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Product Number: AN8921F-9201RS-N

Product Name: Antenna



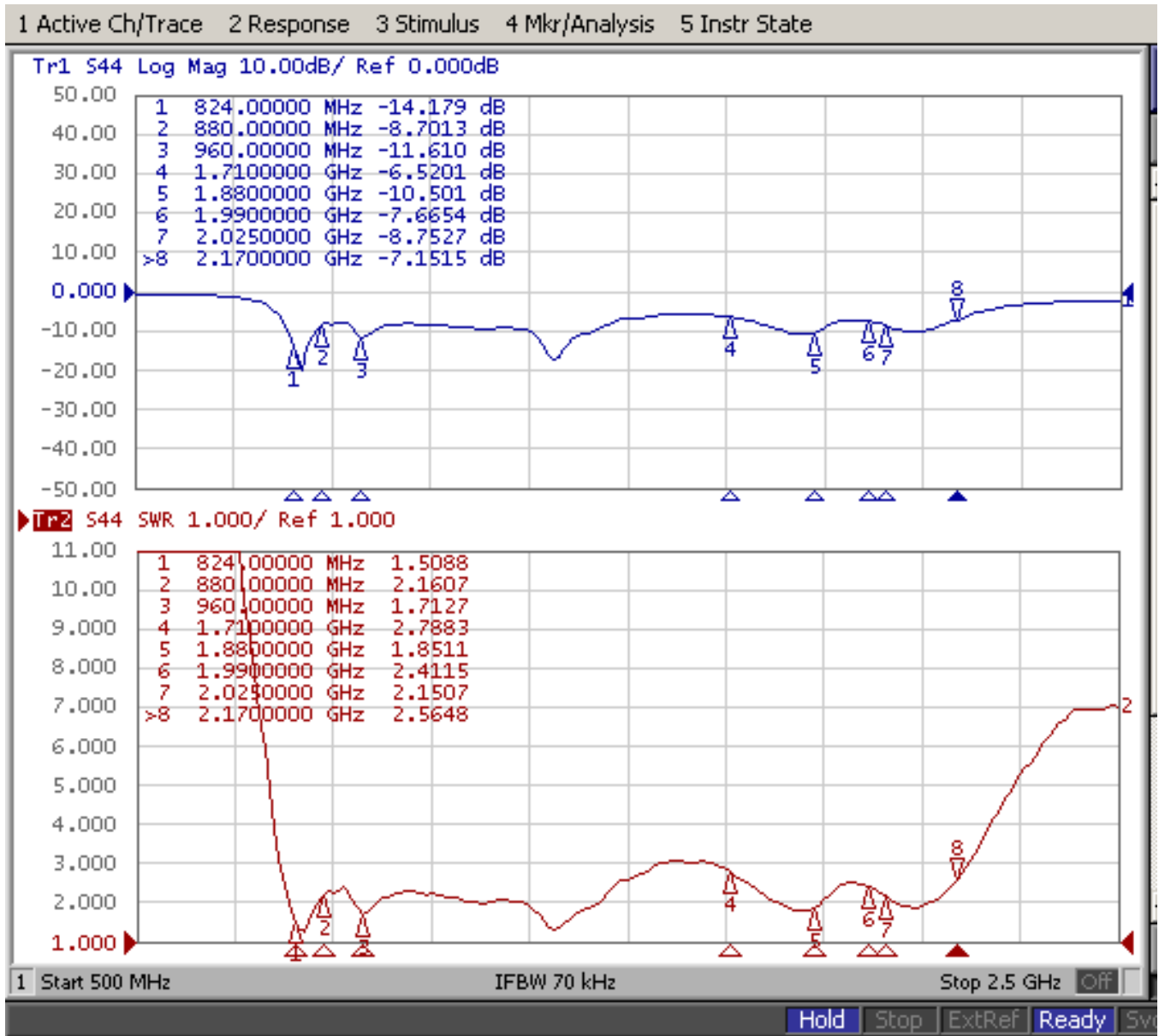
## 1. Specification

Sample Photo	
 A photograph of a black, cylindrical antenna with a slightly tapered middle section, lying horizontally on a light-colored surface.	
A. Electrical Characteristics	
Frequency	824 ~ 960 MHz 1710 ~ 2170 MHz
S.W.R.	<= 3.0 @ 880 MHz <= 3.5 @ 1990 MHz
Antenna Gain	2.0 ± 0.7dBi @ 900 MHz 1.0 ± 0.7dBi @ 1900 MHz
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Material of Plastic	Body: TPE Hinge: PA+ABS Holder: PA+ABS
Cable Type	RG-178
Connector Type	SMA Male Reverse
Connector Pull Test	>= 5 Kg
Connector Torque Test	300 ~ 1000 g.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



