Model :SMA5G_FM
Brand:CHUANGCHENG

Index:

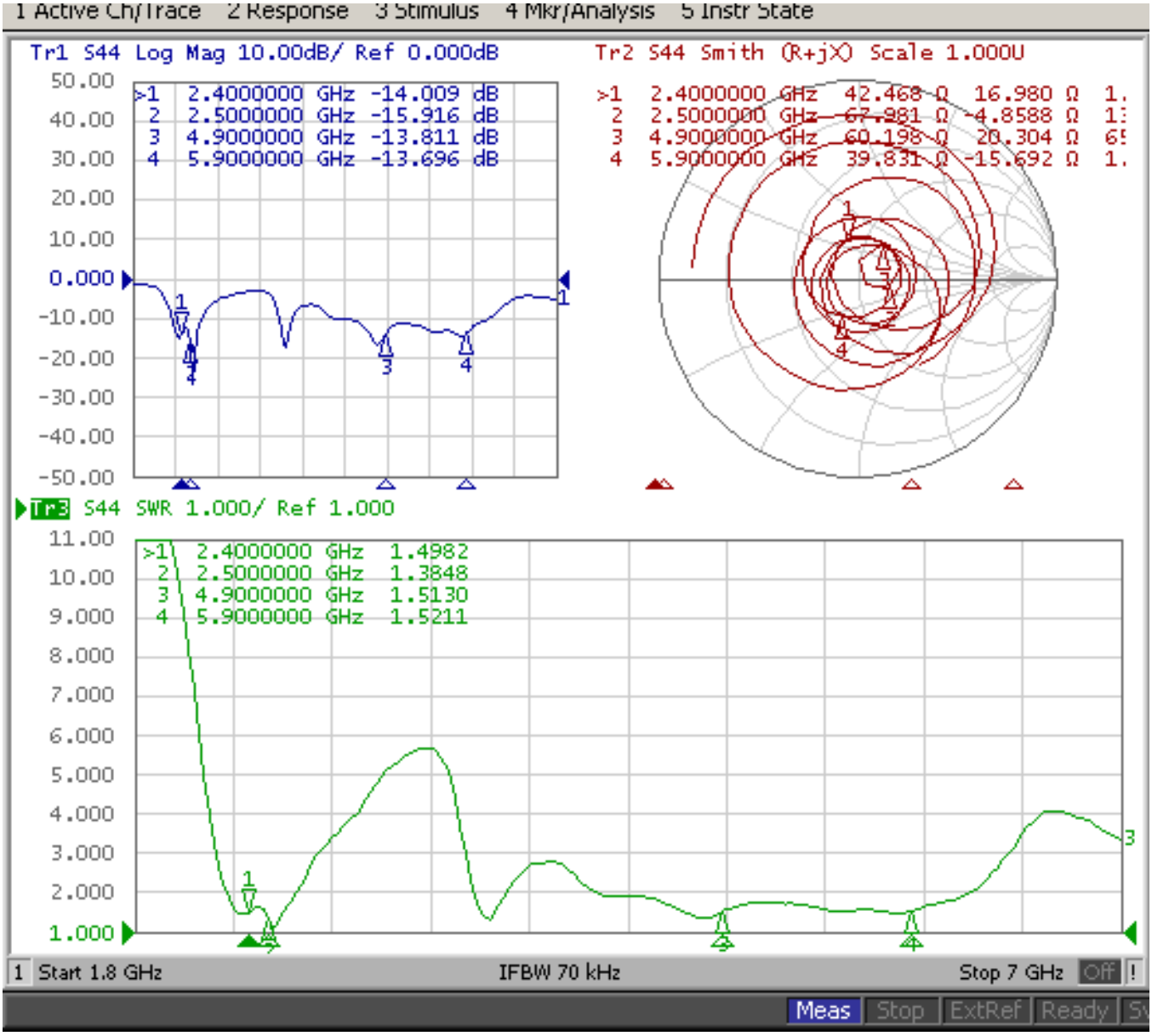
1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	**2400 ~ 2500 MHz** **4900 ~ 5900 MHz**
S.W.R.	**<= 2.0 @ 2400 ~ 2500 MHz** **<= 2.5 @ 4900 ~ 5900 MHz**
Antenna Gain	**2.0 ± 0.7dBi @ 2450 MHz** **1.0 ± 0.7dBi @ 5500 MHz**
Polarization	**Linear**
Impedance	**50 Ohm**
B. Material & Mechanical Characteristics	
Material of Radiator	**PCB**
Material of Plastic	**Body: TPE** **Hinge: PA+ABS** **Holder: PA+ABS**
Cable Type	**RG-178**
Connector Type	**SMA Male Reverse**
Connector Pull Test	**>= 3 Kg**
Connector Torque Test	**100 ~ 300g.cm**
C. Environmental	
Operation Temperature	**- 40 ˚C ~ + 65 ˚C**
Storage Temperature	**- 40 ˚C ~ + 80 ˚C**

