



ANTENNA TEST REPORT

SUMMARY OF TEST RESULTS

Item	Specification
Frequency	2.4 - 2.5 GHz
Peak Gain (max.)	2.19 dBi
Average Gain	-2.91 dBi
V.S.W.R.	2.149 max.
Antenna Type	Printed Monopole Antenna
Polarization	Linear
Impedance	50 ohm

MEASUREMENT EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
S-Parameter Network Analyzer	Agilent	E8358A	US40260243	05/24/05
Signal Generator	Agilent	83630B	3844A01022	01/14/05
Spectrum Analyzer	Agilent	E4446A	MY43360131	01/10/05
Horn antenna	EMCO	3115	00022250	02/26/05

Reviewed by:

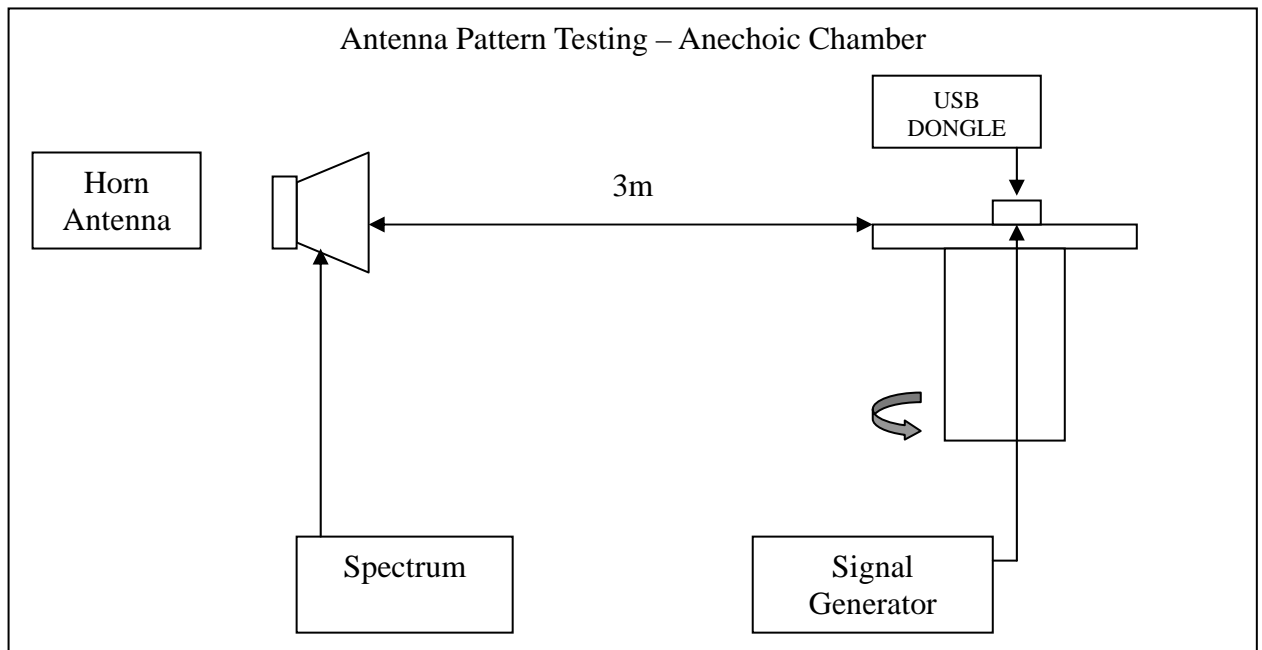
Tested by:

Harris W. Lai
Executive Vice President
Compliance Certification Services Inc.

