

DA.0022.L4.2BS Antenna Specification

1. Explanation of part number :

DA - 0022 - L4 - 2BS
(1) (2) (3) (4)

(1) Product Type: External Antenna

(2) Suffix :0022

(3) Frequency : 2.4~2.4835GHz

(4) Feature code : small S

2. Storage Condition:

Temperature -40 to +85°C
Humidity 65±20 % RH

3. Operating Condition:


Temperature -40 to +85°C
Humidity 65±20 % RH

4. Electrical Specification :

*Those specifications were specially defined for **customer's** model, and all characteristics were measured under the model's handset testing gain .*

4-1. Frequency Band:

Frequency Band	GHz
WIFI	2.4~2.4835

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DESIGNED BY : 杨显江	APPROVED BY : YS		
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4-2. Impedance

50 ohm nominal

4-3. Matching circuit

None

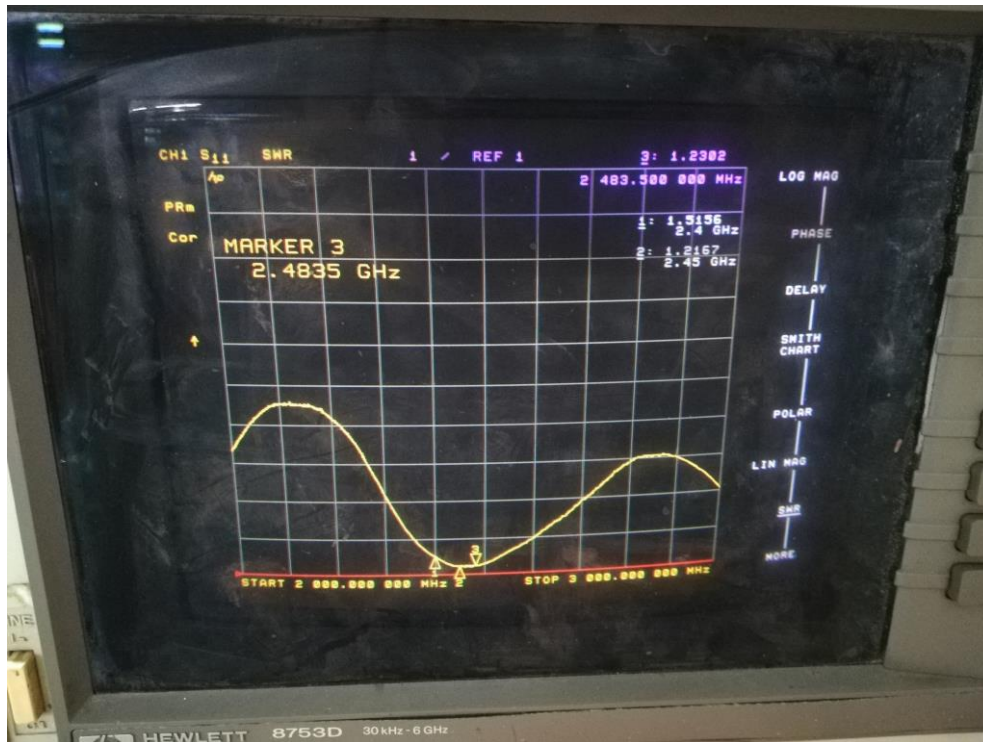
4-4. VSWR

4-4.1 Measuring Method

1. A 50Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR
2. Keeping this gain away from metal at least 20cm


4-4.2 Measurement frequency points and VSWR value (with cable)

Frequency (Unit GHz)	2.4	2.45	2.4835
VSWR@2.4GHZ	1.51	1.21	1.23
VSWR@2.4GHZ	≤2.0	≤2.0	≤2.0

