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Product Number: AB2450-99H05RS

Product Name: Antenna



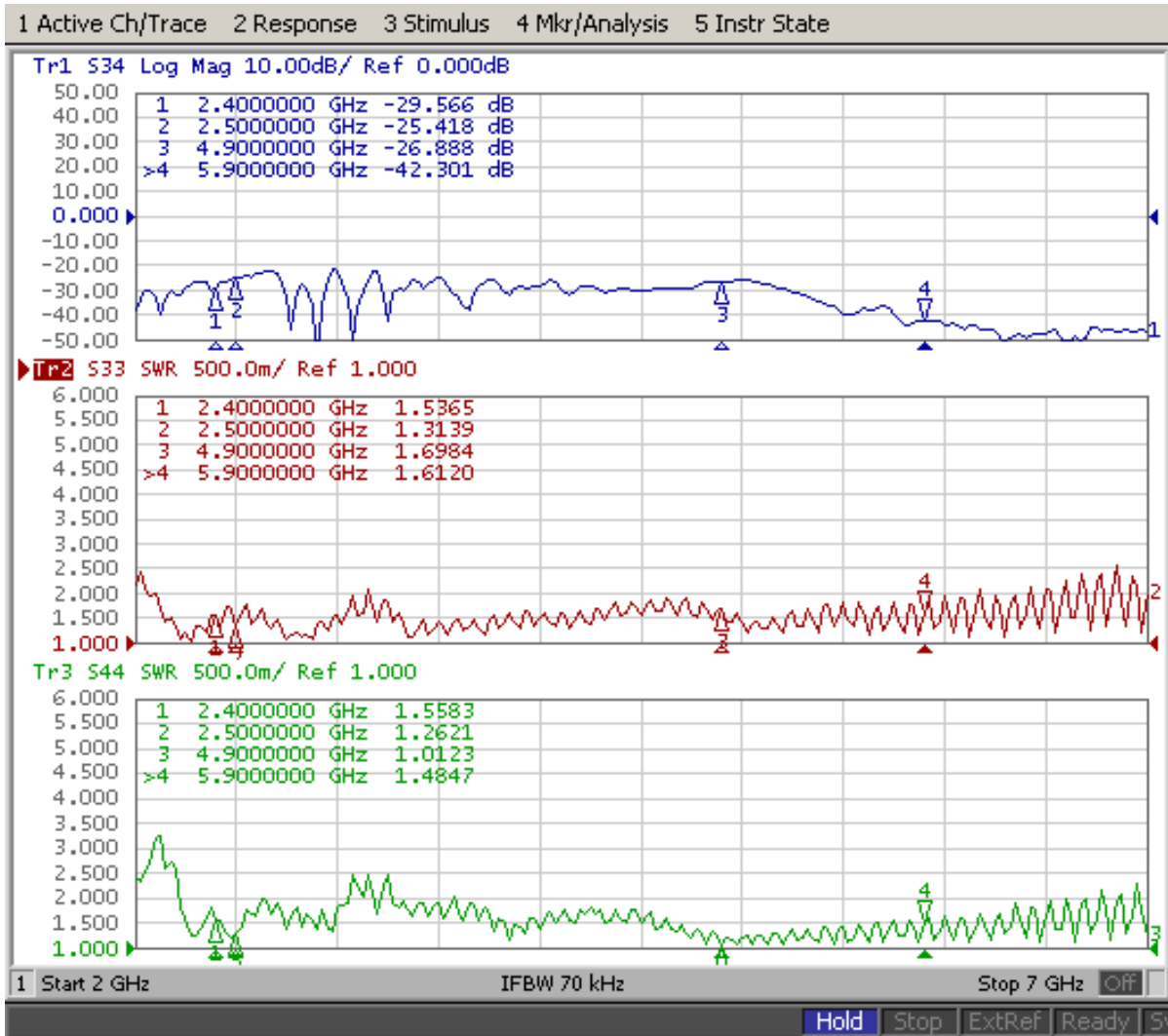
## 1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz 4900 ~ 5900 MHz
S.W.R.	$\leq 2.0$
Antenna Gain	$2.0 \pm 0.7$ dBi
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	PCB
Material of Plastic	Body: ABS
Cable Type	RG-174 // 1000mm
Connector Type	SMA Male Reverse
Connector Pull Test	$\geq 3$ Kg
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	GB / T2423 . 48-1997 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol.<= 5%
M2	Random Drop	GB / T2423.8-1995 Height: 1.0 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.<= 5%
M3	Solderability	GB 2423 . 28- 82 Solder iron: 260±5°C; Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M4	Terminal-Pull Test	Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M5	Terminal-Torque Test	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	GB / T 2423 . 17- 93 Temp: 35°C; RH: >= 95%; NaCl solution: >= 5%; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E2	Humidity	GB / T 2423 . 4 - 93 Temp: 80°C / 12 H; -40°C / 12H RH: >= 90%; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E3	Thermal Shock	GB / T 2423 . 22 - 87 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.)	GB /T 2423 . 2 - 89 Temp: 80°C; Time: 24 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 2011/65/EU
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



