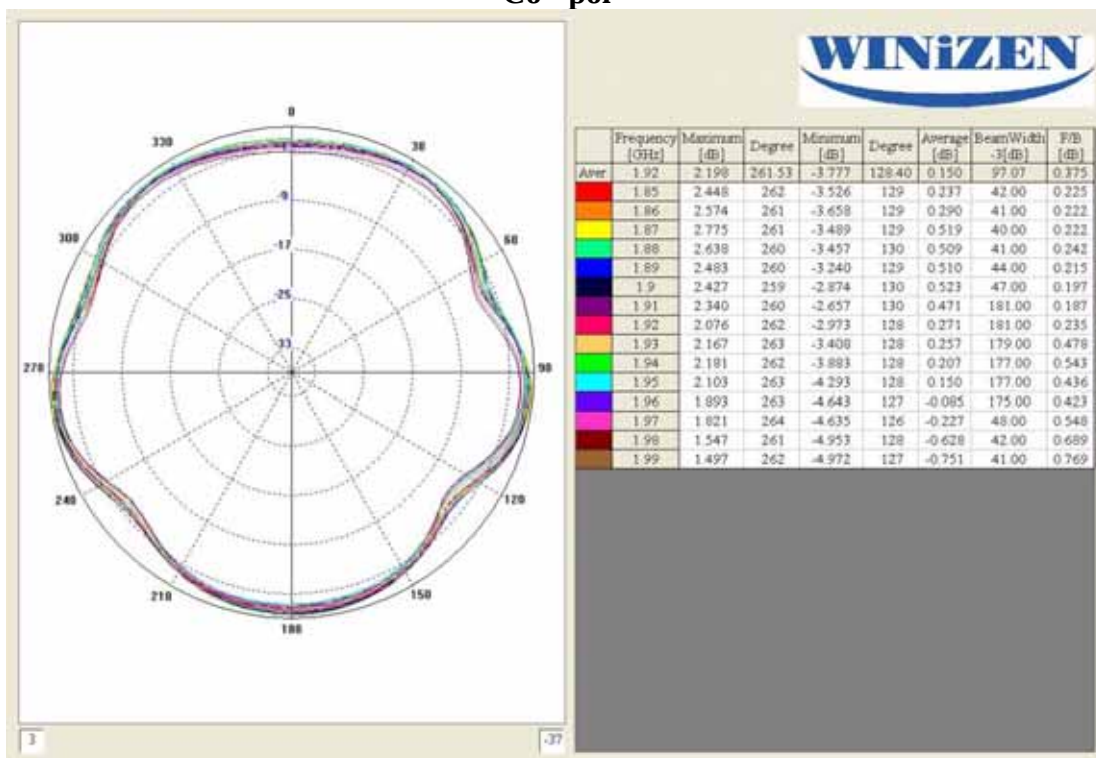




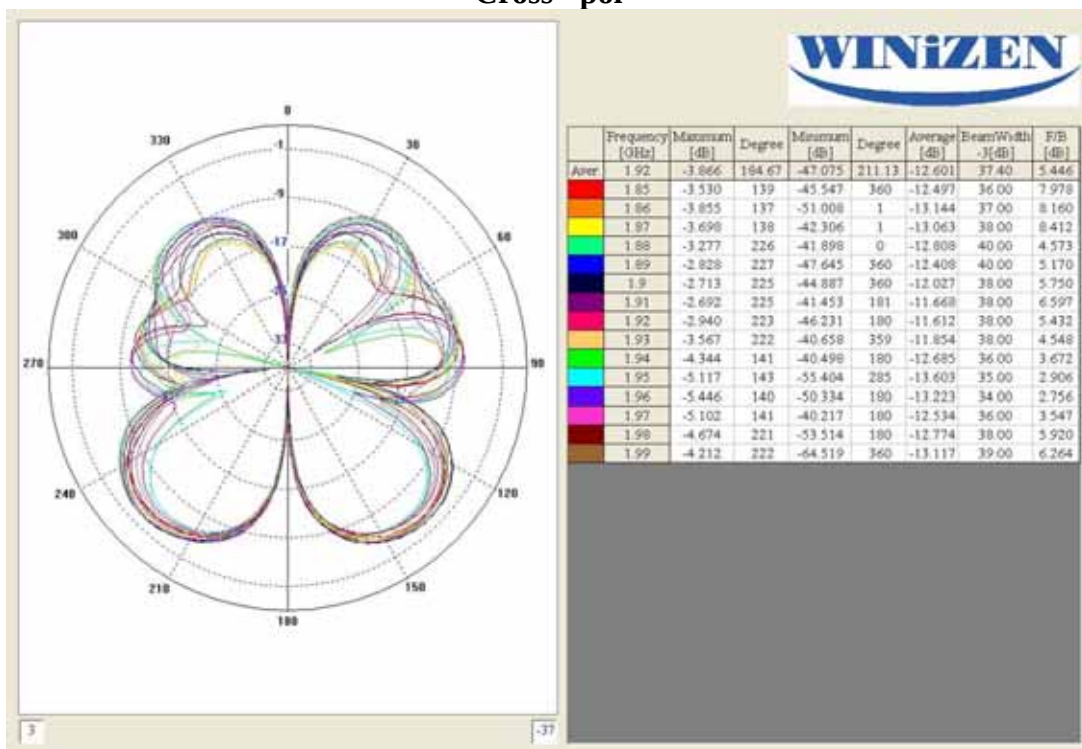
5-4 Radiation Pattern

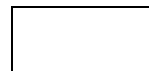