2. Characteristics and Reliability Test

Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	MIL-STD-202G, 201A Amplitude: 0.03 inch (0.76mm); Freq: 10 to 55 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol.<= 5%
M2	Random Drop	Height: 1.5 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.<= 5%
M3	Solderability	MIL-STD-202G, 210F, cond. A Solder iron: 350±10°C; Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M4	Terminal-Pull Test	MIL-STD-202G, 211A, cond. A Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M5	Terminal-Torque Test	MIL-STD-202G, 211A, cond. E Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M6	Dimension	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	Salt Spray	MIL-STD-202G, 101E, cond. B Temp: 35°C; RH: >= 95%; NaCl solution: >= 5%; Time: 48 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E2	Humidity	MIL-STD-202G, 103B, cond. B Temp: 40°C; RH: >= 95%; Time: 48 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E3	Thermal Shock	1 Cycle: - 40°C (30 minutes) to + 80°C (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E4	Life (High Temp.)	MIL-STD-202G, 108A, cond. A Temp: 85°C; Time: 96 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2002/95/EC
R2	PFOS	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC
R3	PFOA	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC

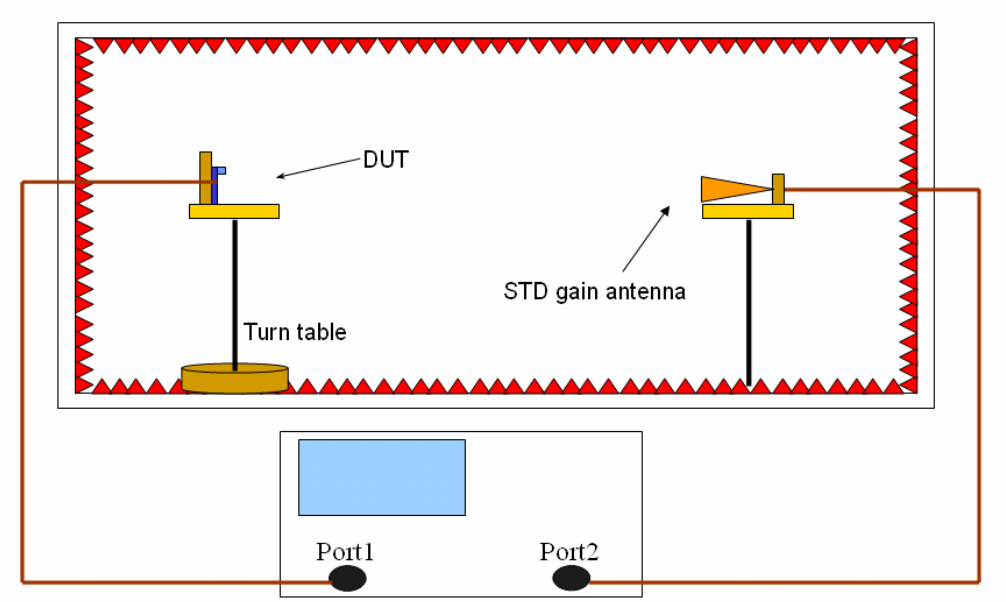
3. Antenna - S Parameter Test Data



4. Antenna - Radiation Pattern Test Data

Testing Equipment Specification:

Antenna Anechoic Chamber Dimension: 8 x 4 x 4 m
Quite Zone: 600mm @1 GHz
Isolation: >100dB @ 1 MHz ~ 10 GHz
Testing Equipment: Agilent 5071B
Received Antenna: 0.7 ~ 6.0 GHz for Gain Calibration
Double Ridged Horn Antenna



5. Mechanical Drawing

See attached files

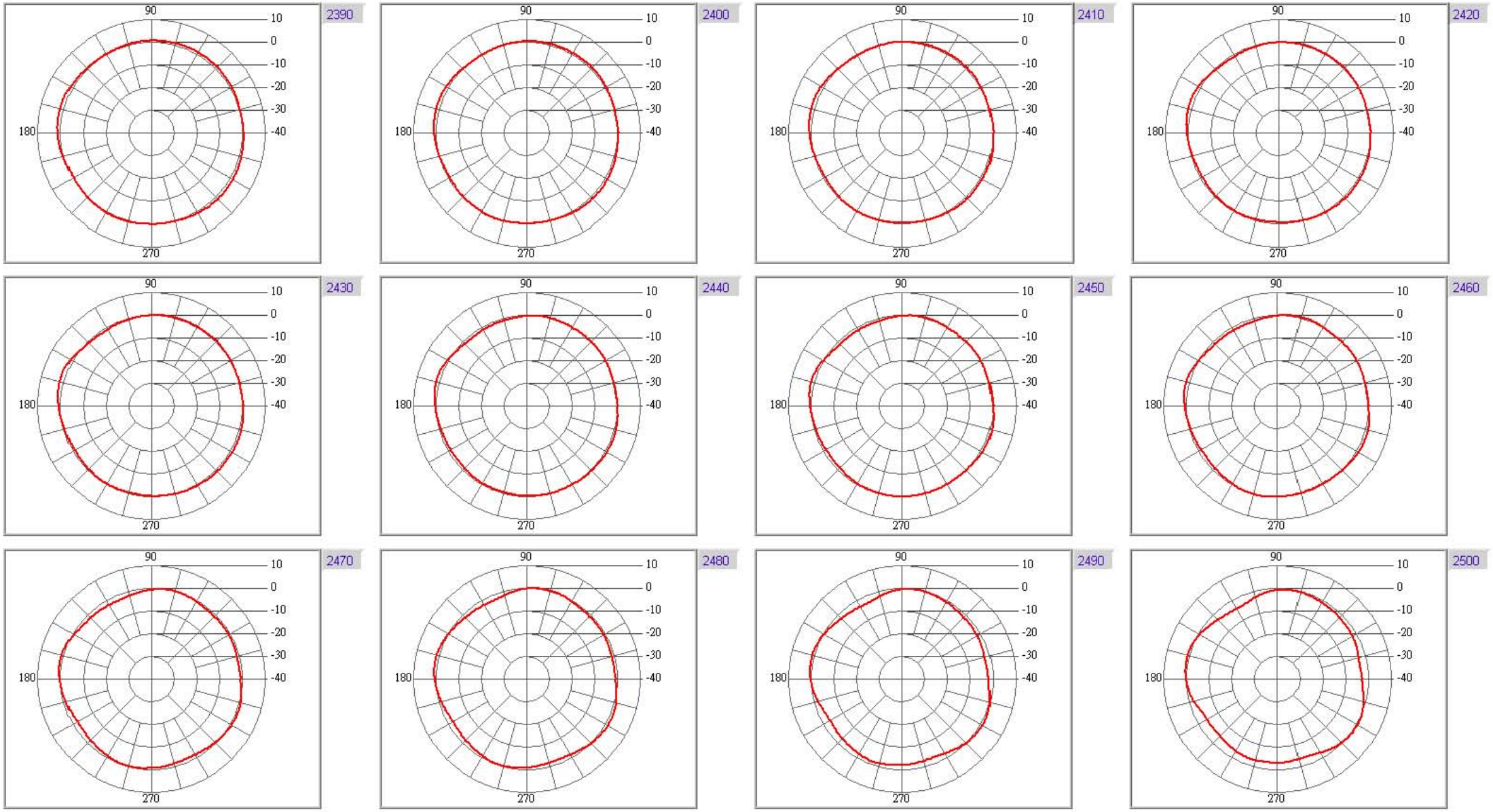
6. Material Description and RoHS Test Report