Product Number: AN8921F-9201RS-N

Product Name: Antenna



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

##### Testing Equipment Specification:

Antenna Anechoic Chamber Dimension: 8 x 4 x 4 m

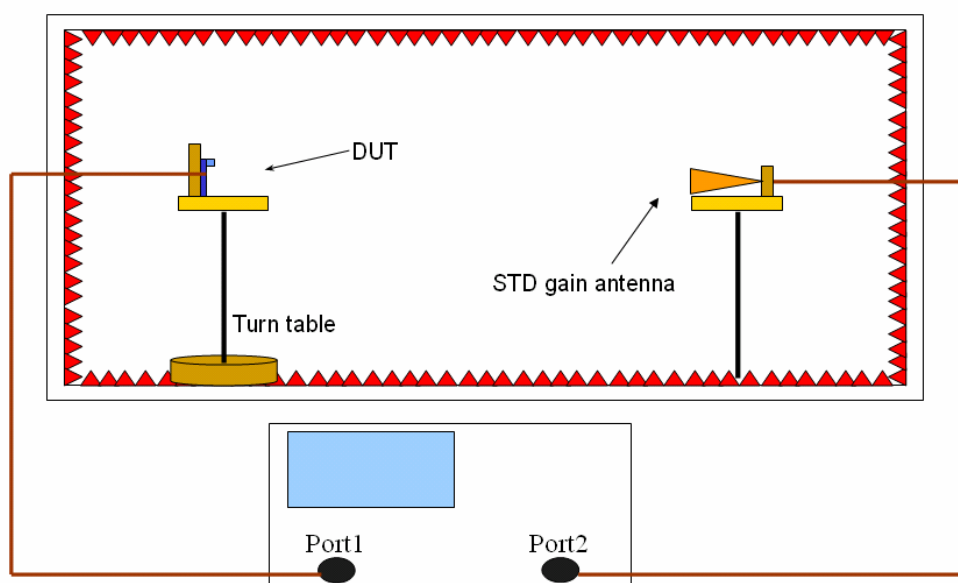
Quiet Zone: 600mm @1 GHz

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