Product Number: AB2450-99H05RS

Product Name: Antenna



#### 4. Antenna - Radiation Pattern Test Data

##### Testing Equipment Specification:

Antenna Anechoic Chamber Dimension: 8 x 4 x 4 m

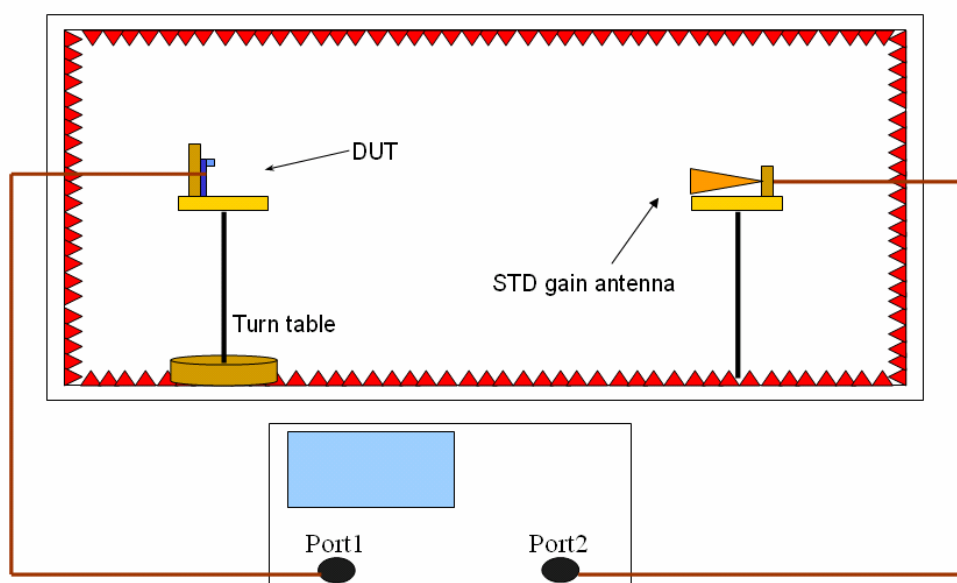
Quiet Zone: 600mm @1 GHz

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



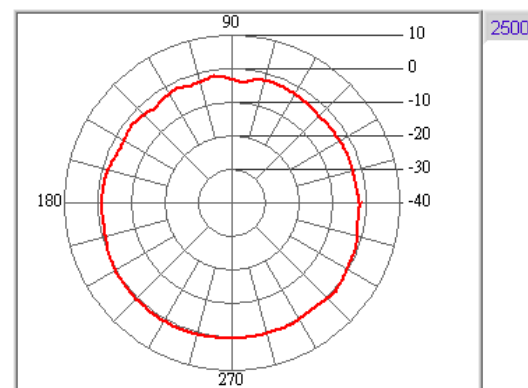
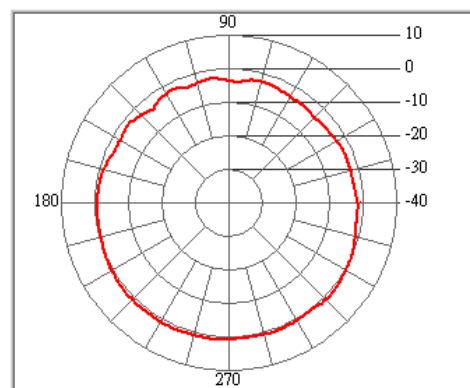
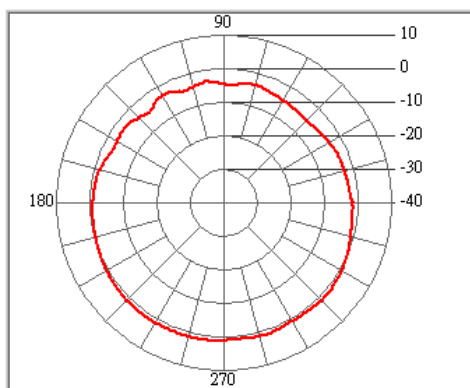
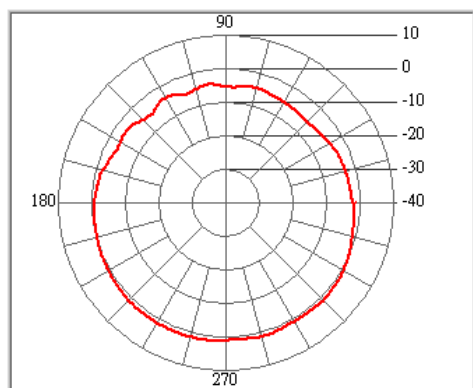
