



WHA YU INDUSTRIAL CO., LTD.(HEAD OFFICE)

DONGGUAN AEON TECH CO.,LTD.(CHINA)

SPECIFICATION FOR APPROVAL

CUSTOMER: UI

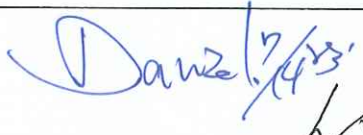
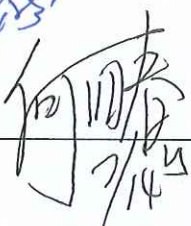
PART NAME: RF Antenna Assembly

PART NO.: 683-00116-01

REVISION:

W. Y. P/NO.: C1758-510265-A(SRF20231108)

REV.: XI

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :		
DATE :		

WHA YU GROUP

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RF Antenna Assembly

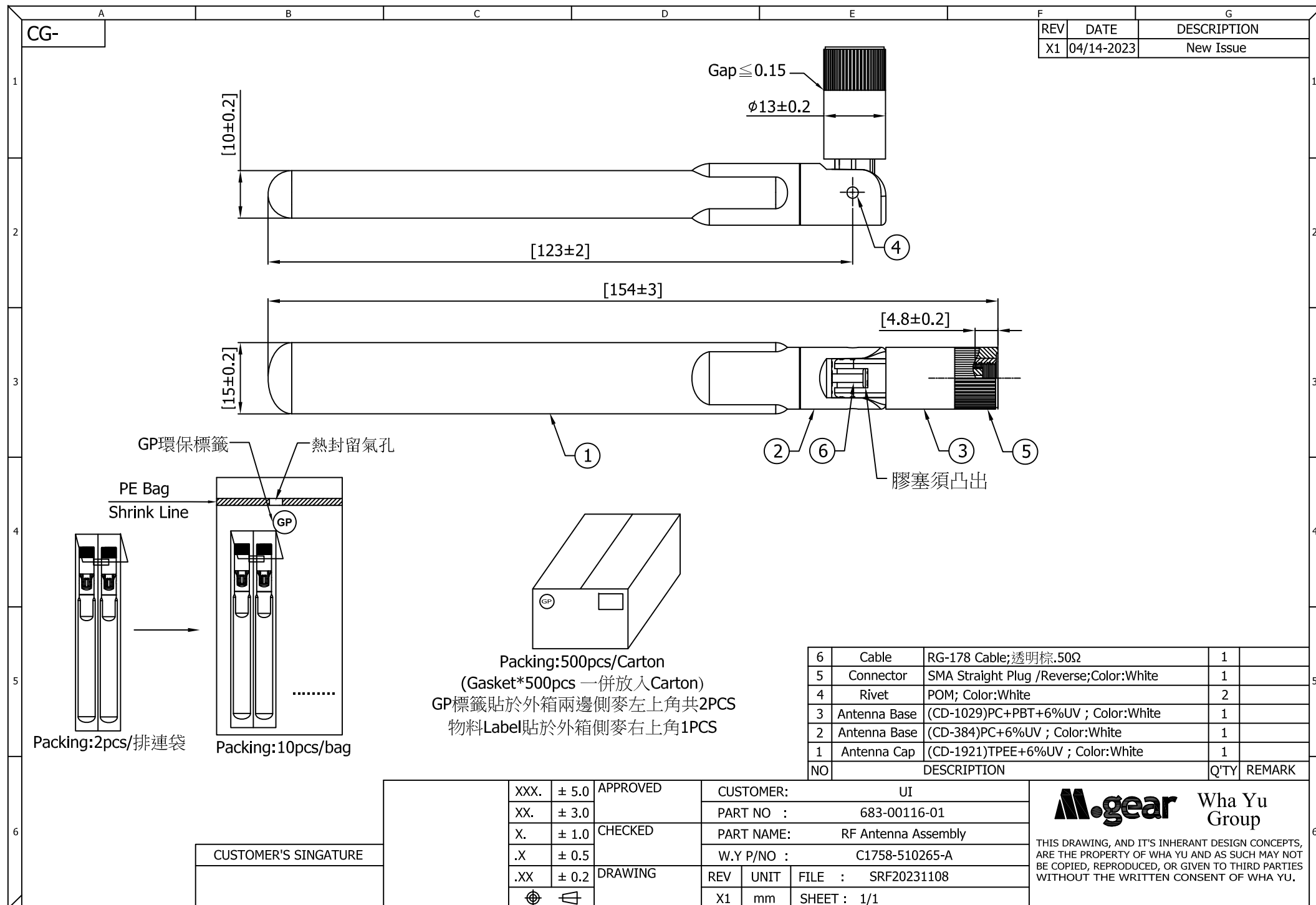
Specification

1. Electrical Properties :(單天線)

- 1.1 Frequency Range..... 2.4~2.5 GHz;4.9~5.825 GHz
- 1.2 Impedance50Ω Nominal
- 1.3 VSWR 1.92 :1Max.
- 1.4 Return Loss..... 10 dB Min.
- 1.5 Radiation..... Omni-directional
- 1.6 Gain(peak)..... 3.59 dBi Max.@ 2.4~2.5 GHz
- 1.7 4.57 dBi Max.@4.9~5.825 GHz
- 1.8 Cable.....RG-178 Cable
- 1.9 Connector.....SMA Connector
- 1.10 Polarization..... Linear ; Vertical