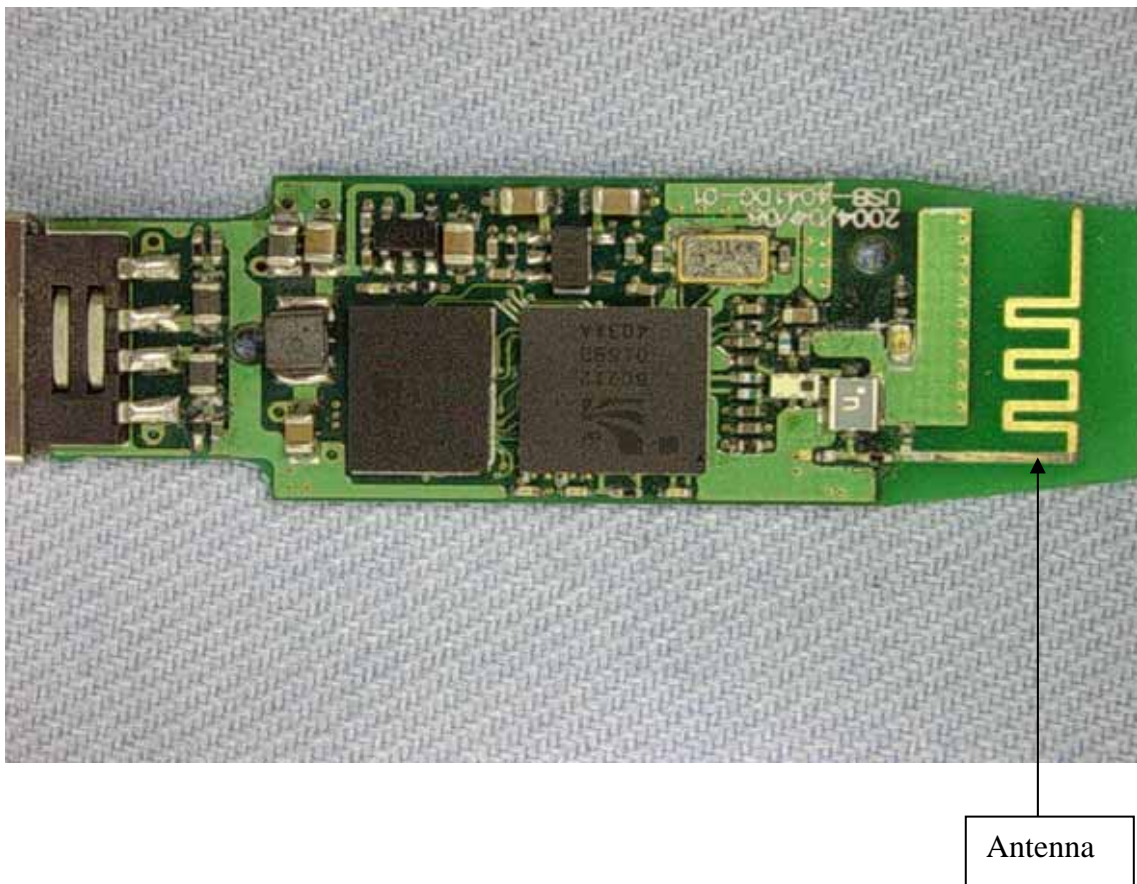
Devin Cheng
Section Manager
Compliance Certification Services Inc.