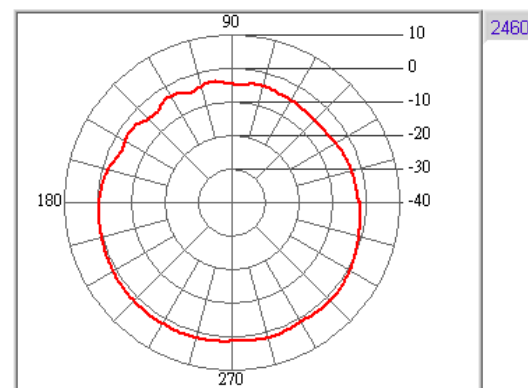
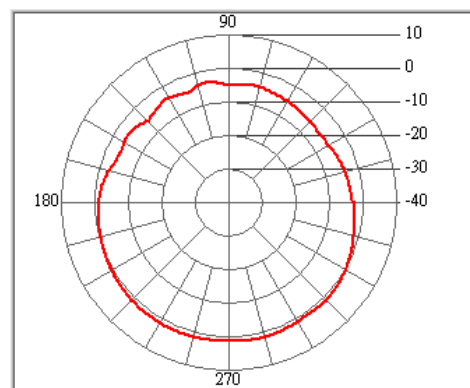
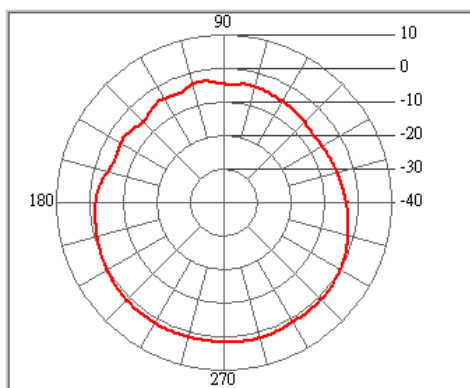
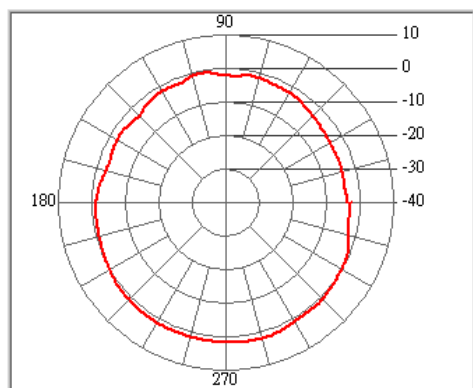
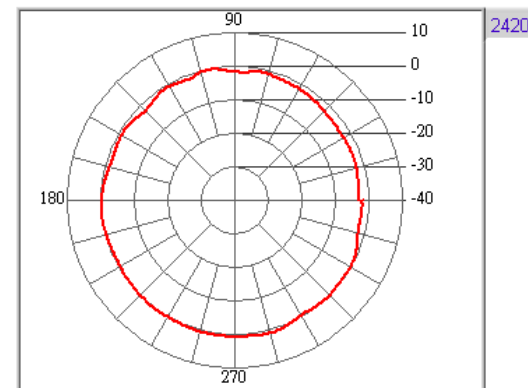
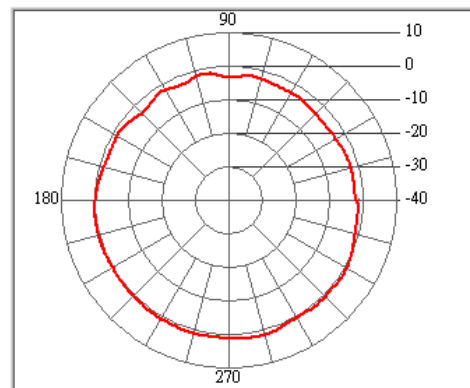
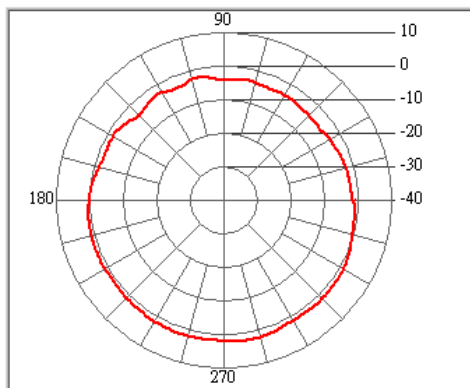
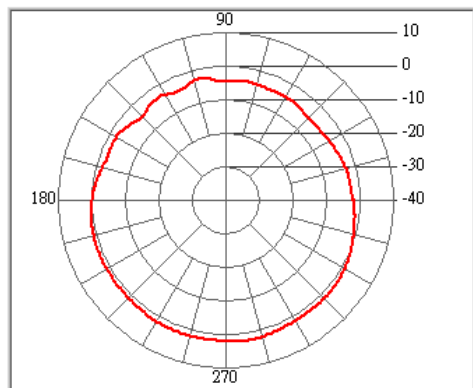
Model : 2.4&5GHz Antenna  
Remark : H-Plane // Vertical Polarization  
Tested by : CORTEC Antenna 3D Lab // Zhao Yao Rong