2. Physical Properties :

- 2.1 Operating Temp. -10°C ~ +60°C
- 2.2 Storage Temp. -10°C ~ +70°C



Antenna Design For NE3-16033

V1.02

Product Development Status		
Concept Study	In Development	Production
	X	

Document Number	NE3-16033
1 st Released Date	04/01/2016
Last Released Date	05/23/2016
Designers	Carter Su
Testers	Carter Su
Reviewed by	SKY

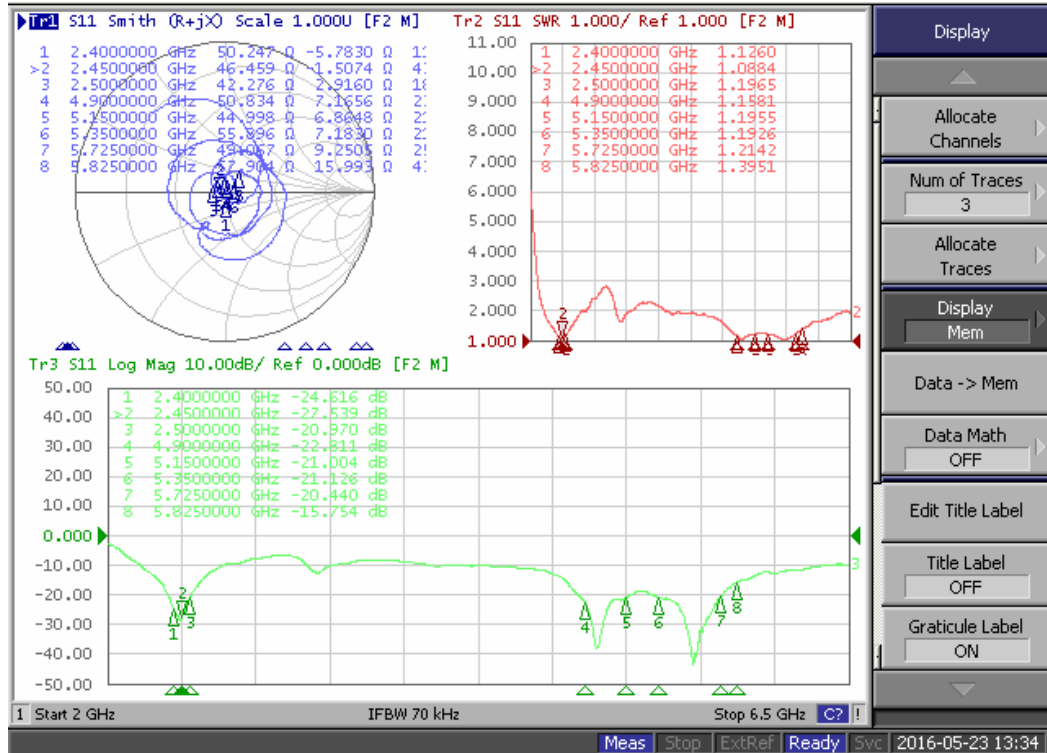
Electrical		
Item	Specification	Note
Test Environment	With Housing	
Frequency Range	2.4GHz~2.5GHz 4.9GHz~5.825GHz	
VSWR	1.92 : 1 (max)	
Input Impedance	50 ohm	
Port to Port Isolation	N/A	
Polarization	Linear (Vertical or Horizontal)	
Gain(Peak gain)	ANT 1. 2.4GHz(3.59dBi) / 5GHz(4.57dBi)	
Efficiency	2.4GHz>80% / 5GHz>70%	
Half Power Beam Width (HPBW)	N/A	
Mechanical		
Dimensions	N/A	
Connector	SMA	
Cable Type	RG-178	
Cable Length	N/A	
Radome Material	N/A	
Ingress Protection	N/A	
Operating Temperature	-10°C ~ +60°C	
Storage Temperature	-10°C ~ +70°C	