Antenna 3GHz Antenna  
Remark H-Plane/V-Pol  
Tested by : Antenna 3D Lab

Location: **Chamber**

Date: **2012/7/2**

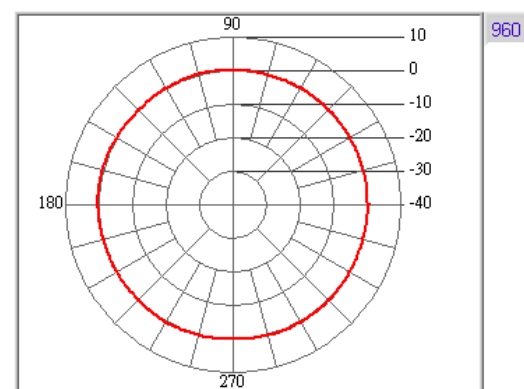
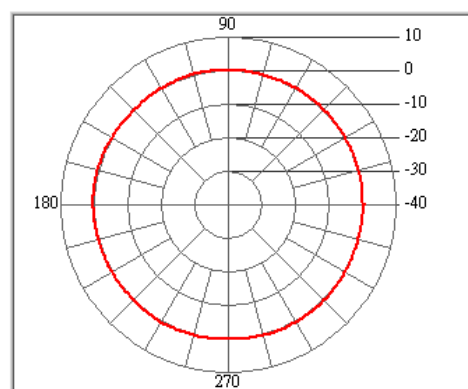
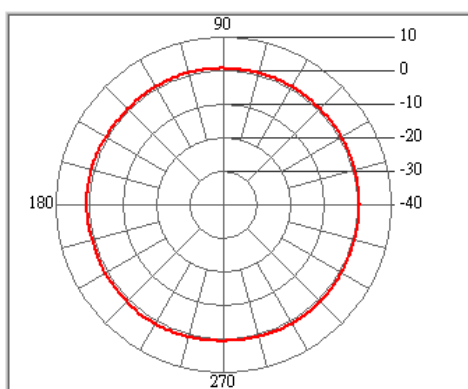
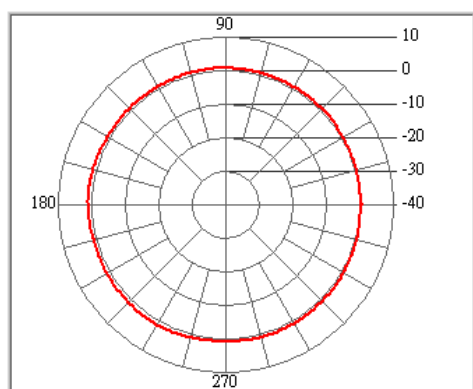
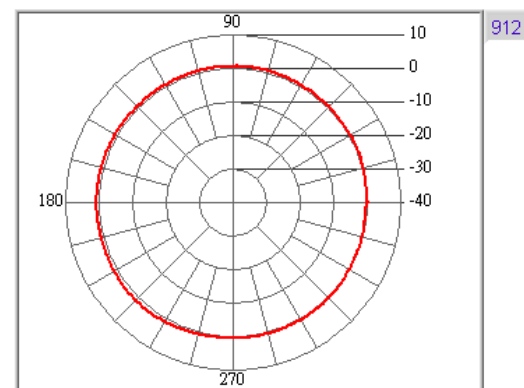