Location: **Chamber**  
Temperatuer (°C): **22.00**

Date: **2008/10/30**  
Humidity (%): **55.00**

Time: **下午 08:50:53**  
Approved by:

Freq. (MHz)	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	2.41	2.38	1.57	1.03	1.93	1.84	1.67	1.81	1.43	1.36	0.98	0.75
Peak Degree	277	282	283	283	283	283	283	258	258	258	240	246
AV Gain (dBi)	-0.53	-0.34	-0.73	-0.76	-0.75	-1.29	-1.19	-0.77	-1.1	-0.98	-0.9	-1.13





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广东省东莞市长安镇振安路沙头段咸西工业区

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Date: **2008/10/30**

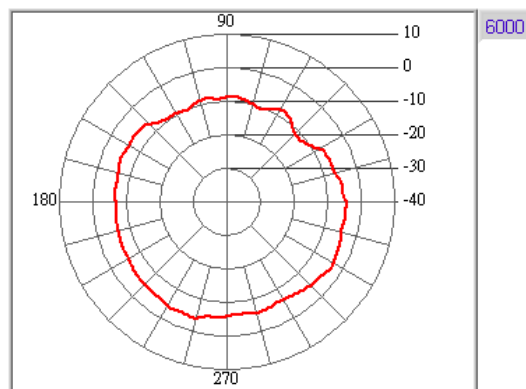
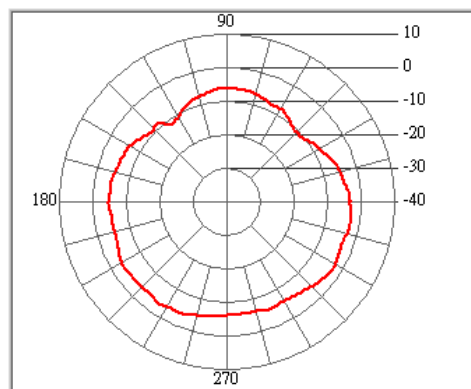
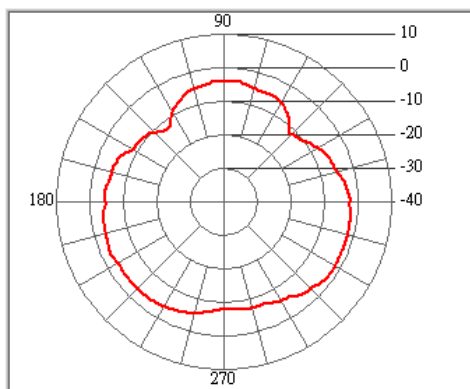
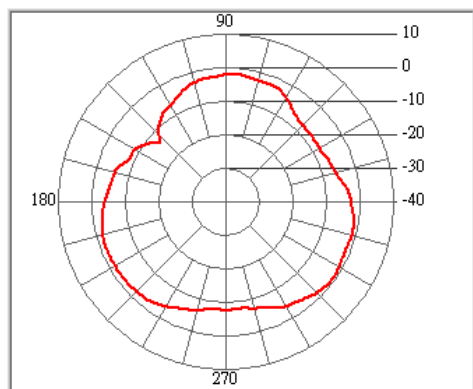
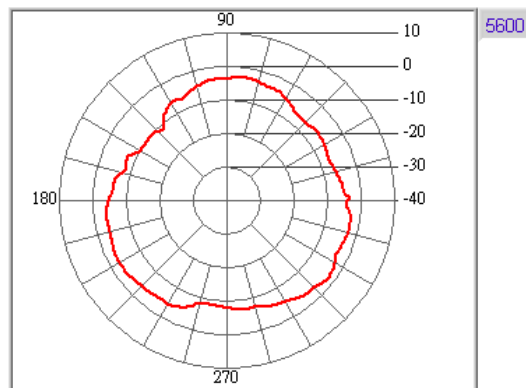
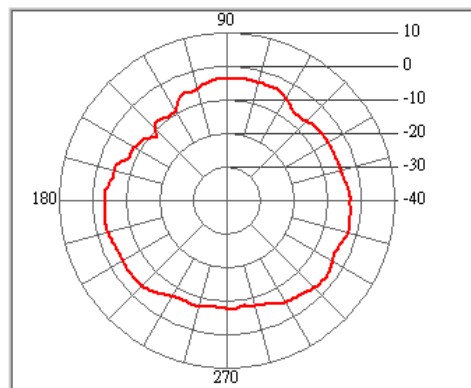
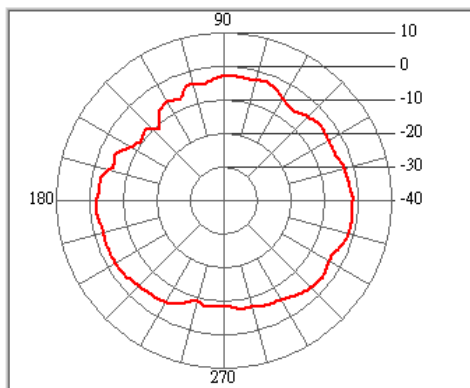
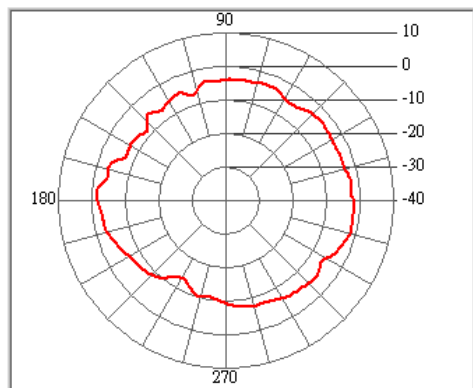
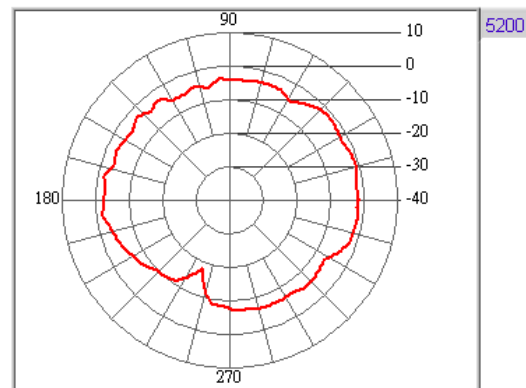
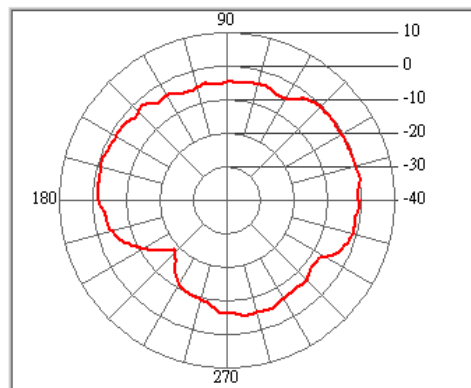
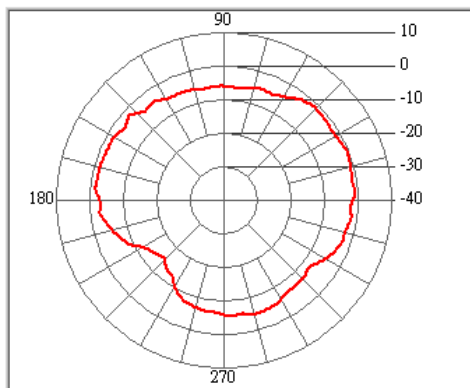
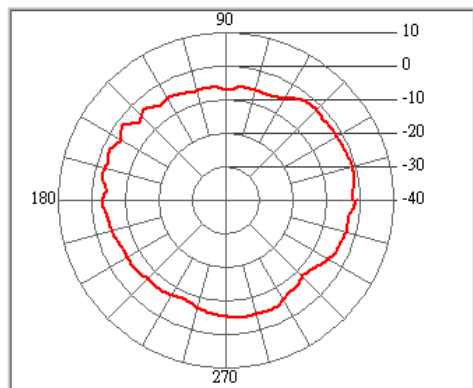
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Temperatuer (°C): **22.00**