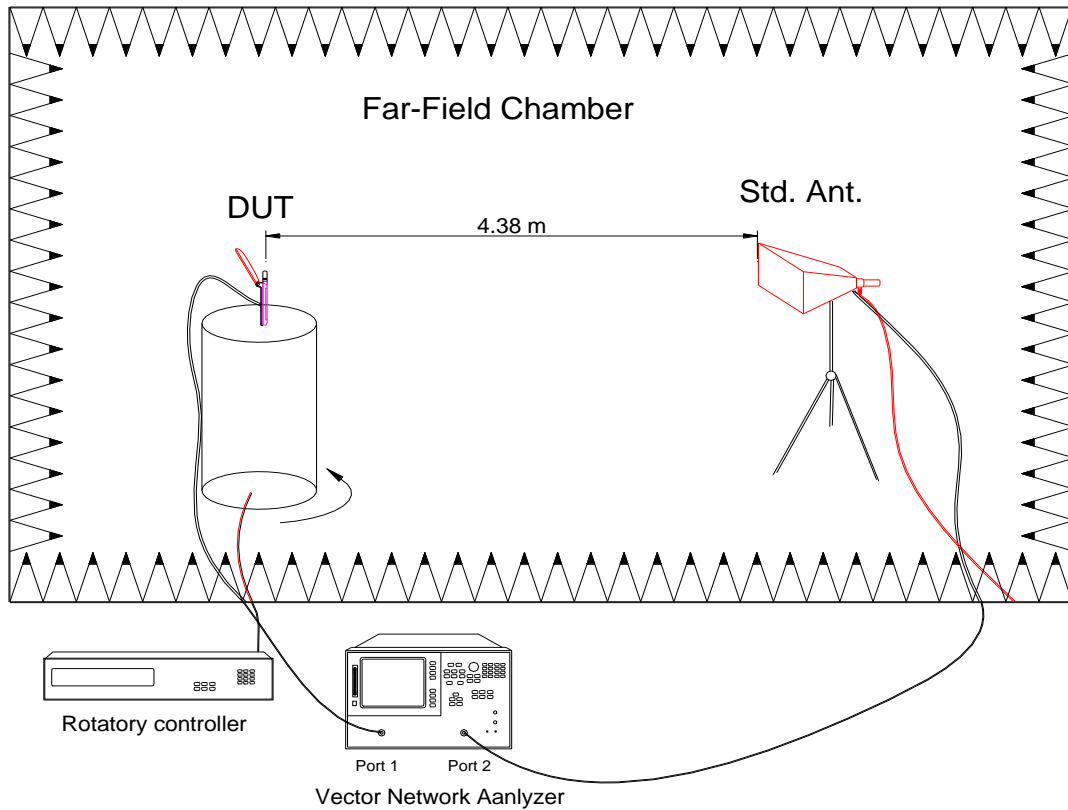


4-5. Efficiency and Gain

4-5.1 Measure method

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1. Using a low loss coaxial cable to link a standard handset gain
2. Fixed this handset gain on chamber's rotator plane
3. Linking gain into network analyzer port and using a probing horn antenna to collect data.
4. Using another standard Gain horn antenna to calibrated those data



4-5.2 Chamber definition

1. An anechoic chamber (7mx4mx3m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quiet room region is 40cmx40cmx40cm at the center of rotator
3. The distance between DUT and standard antenna is 4.38 m
4. Probing antenna (9120D horn antenna) and standard Gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