1. ANTENNA TEST CONDITIONS

Test Setup



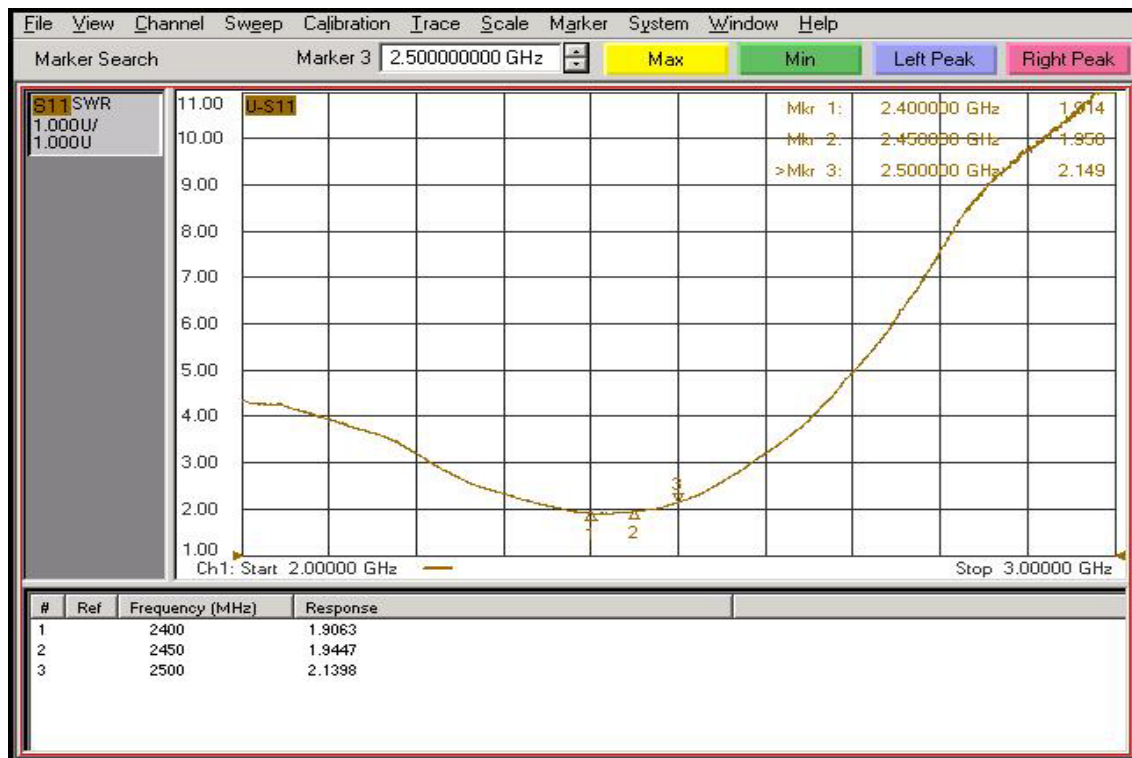
EUT Antenna Description



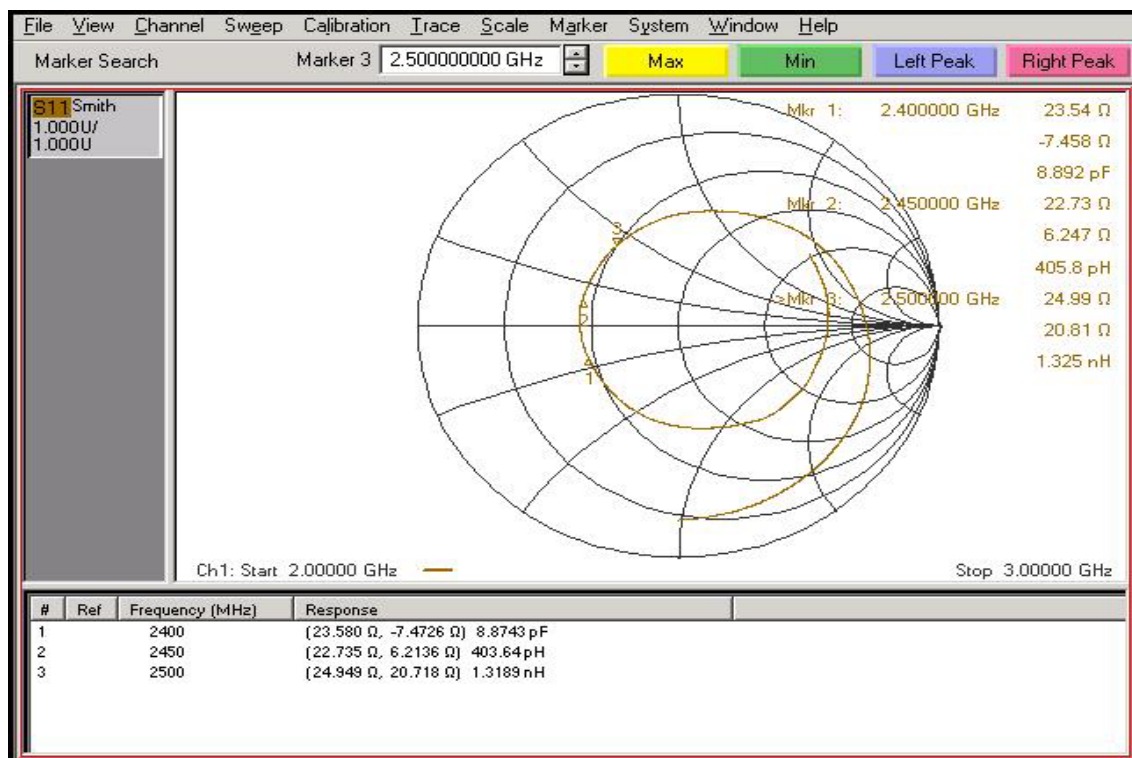