See attached files

Model : 2.4&5GHz Antenna
Remark :H-Plane // Vertical Polarization
Tested by : Antenna 3D Lab // Zhao Yao Rong

Location: **Chamber**
Date: **2008/12/27**
Time: **上午 11:46:14**
Temperatuer (℃): **22.00**
Humidity (%): **55.00**
Approved by:

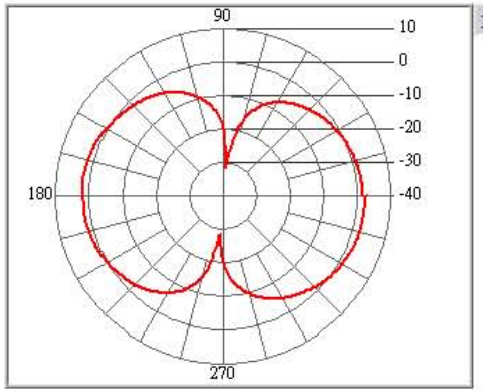
Freq. (MHz)	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	1.36	1.26	1.41	1.41	1.59	1.34	1.34	1.32	0.88	1.38	0.95	0.66
Peak Degree	158	158	157	158	163	163	164	164	336	336	336	169
AV Gain (dBi)	0.63	0.35	0.21	0.02	0.15	-0.15	-0.17	-0.1	-0.74	-0.57	-1.21	-1.75

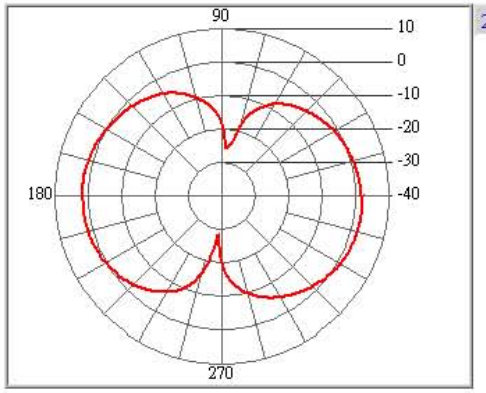


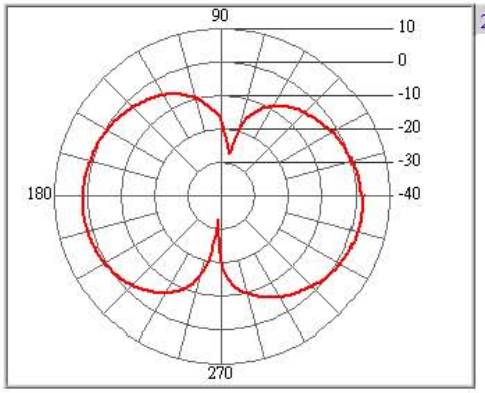
Model : 2.4&5GHz Antenna
Remark :E-Plane // Horizontal Polarization
Tested by : Antenna 3D Lab // Zhao Yao Rong

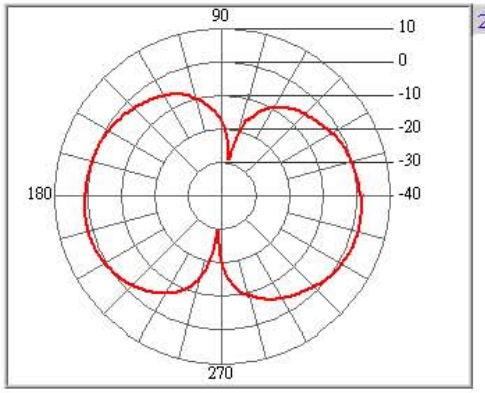
Location: **Chamber**
Date: **2008/12/27**
Time: **上午 11:46:14**
Temperatuer (℃): **22.00**
Humidity (%): **55.00**
Approved by:

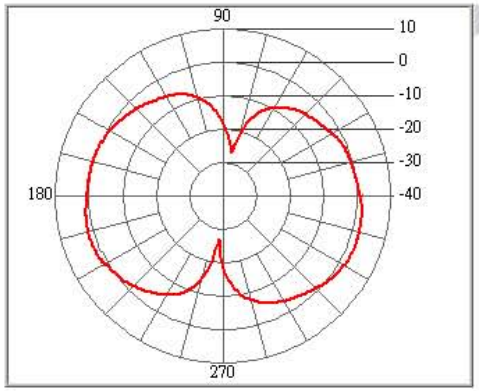
Freq. (MHz)	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	2.4	2.24	2.12	1.89	2.22	1.95	1.98	2	1.55	1.84	1.29	0.94
Peak Degree	356	356	351	350	339	338	338	338	333	332	332	326
AV Gain (dBi)	-1.56	-1.74	-1.92	-2.15	-2.02	-2.47	-2.47	-2.4	-2.9	-2.64	-3.19	-3.71

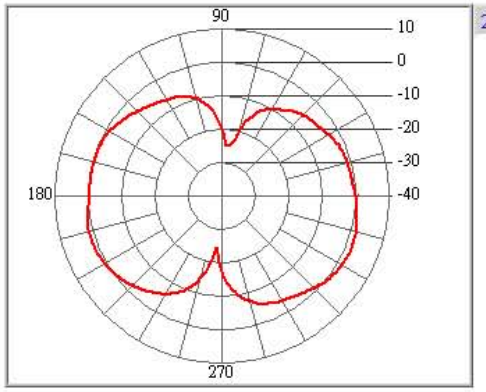


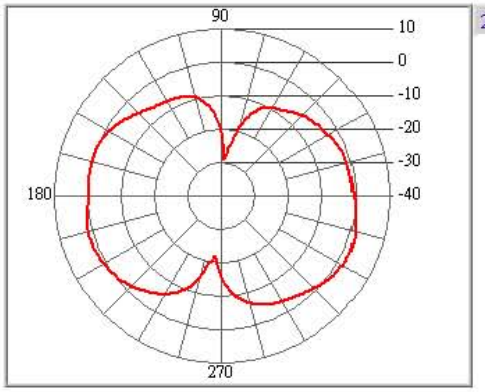


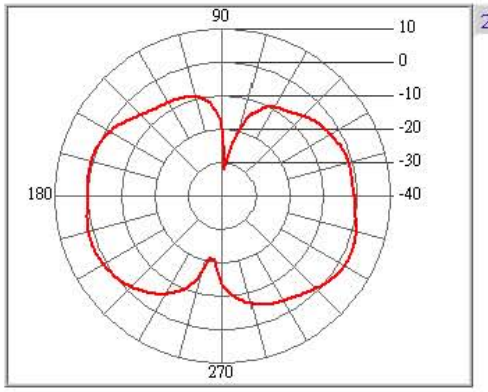


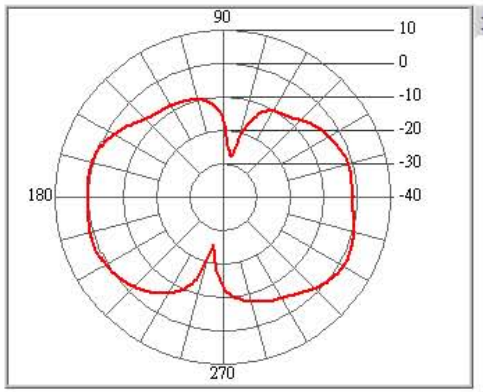


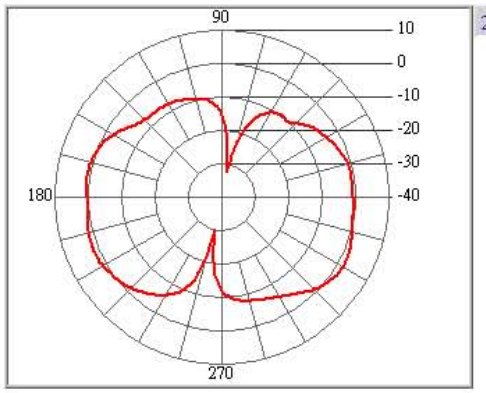


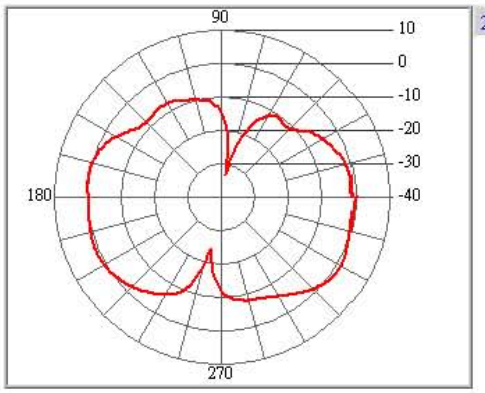


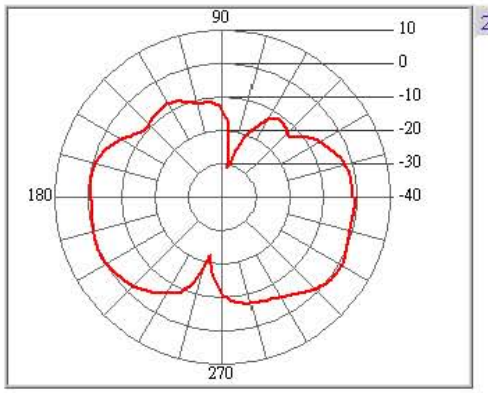












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Remark :H-Plane // Vertical Polarization
Tested by : Antenna 3D Lab // Zhao Yao Rong