1 Antenna Introduction



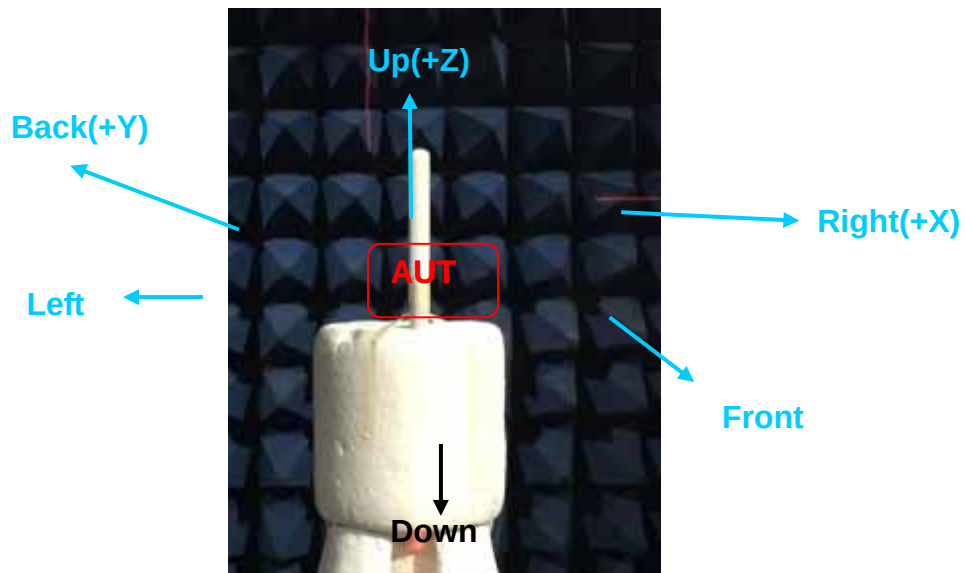
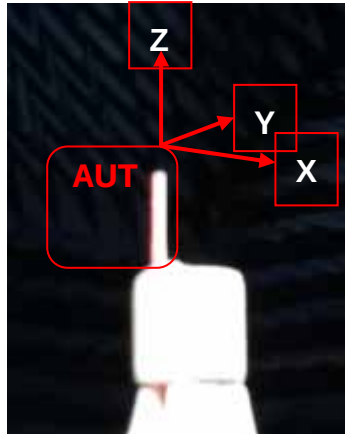
2 S11 test results