Humidity (%): **55.00**

Approved by:

Freq. (MHz)	4900	5000	5100	5200	5300	5400	5500	5600	5700	5800	5900	6000
Peak Gain (dBi)	-0.88	-0.46	0.29	-0.89	-1.51	-1.26	-2.47	-1.89	-0.65	-1.52	-2.55	-3.16
Peak Degree	15	21	9	16	347	352	347	322	322	328	328	328
AV Gain (dBi)	-4.24	-4.08	-3.56	-4.2	-4.84	-4.09	-4.96	-4.96	-3.91	-4.82	-5.45	-6.27





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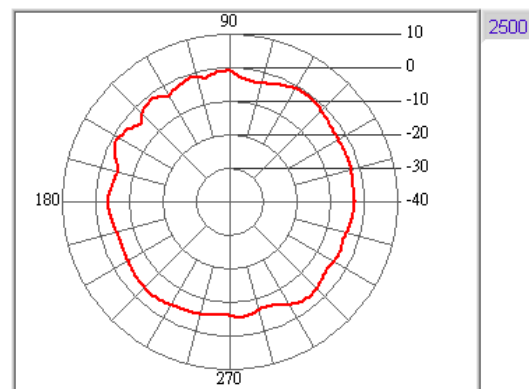
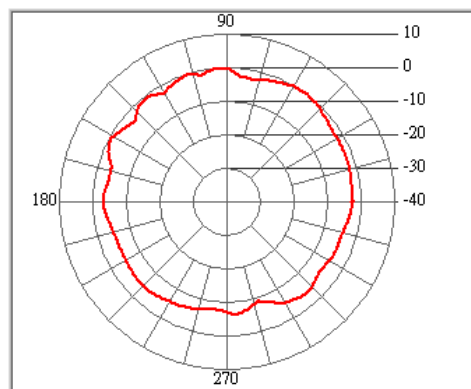
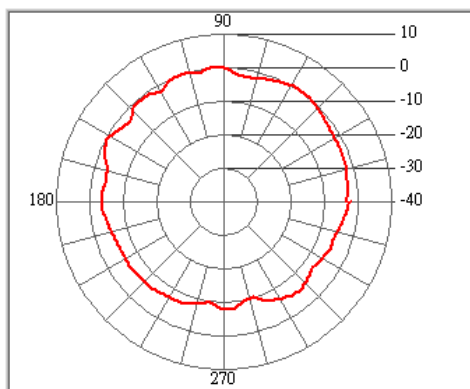
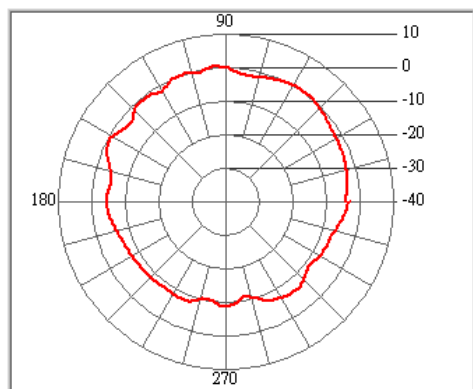
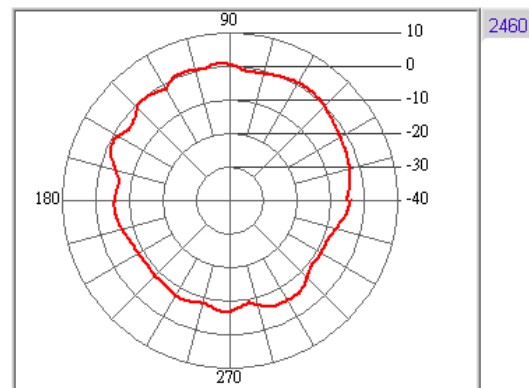
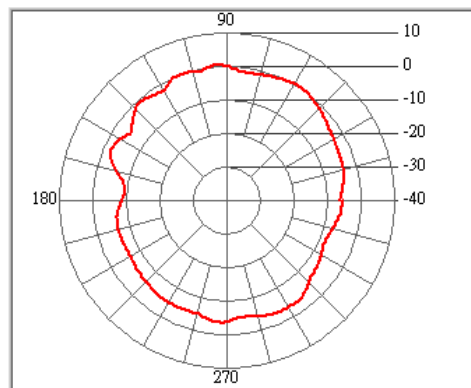
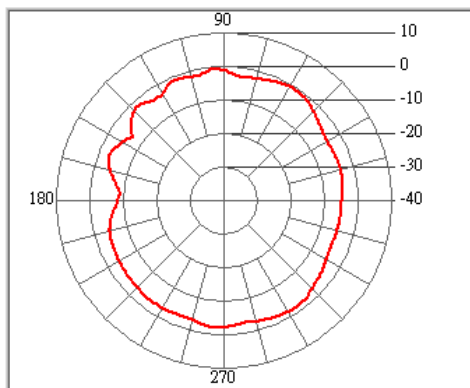
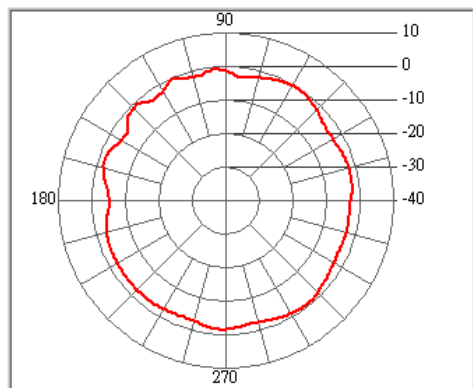
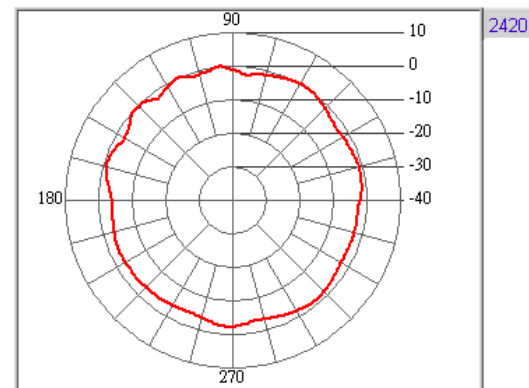
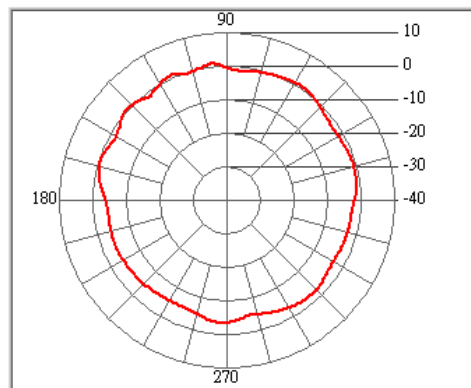
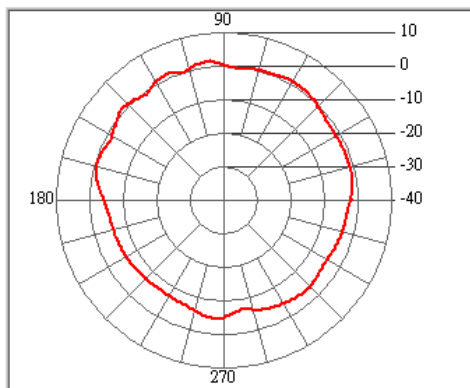
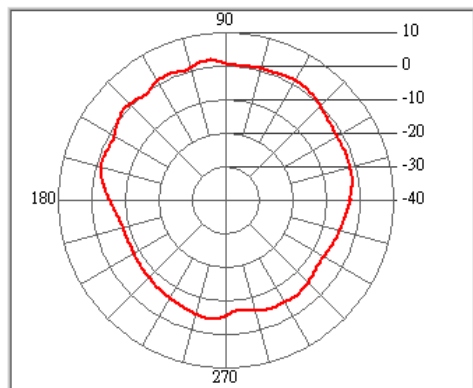
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Temperatuer (°C): **22.00**