5-1. Mechanical Dimensioned Drawing

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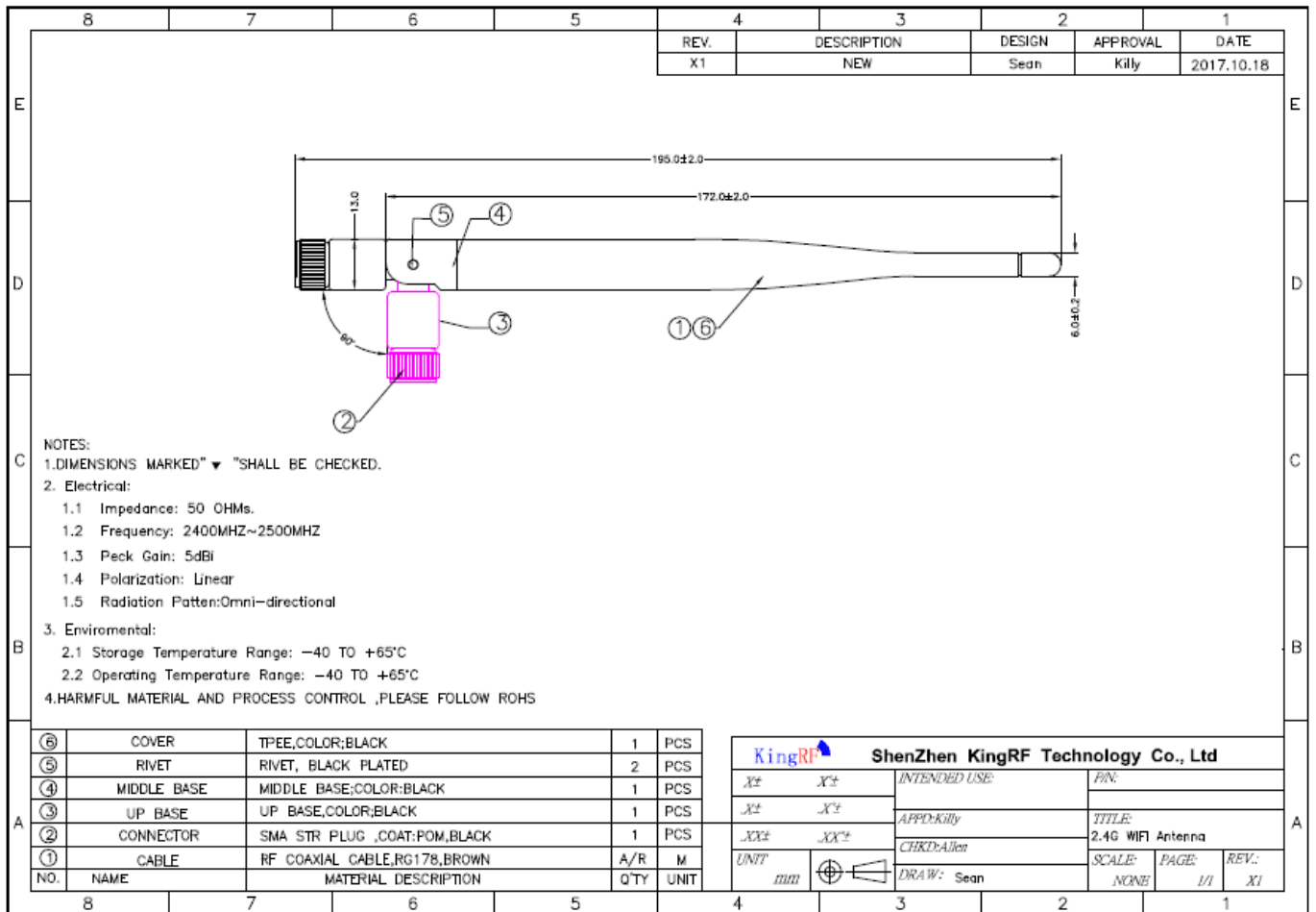


Figure 5-1-1. The antenna drawing

NAME	MATERIAL DESCRIPTION	Q' TY	UNIT
SMA	SMA MALE PIN, BODY NICKEL PLATED, PIN GOLD PLATED,	1	PCS
COVER	COVER, TPEE, BLACK	1	PCS
DOWN BASE	PBT. BLACK	1	PCS
UP BASE	PBT, BLACK	1	PCS
RIVET	POM, BLACK	2	PCS
CABLE	RG-178 COAXIAL CABLE, OD: 1.8mm, BROWN	1	PCS
SPRING	BRASS	1	PCS