2.1 ANT 1.

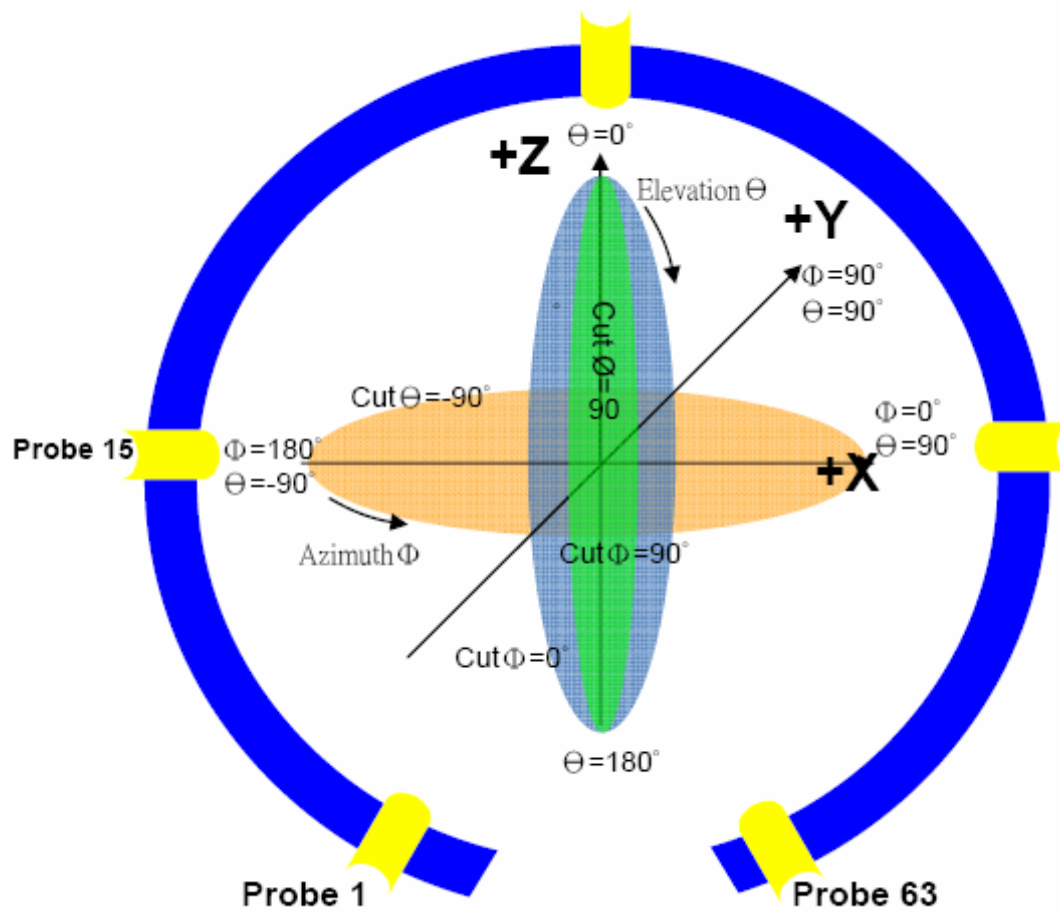


3 Gain & Patterns test results

3.1 Measurement setting



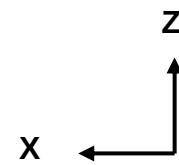
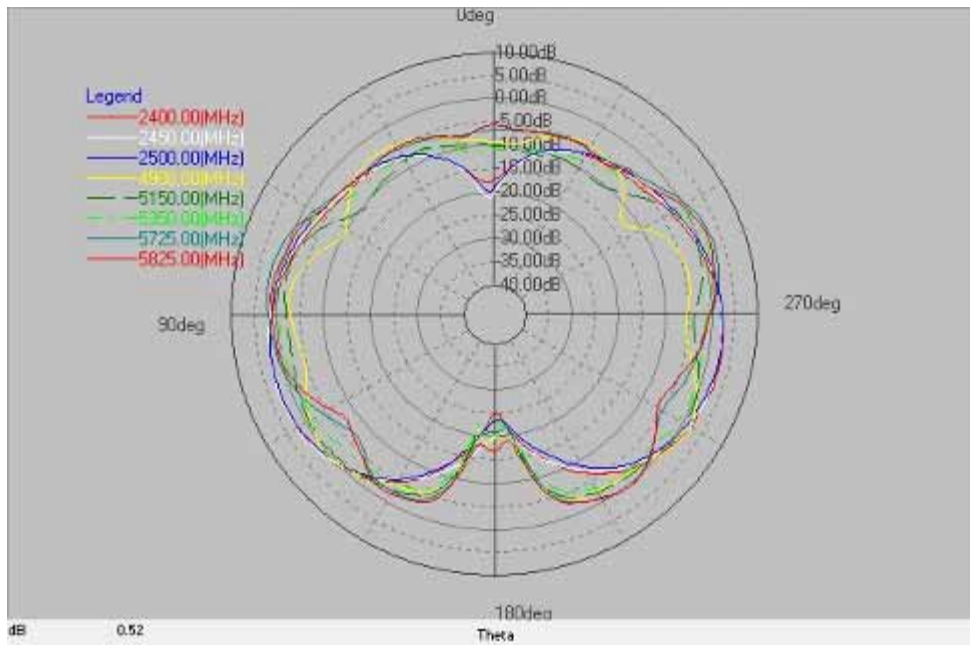
	XY	YZ	XZ
0°	Right	Up	Up
90°	Back	Back	Right
180°	Left	Down	Down
270°	Front	Front	Left



	θ	ϕ
Total angle	175°	360°
How many angle scan one point	5°	5°
Total scan point	36	73