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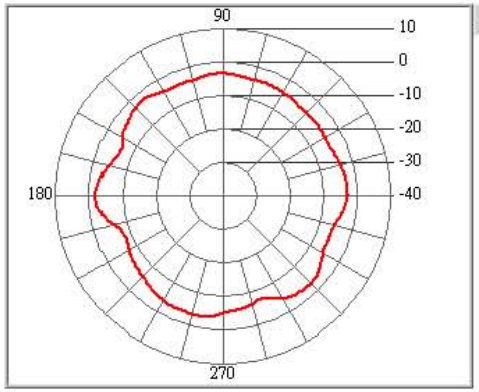
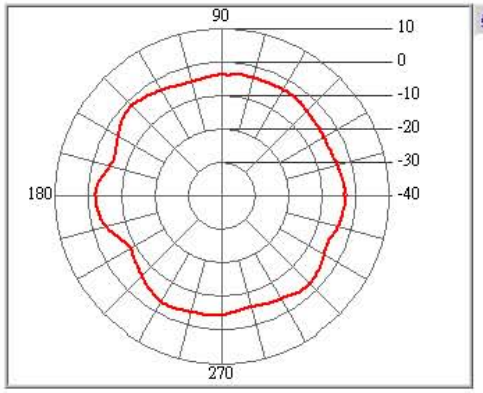
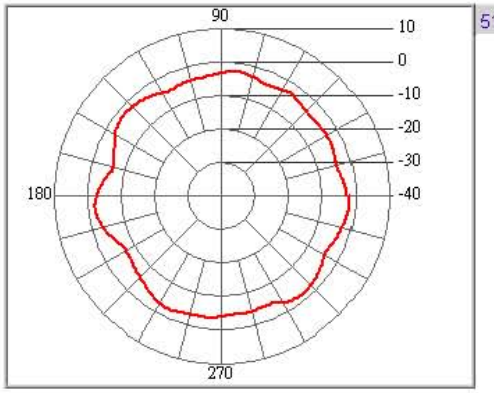
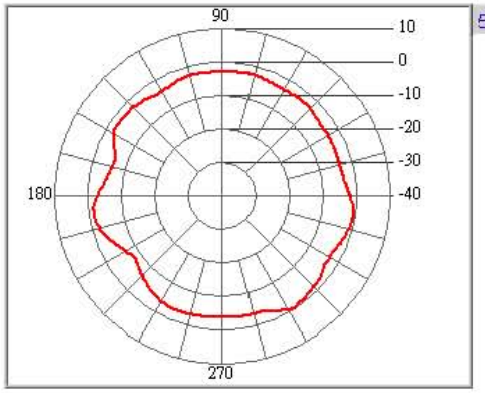
Humidity (%): **55.00**
Approved by:

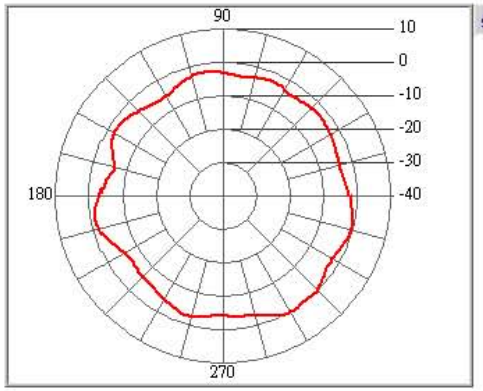
Freq. (MHz)	4900	5000	5100	5200	5300	5400	5500	5600	5700	5800	5900	6000
Peak Gain (dBi)	-2.04	-1.71	-1.4	-0.35	0.12	1.27	1.72	1.82	1.99	0.87	0.42	-2.15
Peak Degree	179	136	356	302	301	307	302	296	307	302	338	332
AV Gain (dBi)	-4.31	-4.01	-3.57	-3.07	-2.89	-2.17	-1.63	-1.07	-0.84	-1.48	-2.02	-4.48