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天线型号 : 5dBi 全向天线

测试时间: 2017-03-20

测试人 : WEISHA ZHU

测试频率 (MHz) : 2.40

Peak Gain: 4.43381 dBi

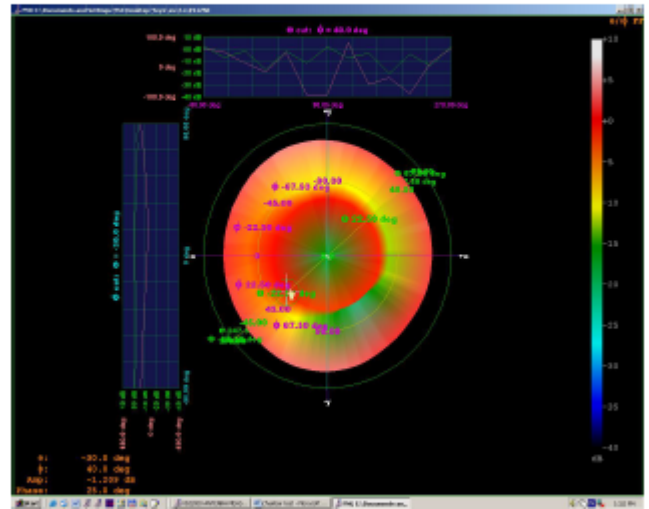
Efficiency: 79.26%

Avg Gain(V cut): 2.814 dB

Peak degree: H peak at: -77.400 deg,

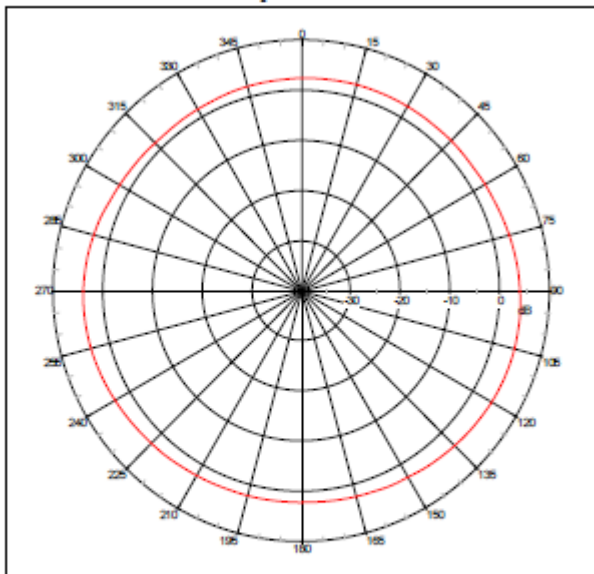
V peak at: -22.496 deg

Avg Gain(H cut): -3.533 dB

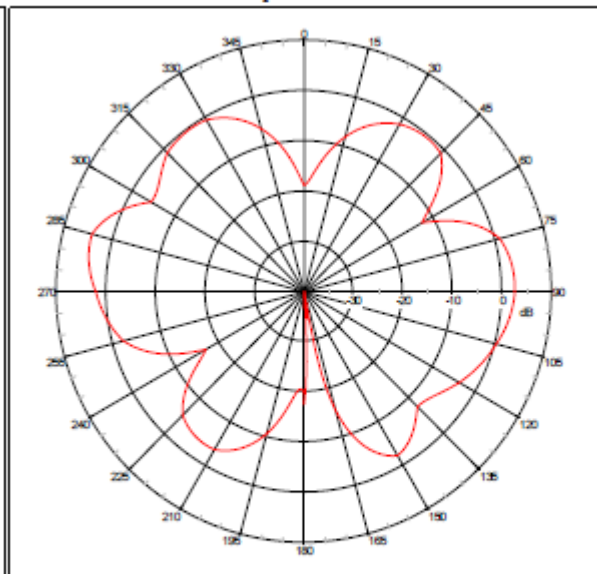



3D