2. ELECTRICAL CHARACTERISTICS

V.S.W.R.

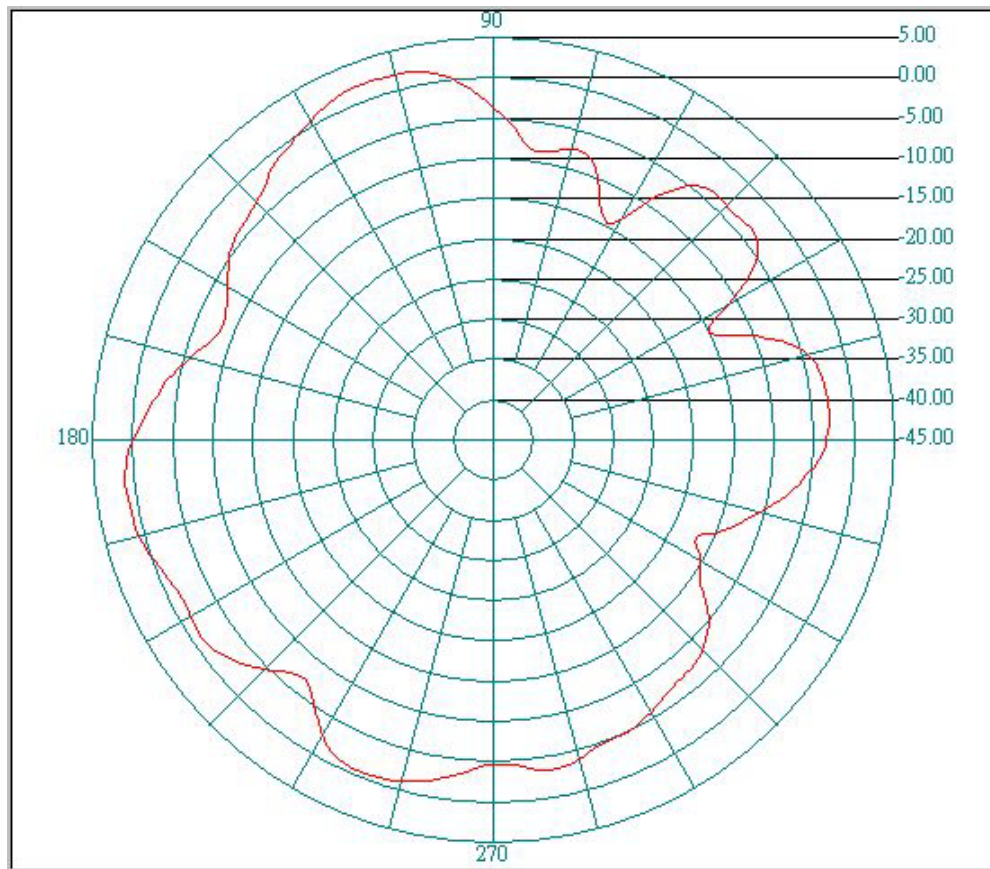


Smith Chart



3. Antenna Patterns

● Co-plane (E-plane)