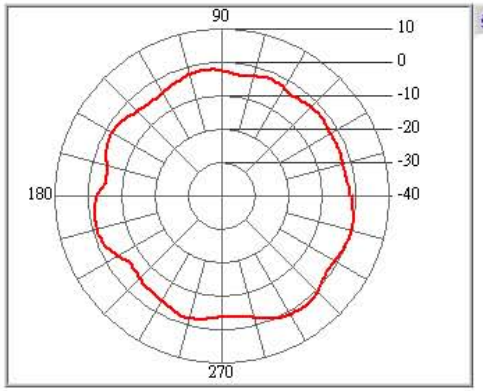


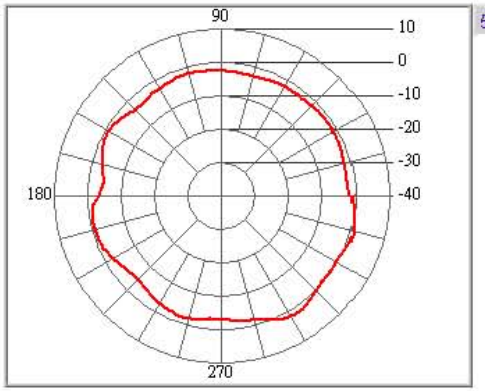


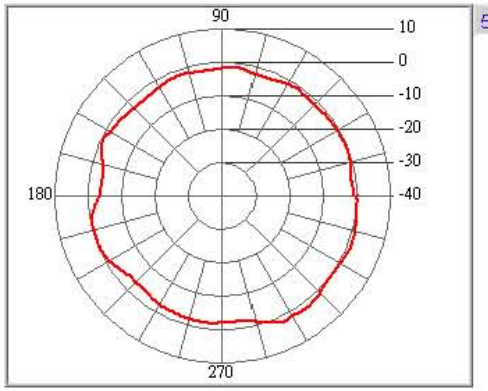


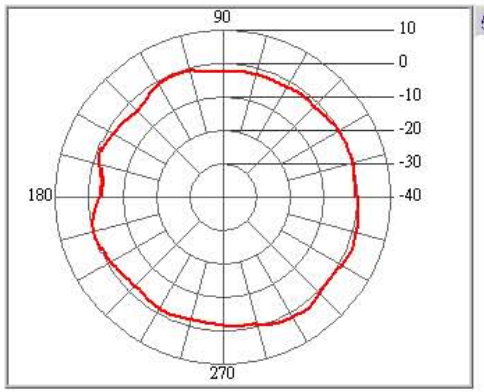


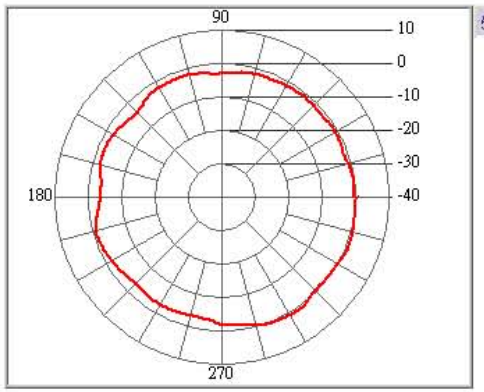


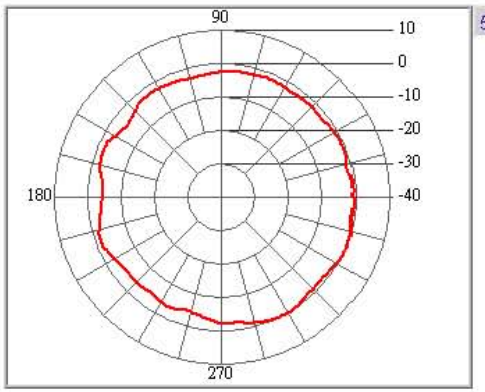


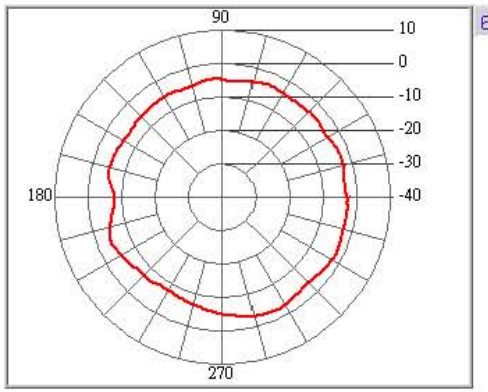












Model : 2.4&5GHz Antenna
Remark :E-Plane // Horizontal Polarization
Tested by : Antenna 3D Lab // Zhao Yao Rong

Location: **Chamber**
Date: **2008/12/27**
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Temperatuer (℃): **22.00**
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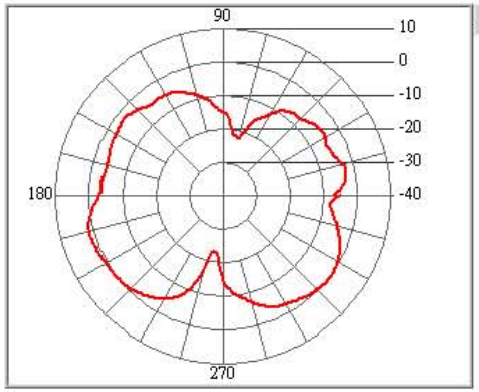
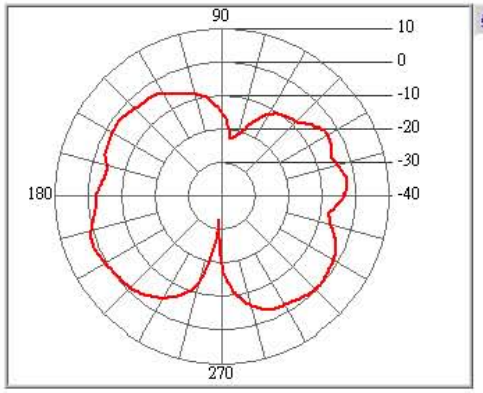
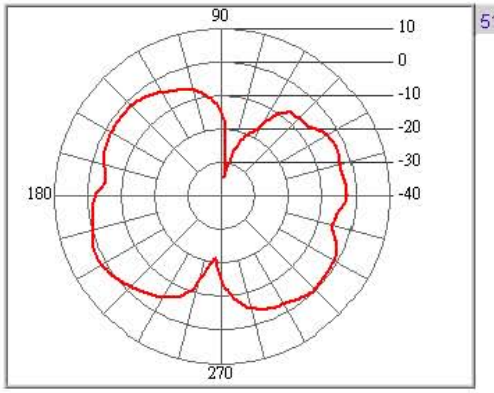
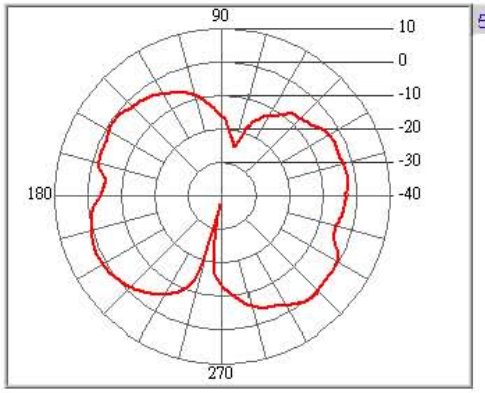
Approved by:

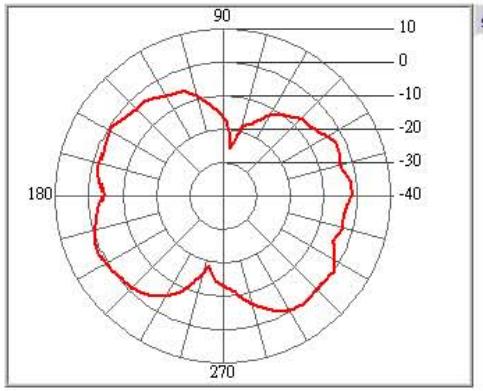
Freq. (MHz)	4900	5000	5100	5200	5300	5400	5500	5600	5700	5800	5900	6000
Peak Gain (dBi)	1.31	1.3	1.44	1.24	0.8	0.86	0.77	1.47	0.79	0.58	0.36	-2.52
Peak Degree	197	203	209	204	204	209	314	308	154	155	160	148
AV Gain (dBi)	-3.71	-3.76	-3.47	-3.32	-3.48	-2.98	-3.02	-2.52	-2.85	-3.63	-4.04	-6.64

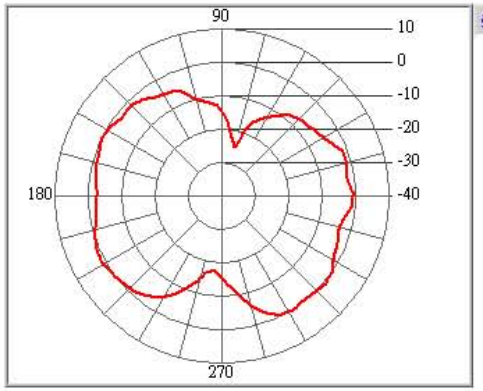


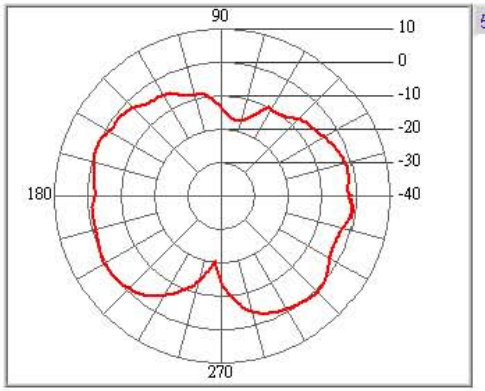


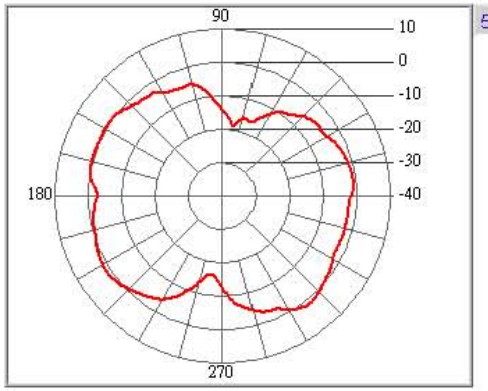


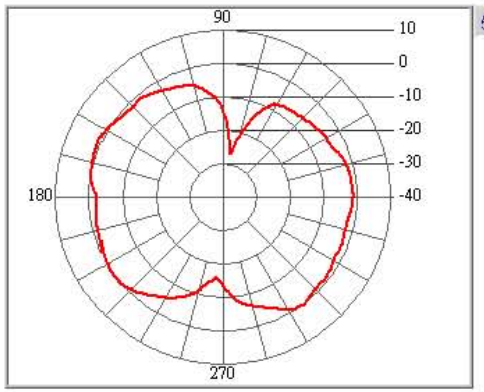


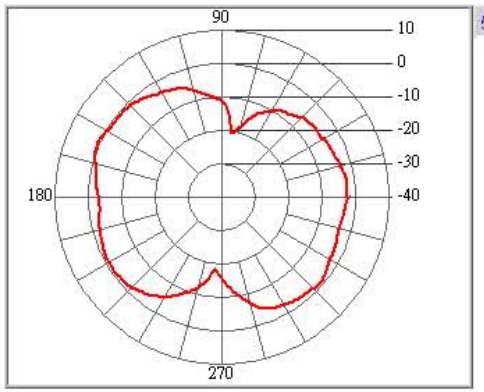


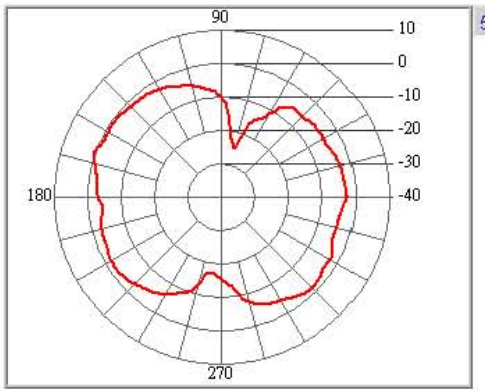


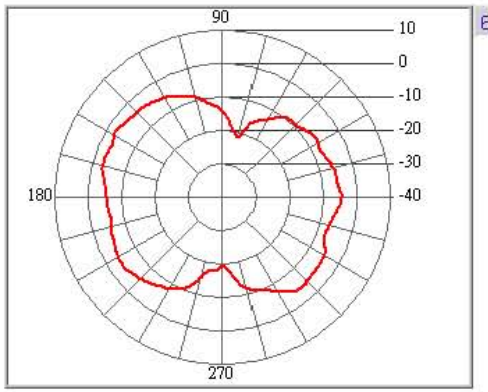












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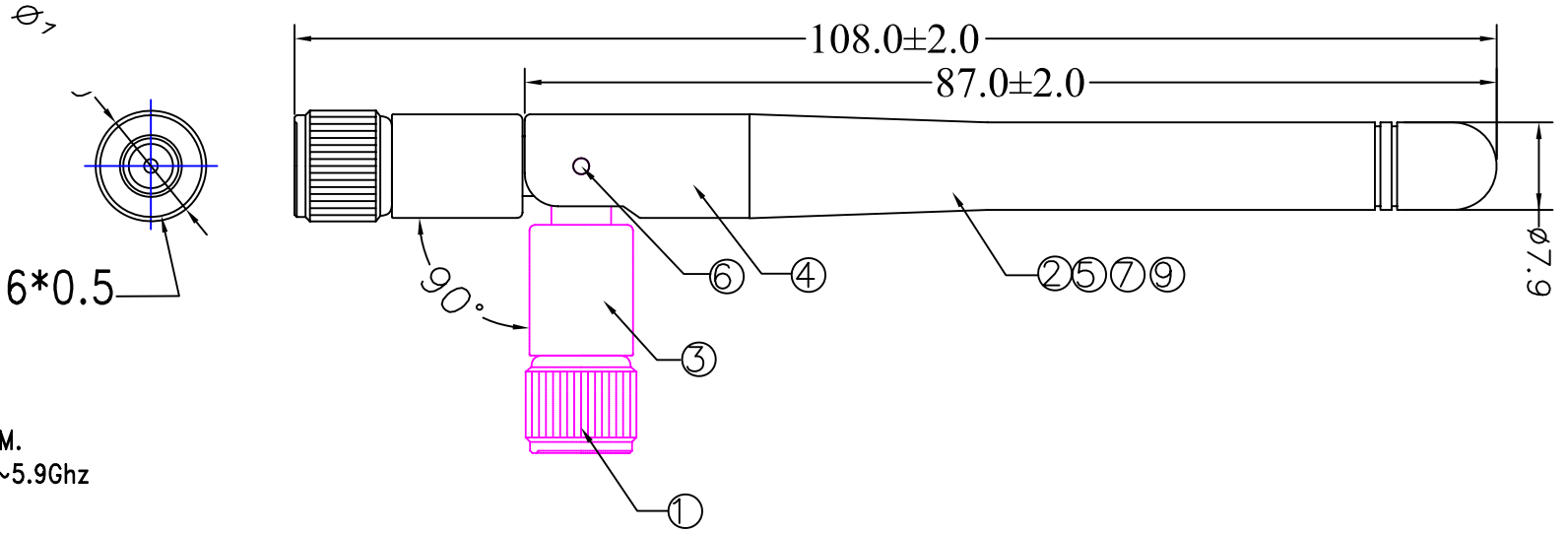

Screw thread : M6*0.5