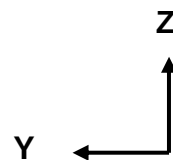
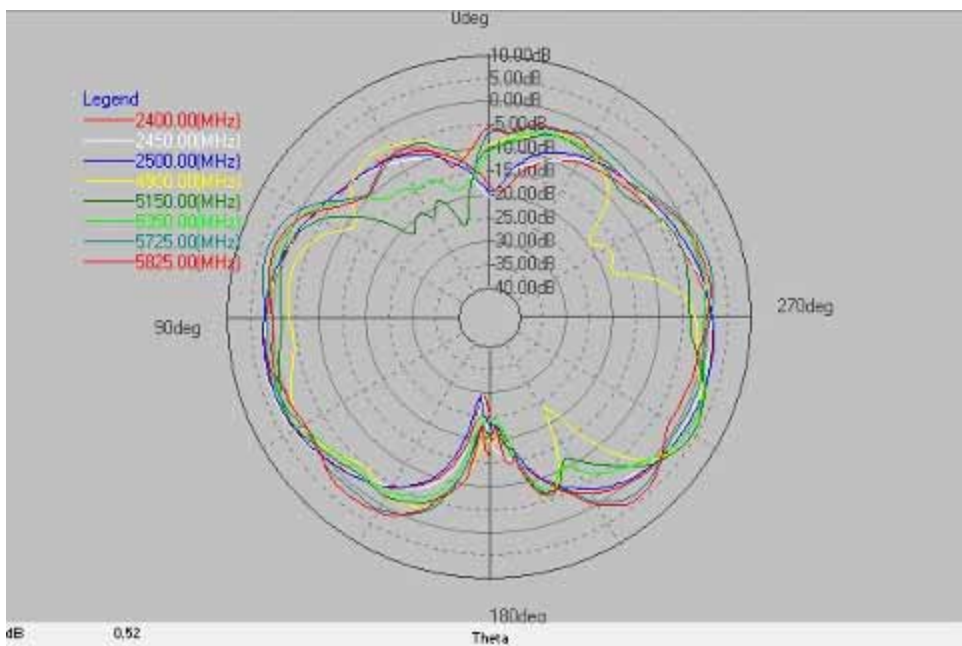
3.2 ANT 1.

2400 MHz~2500 MHz/4900 MHz~5825 MHz



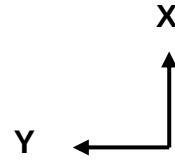
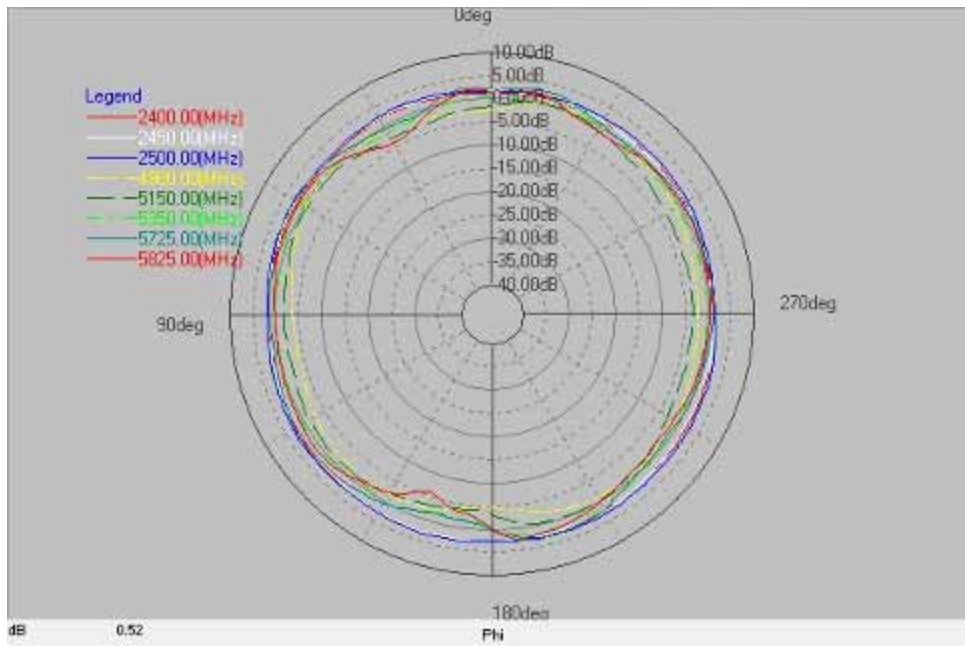
X-Z Plane (E-total)

2400 MHz~2500 MHz/4900 MHz~5825 MHz



Y-Z Plane (E-total)

2400 MHz~2500 MHz/4900 MHz~5825 MHz



X-Y Plane (E-total)

4 Return Loss

Frequency	Ant 1. (dB)
2400MHz	-24.61
2450MHz	-27.63
2500MHz	-20.97
4900MHz	-22.81
5150MHz	-21.00
5350MHz	-21.12
5725MHz	-20.44
5825MHz	-15.75

5 3D total Peak Gain & Efficiency

Frequency	Ant 1.	
	Peak Gain (dBi)	Efficiency (%)
2400MHz	3.59	86.35
2450MHz	3.20	86.64
2500MHz	3.29	85.27
4900MHz	3.94	72.57
5150MHz	4.57	72.46
5350MHz	3.60	73.99
5725MHz	4.19	76.23
5825MHz	4.05	76.58