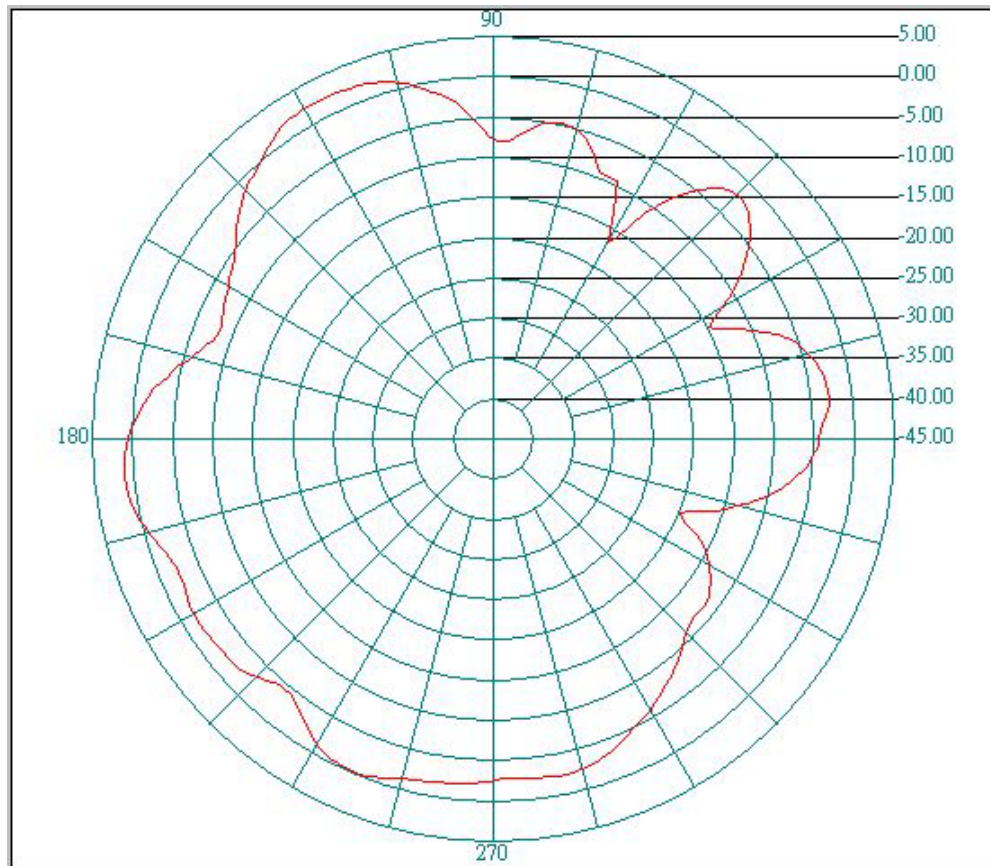
Center freq.(MHZ): 2400

Polarization : E plane

Max gain(dBi):2.13

Min gain(dBi):-17.67

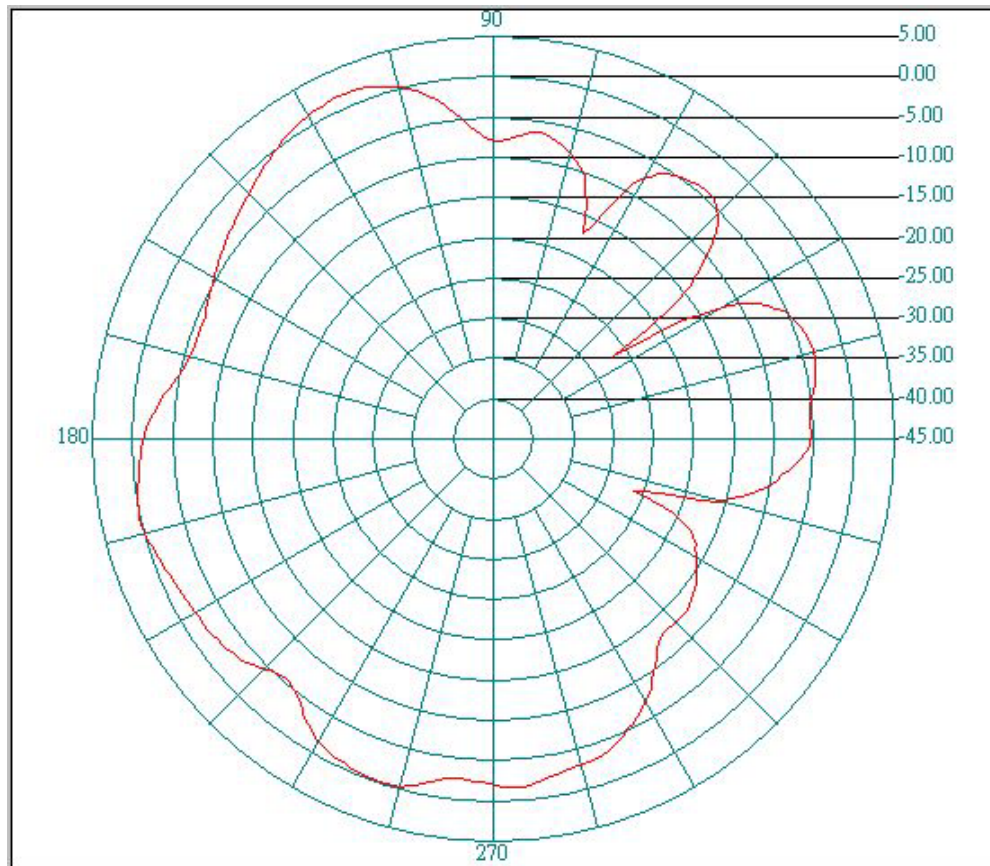
Avg gain(dBi):-3.20



Center freq.(MHZ): 2450
Max gain(dBi):2.19