Far-field amplitude of 2.4 #14.NSI



Far-field amplitude of 2.4 #14.NSI



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暗室测试报告

天线型号 : 5dBi 全向天线

测试时间: 2017-03-20

测试人 : WEISHA ZHU

测试频率 (MHz) : 2.42

Peak Gain: 4.5489 dBi

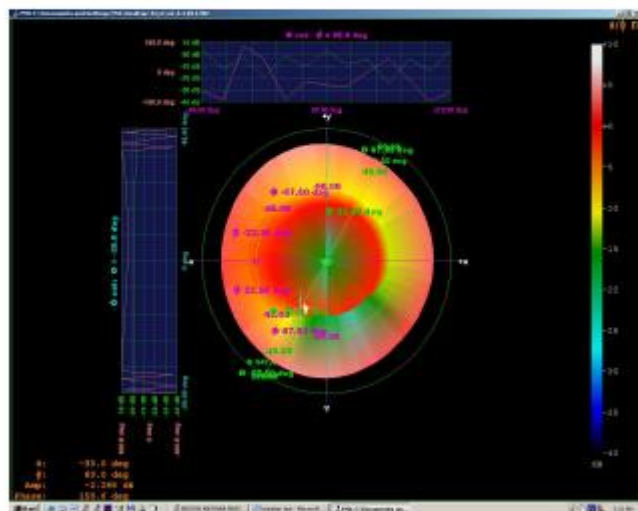
Efficiency: 84.95%

Avg Gain(V cut): 3.361 dB

Peak degree: H peak at: -85.824 deg,

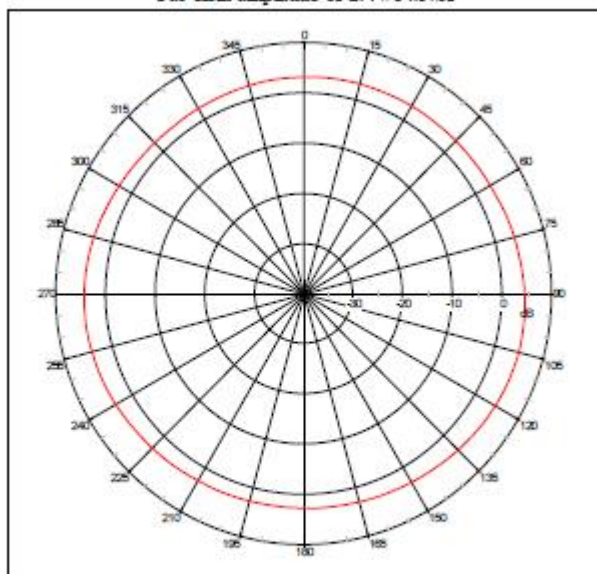
V peak at: -66.056 deg

Avg Gain(H cut): -3.340 dB