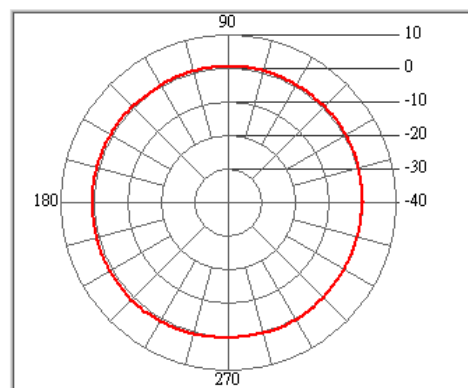
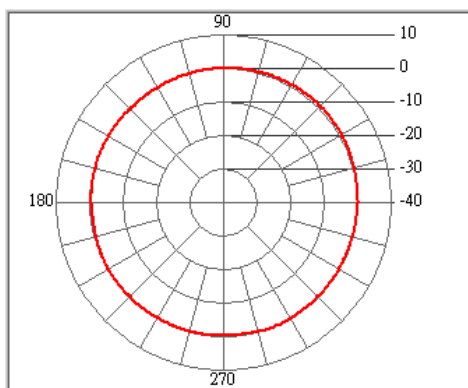
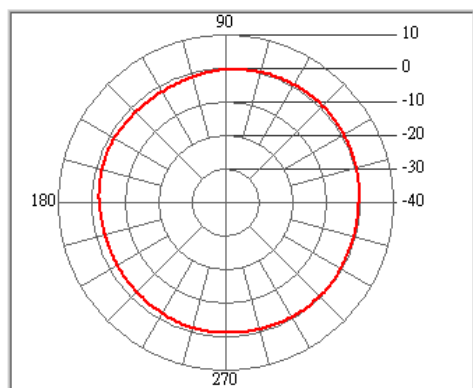
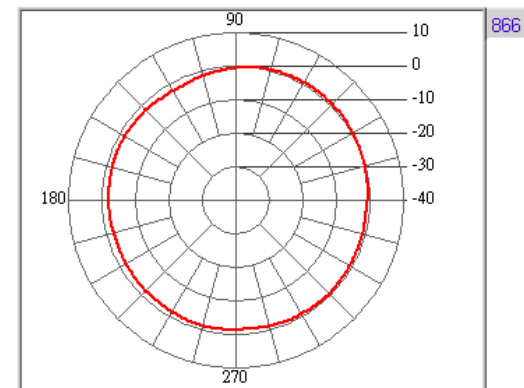
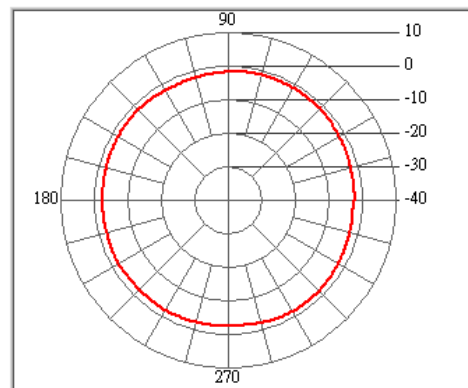
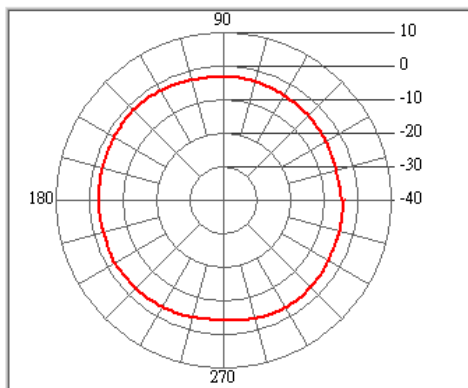
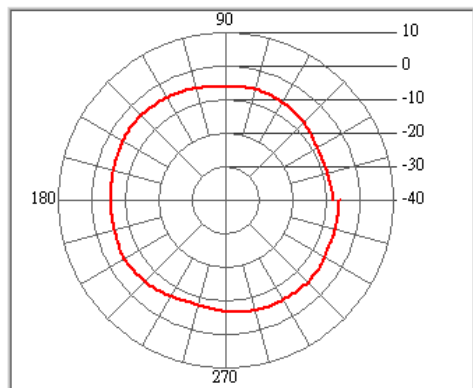
Time: **下午 08:03:34**