Polarization : E plane
Min gain(dBi):-20.16

Avg gain(dBi):-2.91



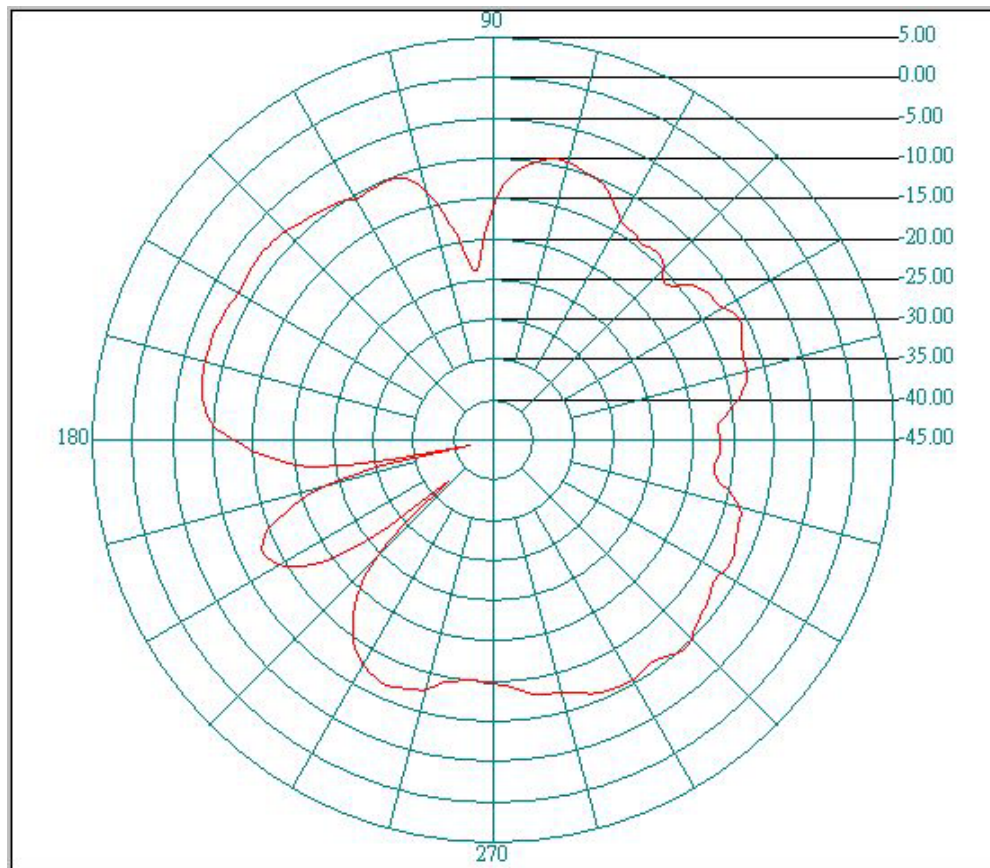
Center freq.(MHZ): 2500
Max gain(dBi): 1.66

Polarization : E plane
Min gain(dBi): -26.43

Avg gain(dBi): -3.49



● Cross-plane (H-plane)