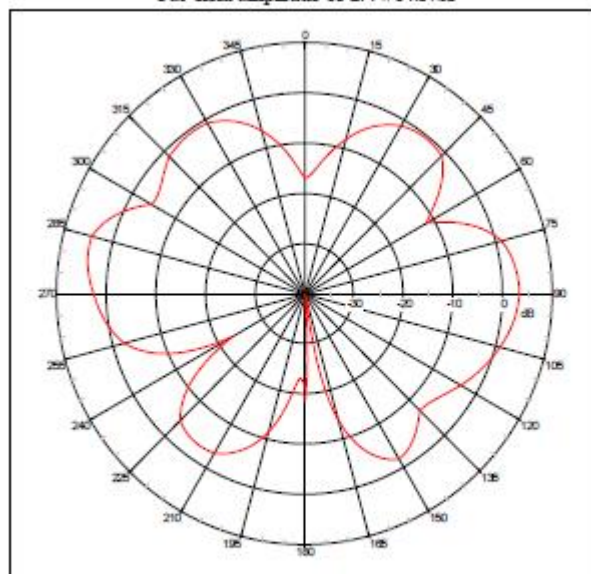



3D

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天线型号：5dBi 全向天线

测试时间：2017-03-20

测试人：WEISHA ZHU

测试频率 (MHz)：2.48

Peak Gain: 4.5416 dBi

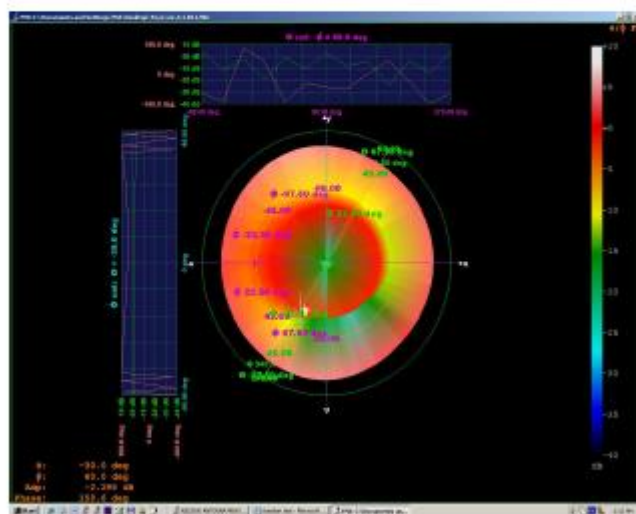
Efficiency: 86.58%

Avg Gain(V cut): 3.765 dB

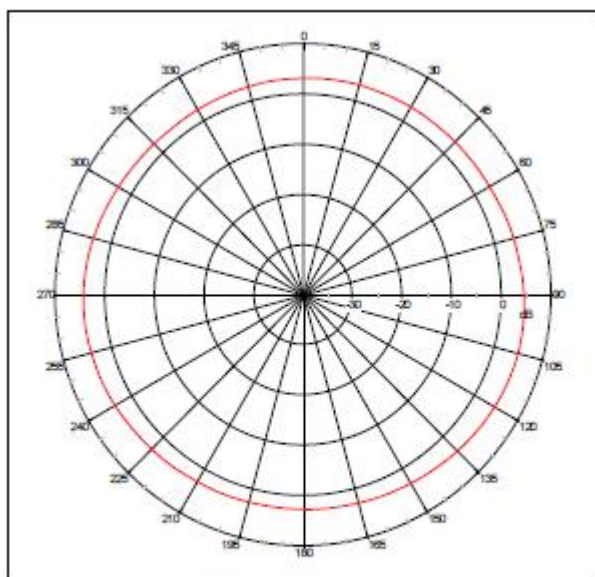
Peak degree: H peak at: -88.176 deg,

V peak at: -78.912 deg

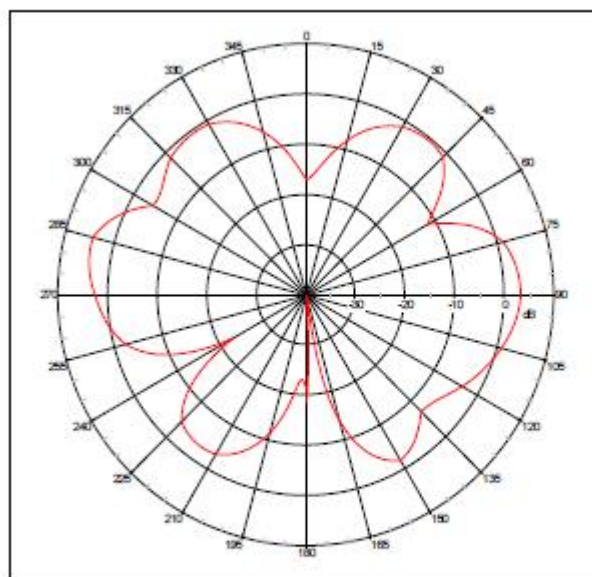