Temperature (°C): **25.00**

Humidity (%): **65.00**

Approved by:

Freq. (MHz)	824	838	852	866	880	894	908	912	936	950	960	960
Peak Gain (dBi)	-4.21	-1.97	-1.35	0.66	0.89	0.79	1.02	1.16	1.3	1	0.45	0.45
Peak Degree	136	136	53	52	42	42	230	230	241	231	241	241
AV Gain (dBi)	-5.99	-3.35	-2.04	-0.99	-0.84	-0.09	0.45	0.52	0.74	0.67	0.19	0.19





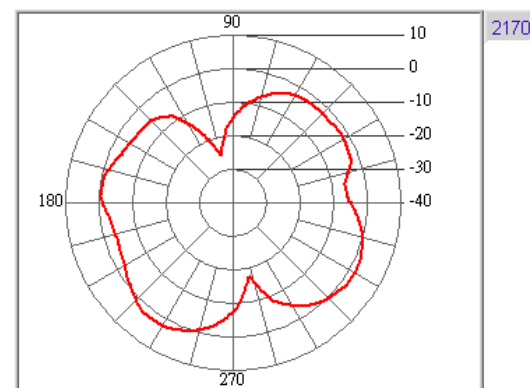
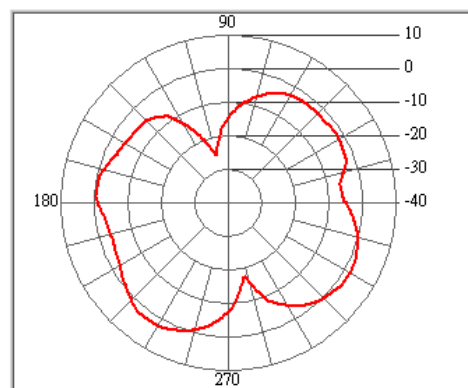
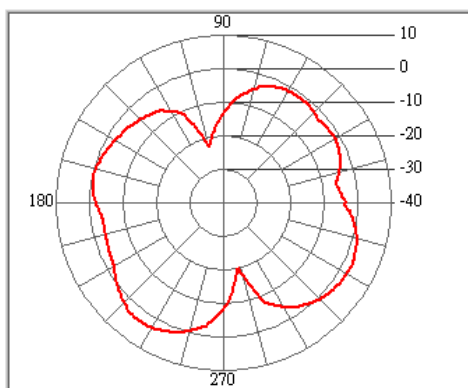