a. Azimuth Pattern

Co - pol



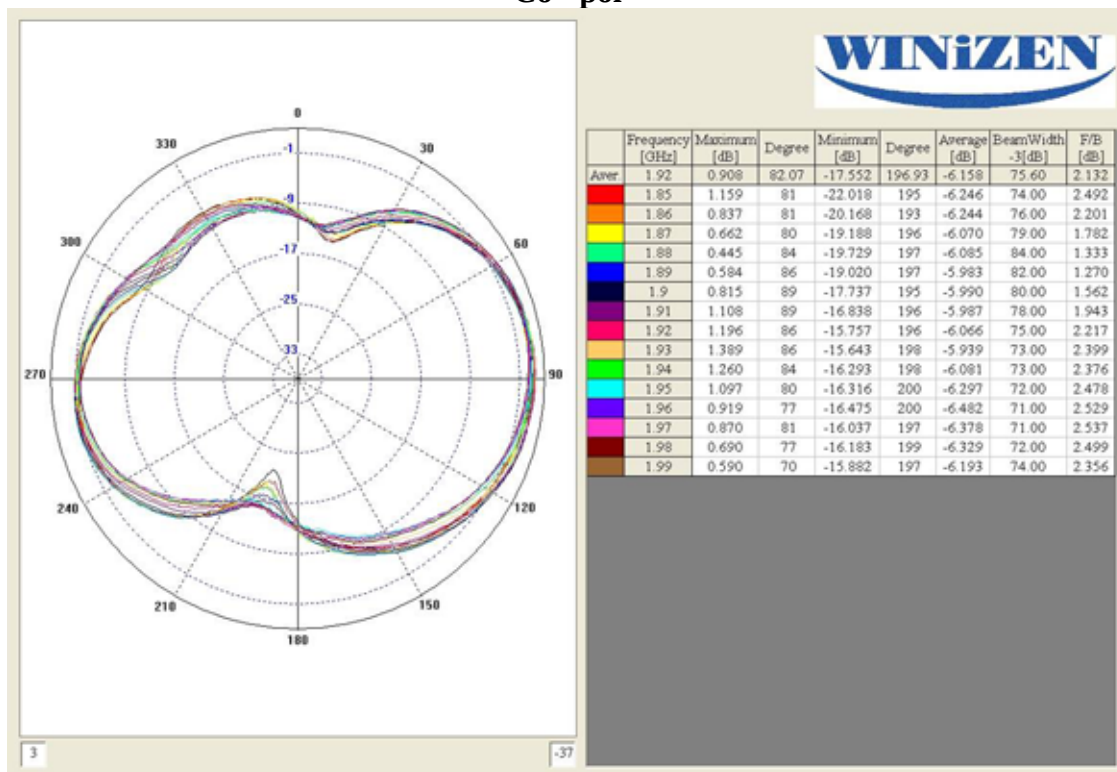
Cross - pol



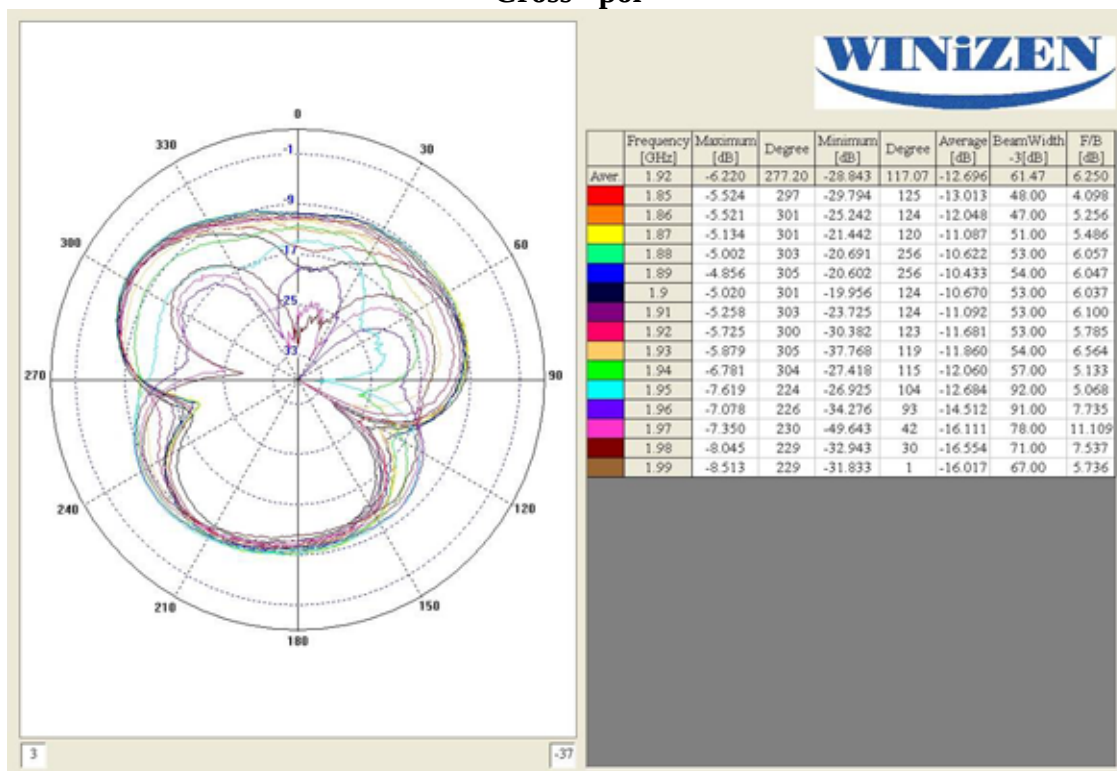