Avg Gain(H cut): -2.953 dB




Far-field amplitude of 2.4 #14.NSI



Far-field amplitude of 2.4 #14.NSI



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暗室测试报告

天线型号：5dBi 全向天线

测试时间：2017-03-20

测试人：WEISHA ZHU

测试频率 (MHz)：2.45

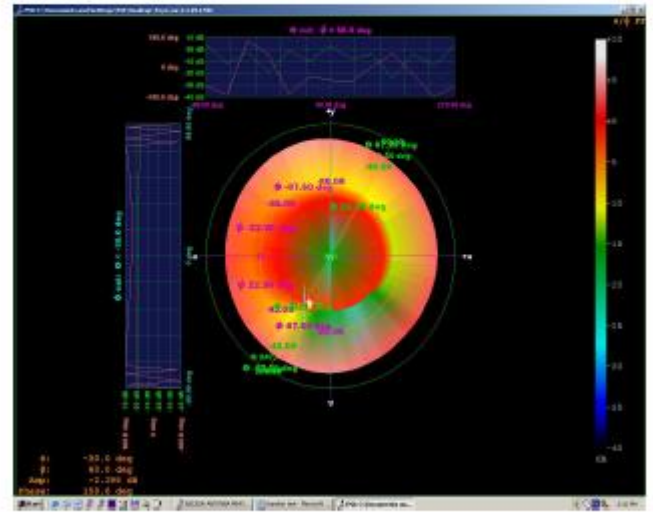
Peak Gain: 4.5615 dBi

Efficiency: 73.96%

Avg Gain(V cut): 3.968 dB

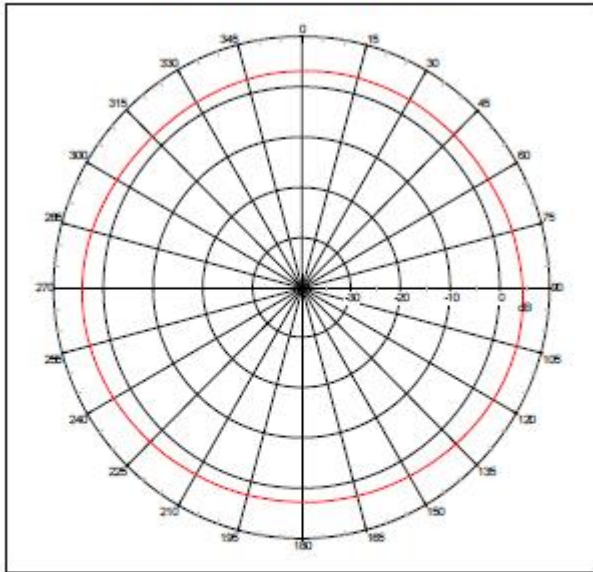
Peak degree: H peak at: -87.984 deg,
V peak at: -80.000 deg