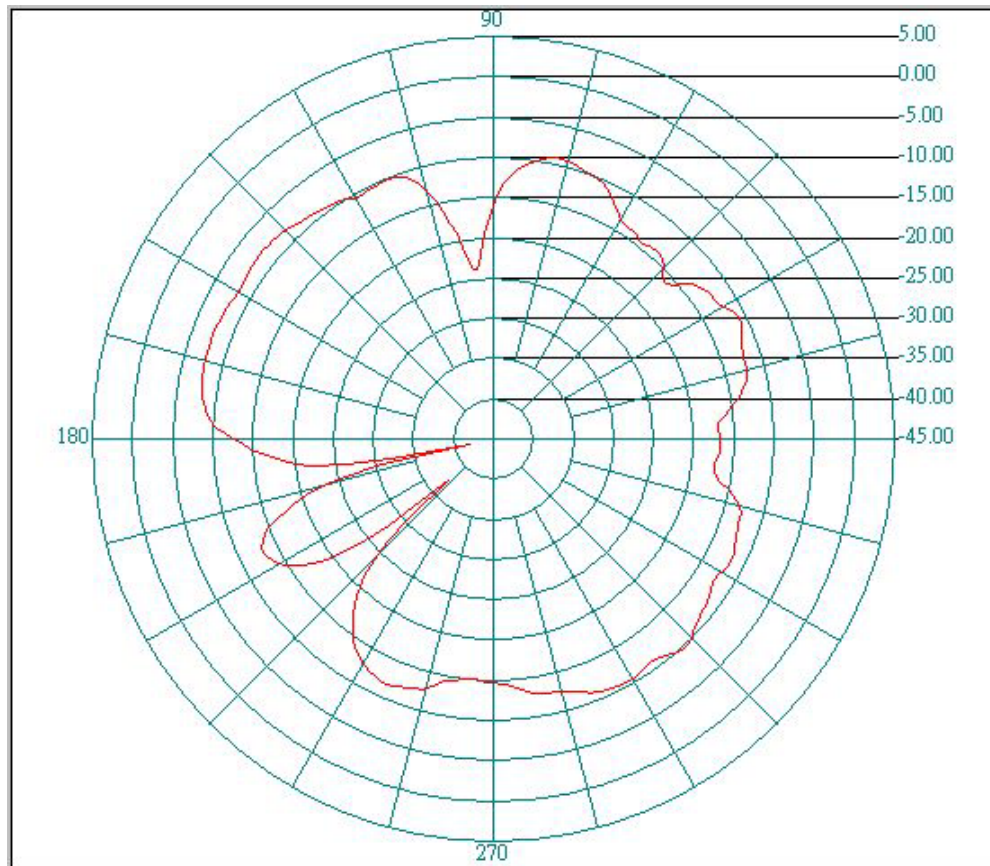
Center freq.(MHZ): 2400

Polarization : H plane

Max gain(dBi):-8.19

Min gain(dBi):-38.01

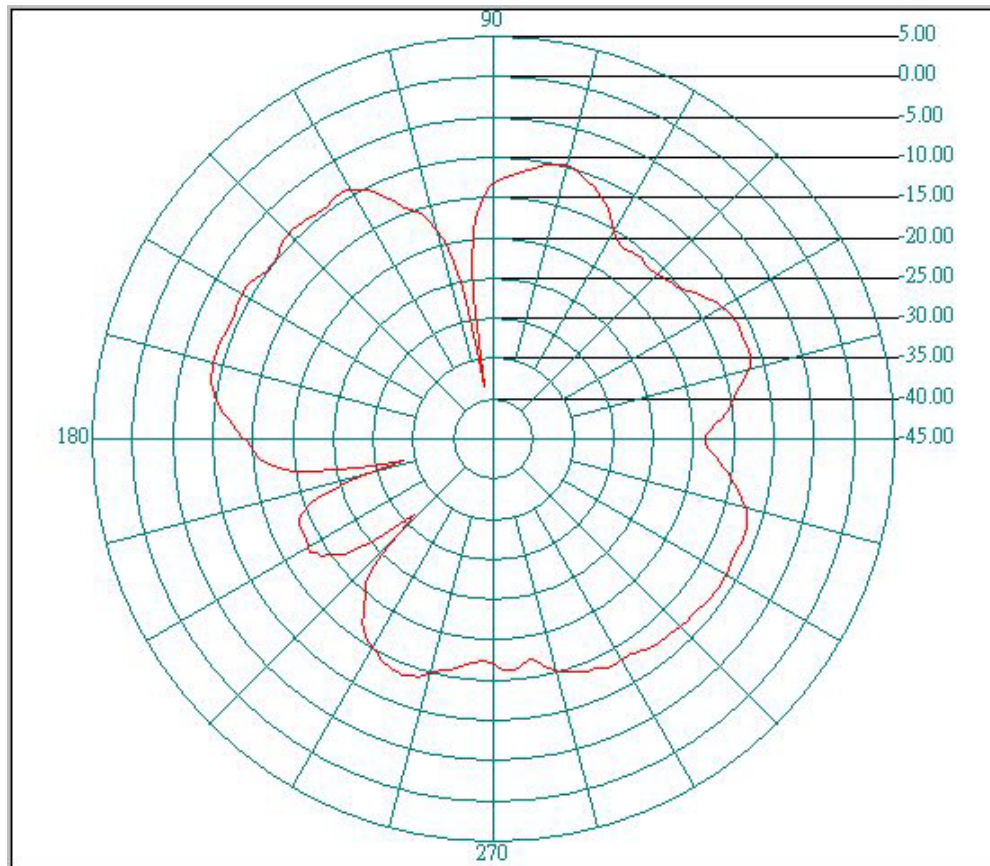
Avg gain(dBi):-12.06



Center freq.(MHZ): 2450
Max gain(dBi):-7.73

Polarization : H plane
Min gain(dBi):-41.97

Avg gain(dBi):-11.85



Center freq.(MHZ): 2500
Max gain(dBi):-8.71

Polarization : H plane
Min gain(dBi):-38.42

Avg gain(dBi):-12.90