NOTES:

1. Electrical:
   - 1.1 Impedance: 50 OHM.
   - 1.2 Frequency: 5.0Ghz~5.9Ghz
   - 1.3 VSWR: ≤2.0
   - 1.4 Peck Gain: 2dBi
   - 1.5 Polarization: Linear
   - 1.6 Radiation Patten:Omni-directional
2. Enviromental:
   - 2.1 Storage Temperature Range: -40 TO +85°C
   - 2.2 Operating Temperature Range: -40 TO +85°C
3. All material must meet RoHS Request.
4. CONN 鉚壓高度:HEX2.1~2.2mm

單體重量:9.65G

EC NO.	REV.	DATE	DESCRIPTION
EC-081008-03	C	2008.10.17	CHANGED PART 4,5
EC-080620-24	B	2008.06.20	CHANGED PART 7,8,9
	A	2008.04.25	NEW RELEASE

WIRE LENGTH: Antenna length 108±2mm

TITLE	5Ghz high gain dipole Antenna	UNIT m/m	APPROVE	CHECK	DRAWN	
ORD. NO.		MODEL NO.	吴火亮	聂永华	张继凡	CUSTOMER
BOM NO.		SCALE FREE SHEET 1 OF 2				
CUSTOMER PART NO.		DWG NO. D:\ERP\001759				