Humidity (%): **55.00**

Approved by:

Freq. (MHz)	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	2.16	1.78	1.11	0.2	-0.33	-0.69	0.54	1.03	0.46	0.28	-0.06	-0.61
Peak Degree	96	96	96	114	59	59	96	96	96	96	53	53
AV Gain (dBi)	-2.13	-2	-1.9	-1.95	-2.22	-3.17	-3.31	-3.19	-3.42	-3.14	-3.04	-3.32







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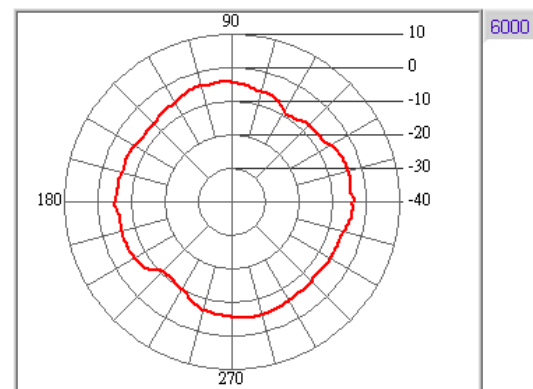
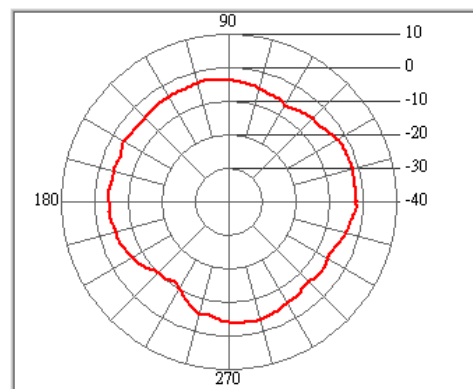
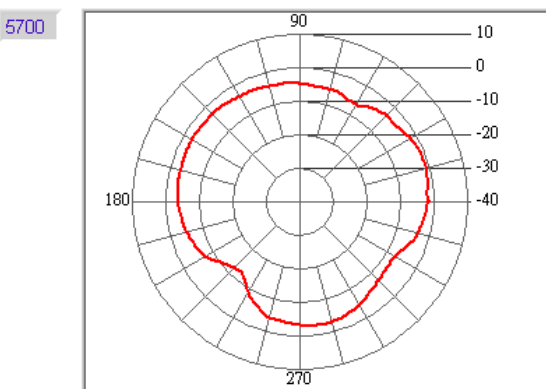