b. Elevation Pattern

Co - pol

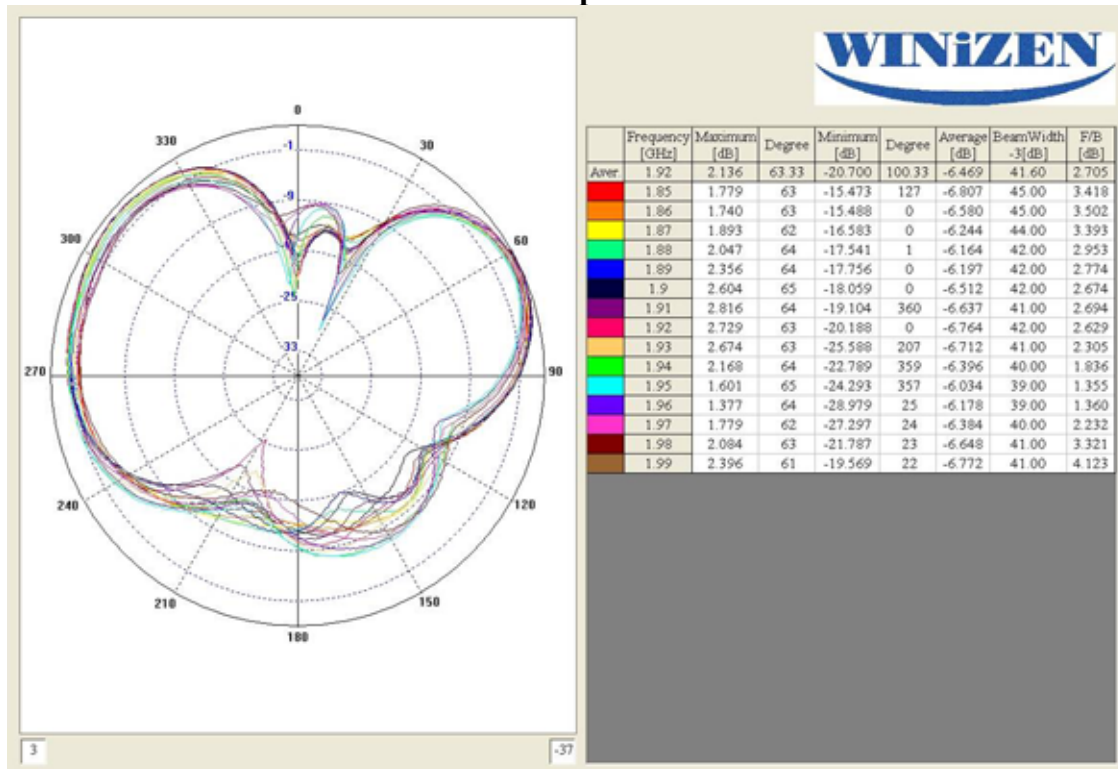


Cross - pol



c. Elevation Side Pattern

Co - pol



Cross - pol