Avg Gain(H cut): -2.953 dB

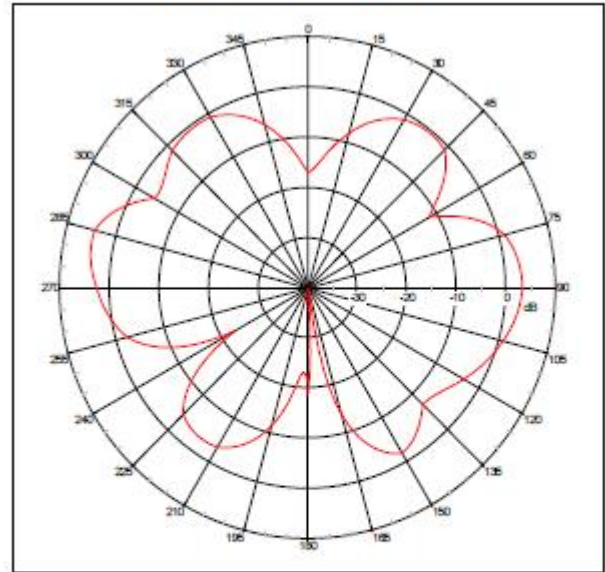



3D

Far-field amplitude of 2.4 #14.NSI



Far-field amplitude of 2.4 #14.NSI



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暗室测试报告

天线型号：5dBi 全向天线

测试时间：2017-09-20

测试人：WEISHA ZHU

测试频率 (MHz)：2.50

Peak Gain: 4.60473 dBi

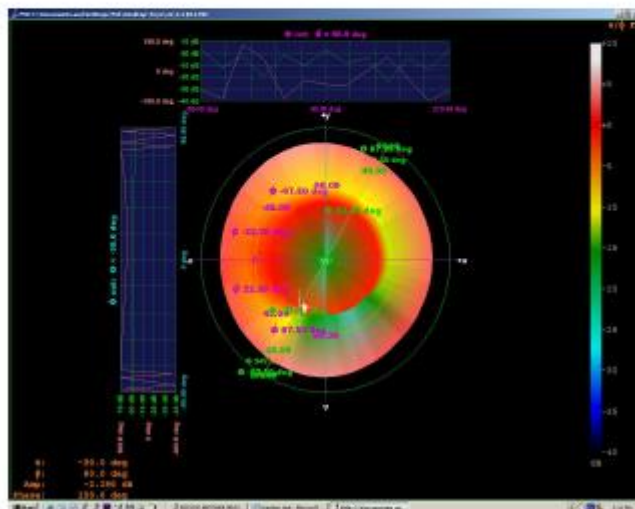
Efficiency: 82.06%

Avg Gain(V cut): 3.520 dB

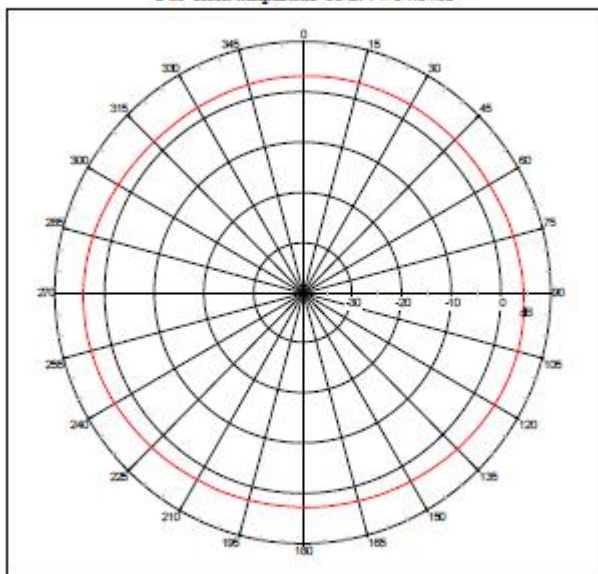
Peak degree: H peak at: -90.000 deg,

V peak at: -93.928 deg

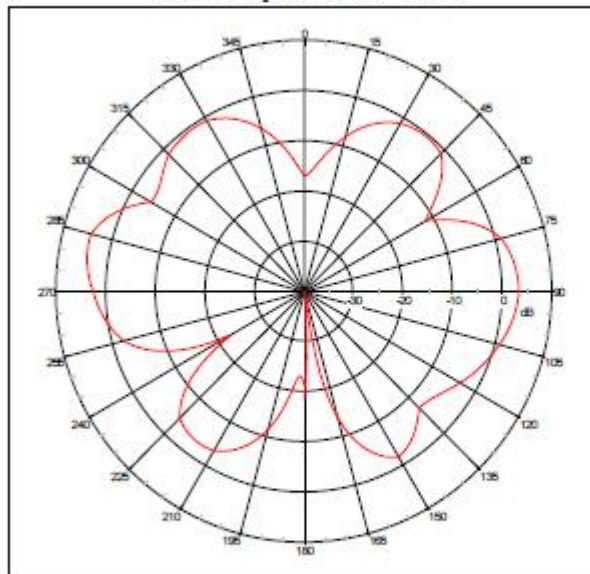
Avg Gain(H cut): -3.584 dB



Far-field amplitude of 2.4 #14.NSI



Far-field amplitude of 2.4 #14.NSI



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ANGLE= HOLE DIA.=

SCALE : N/A

UNIT : mm

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APPROVED BY: YS



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