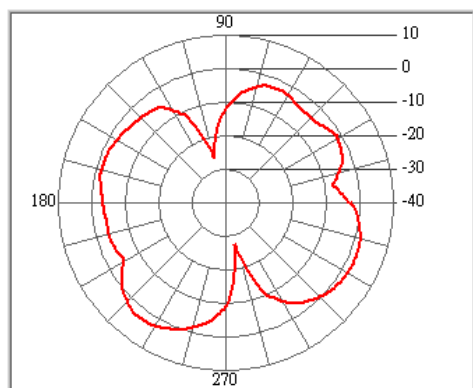
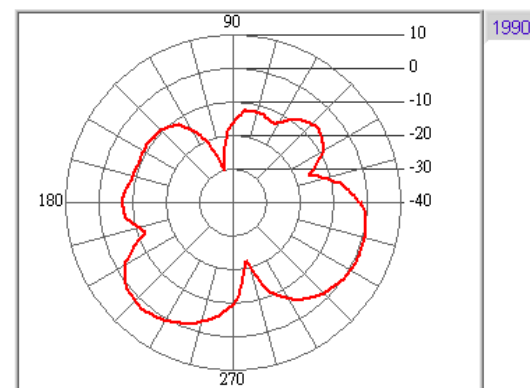
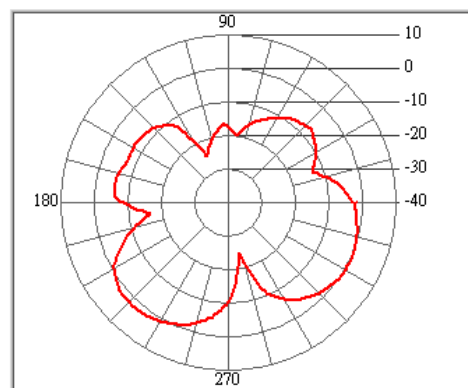
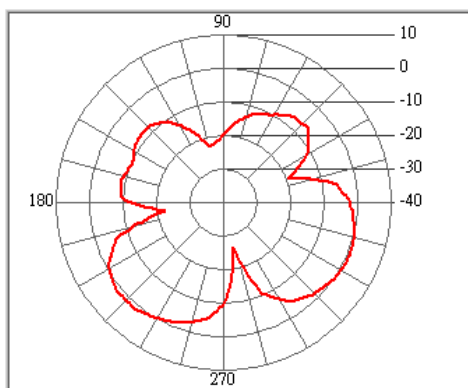
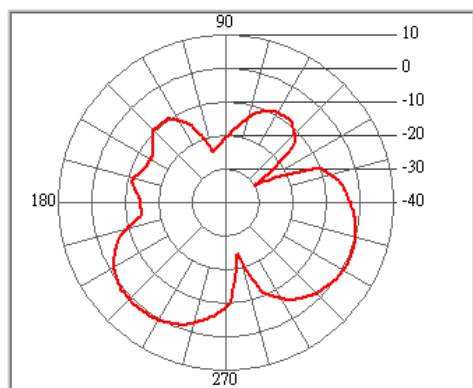
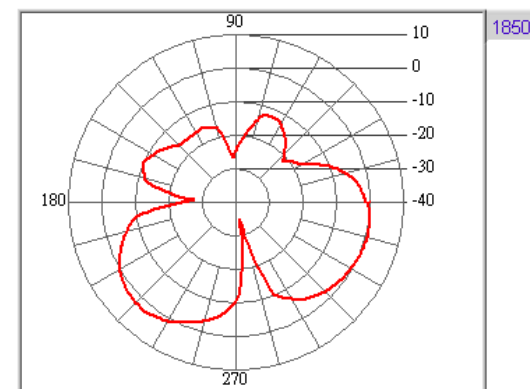
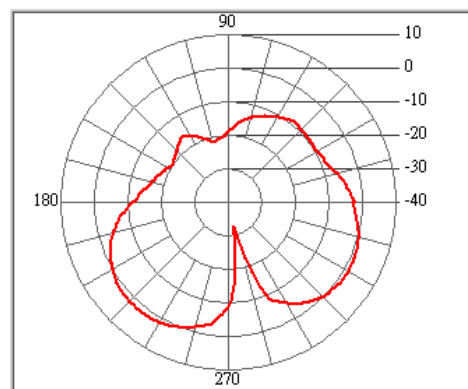
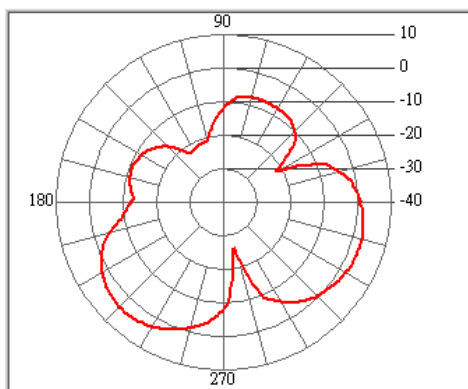
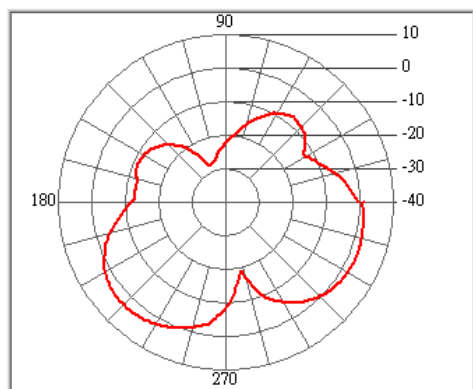
Antenna 3GHz Antenna  
Remark E-Plane/H-Pol  
Tested by : Antenna 3D Lab