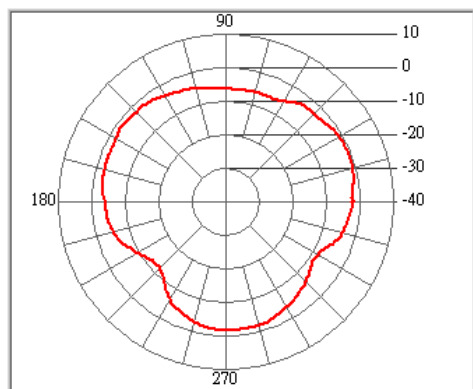
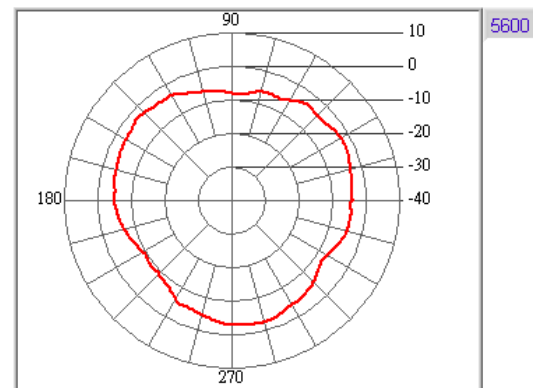
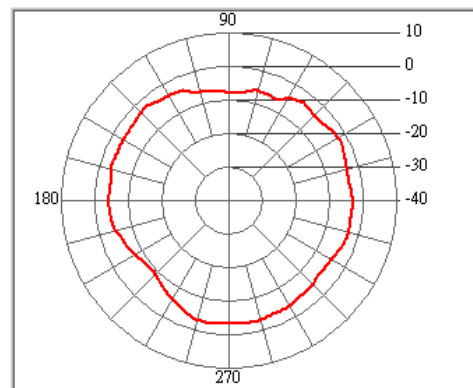
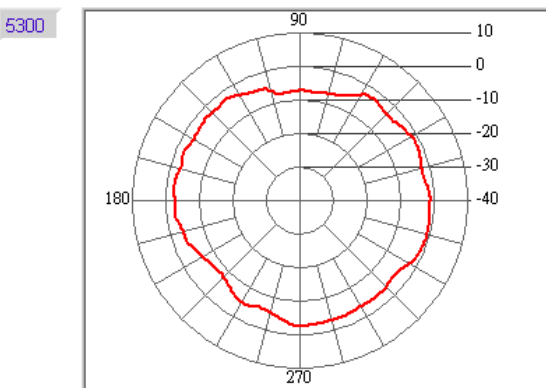
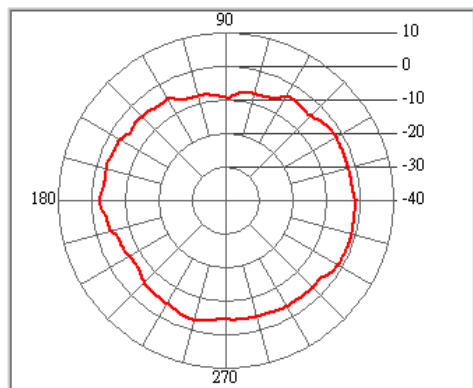
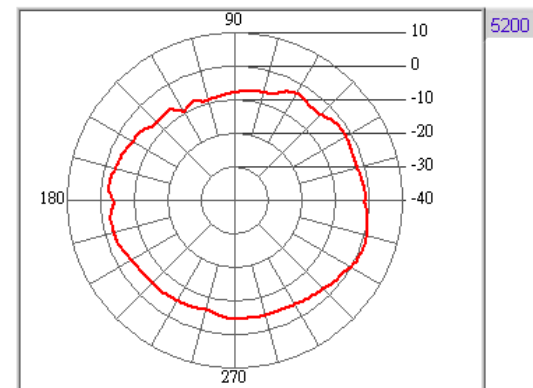
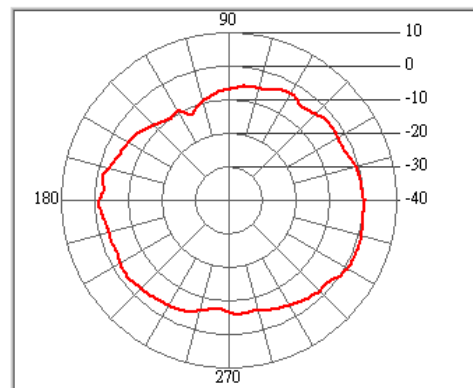
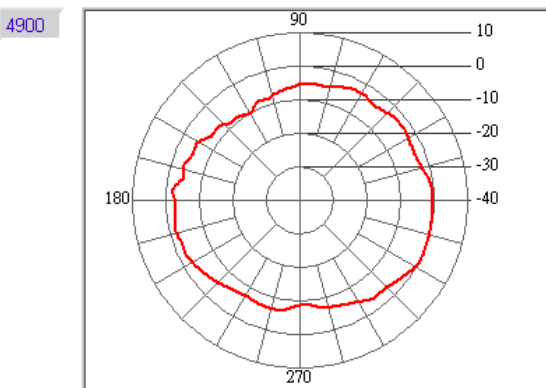
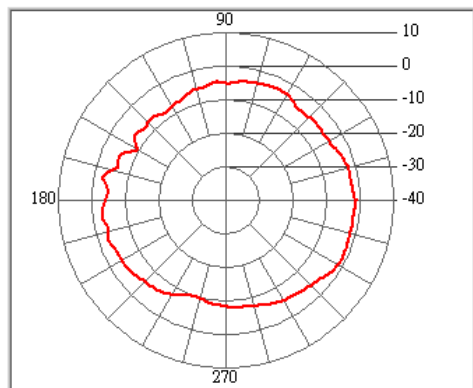
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Temperatuer (°C): **22.00**

Humidity (%): **55.00**

Approved by:

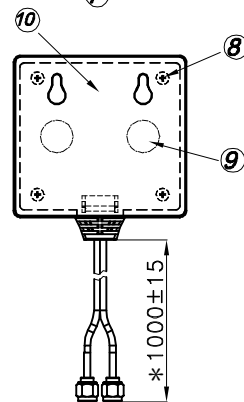
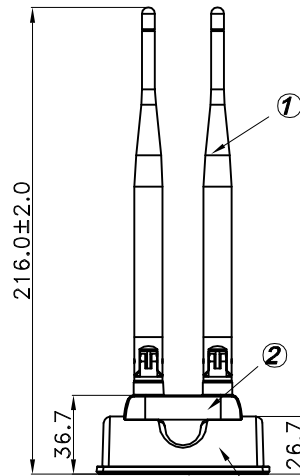
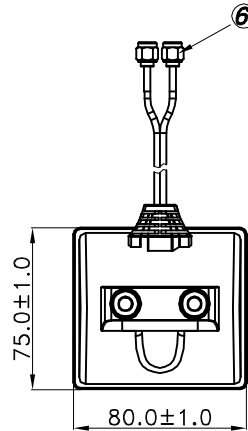
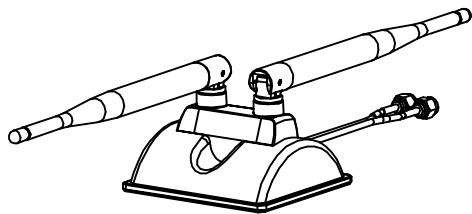
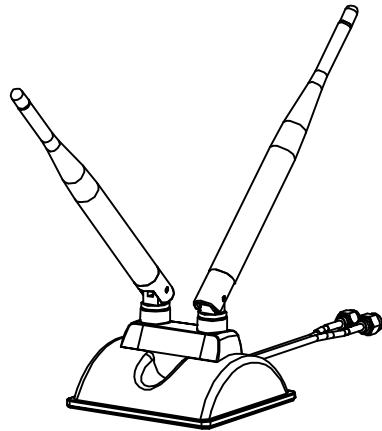
Freq. (MHz)	4900	5000	5100	5200	5300	5400	5500	5600	5700	5800	5900	6000
Peak Gain (dBi)	-1.12	0.14	1.09	1.02	-1.13	-0.75	-2.24	-2.43	-0.62	-0.92	-1.78	-3.29
Peak Degree	333	333	342	343	359	343	27	27	15	15	15	1
AV Gain (dBi)	-4.51	-3.74	-3.06	-3.49	-3.85	-3.47	-4.36	-4.77	-3.72	-4.15	-4.54	-5.98



# RoHS

## Compatible

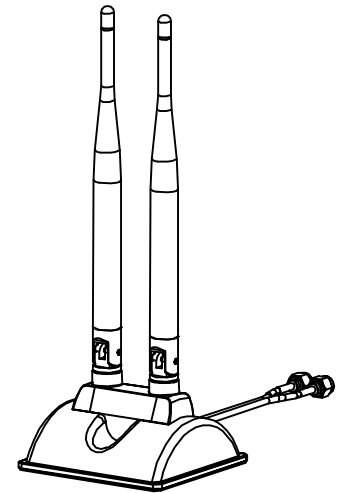
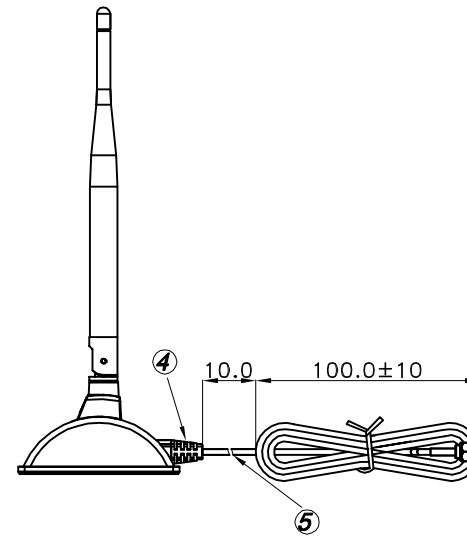
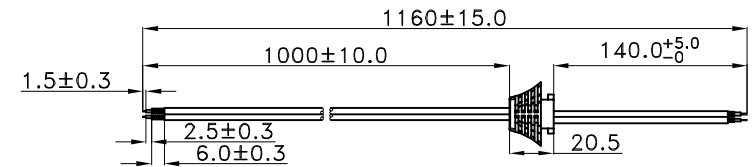
★★★★☆



SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			

接头端

天线端



10	R-AB9901-02	Bottom Cover	SPCC	Zn-plated	1
9	R-AB8601-04	Magnet		φ15.0*1.0mm	2
8	R-AB8601-03	Screw	Iron	M3.0*1.0	4
7	R-AB9901-10	EVA		Black( T:0.7mm)	1
6	SMA010-CGR574-B	SMA Male Reverse	Bronze	Au plated	2
5	R-RG174H-TWO	Cable	RG174	Black	1
4	R-AB9901-06	SR	PVC 50P	Black	1
3	R-AB9901-01	Top Cover	ABS	Black	1
2	AB9901-15A	Holder	ABS	Black	1
1	AN2450-9201BO	AP Antenna		Black	2
No.	Part Number	Description	Material	Finished	Qty

Invex System Group.		Cortec Technology Inc.	
<b>Cortec</b>		<a href="http://www.invaxsystem.com">Http://www.invaxsystem.com</a> E-mail: info@invax.com.tw	
		Tel: 886-2-27885218 Fax: 886-2-27831658	
TITLE: AB99H Type Antenna			
PART NO.: AB2450-99H05RS		CUSTOMER P/N: /	
APP BY	CHK BY	RF BY	DES BY
Grant	Jack	SiFei	LiLiQun
2011/04/07	2011/04/07	2011/04/07	2011/04/07
			Tolerance X.X ±0.5 X.XX ±0.2 X° ±1
			UNITS: mm SCALE: 1/1 REVISION: A