Location: **Chamber**  
Temperatuer (°C): **25.00**

Date: **2012/7/2**  
Humidity (%): **65.00**

Time: **下午 08:16:24**  
Approved by:

Freq. (MHz)	1710	1756	1802	1850	1880	1920	1950	1990	2110	2150	2170	2170
Peak Gain (dBi)	3.13	4.11	1.79	2.47	0.95	1.25	2.03	1.77	2.85	3.17	2.46	2.46
Peak Degree	230	230	230	230	230	230	230	230	230	230	240	240
AV Gain (dBi)	-2.82	-2.26	-3.8	-4.27	-4.75	-4.48	-4.27	-4.46	-2.32	-1.76	-2.42	-2.42







Cortec Technology Inc.

广东省东莞市长安镇振安路沙头段咸西工业区

Antenna 3GHz Antenna  
Remark H-Plane/V-Pol  
Tested by : Antenna 3D Lab

Location: Chamber

Date: 2012/7/2

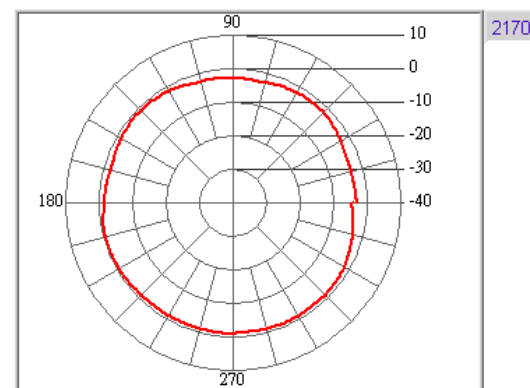
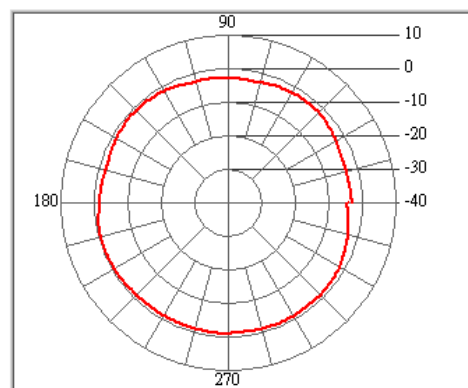
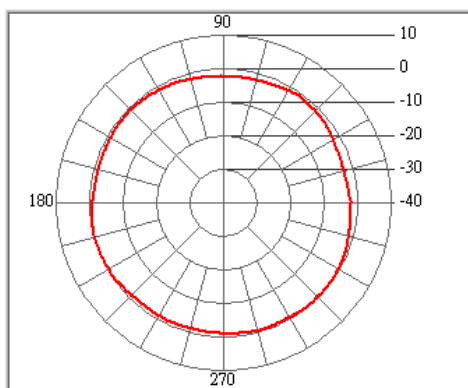
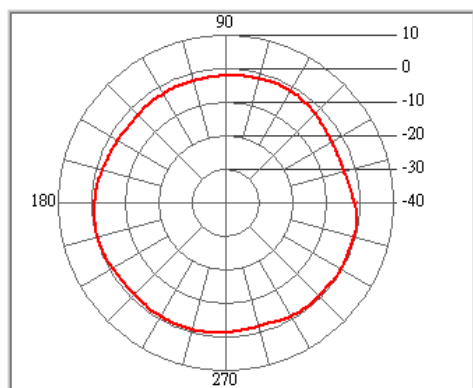
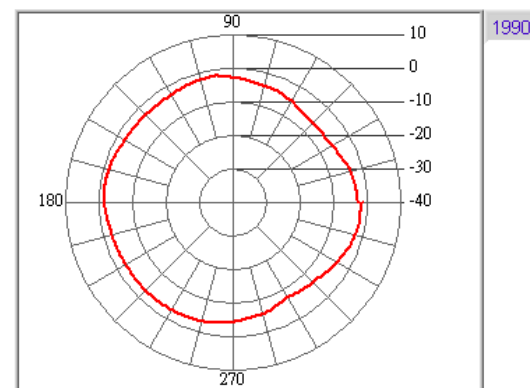
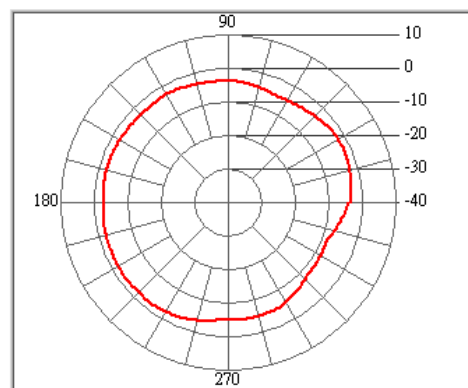
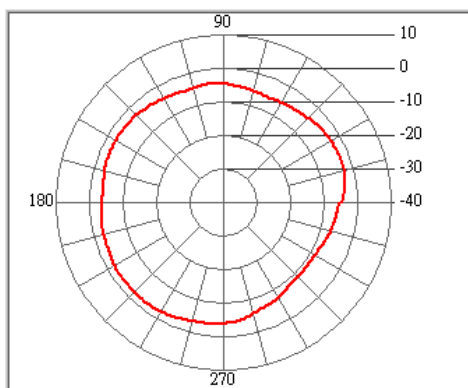
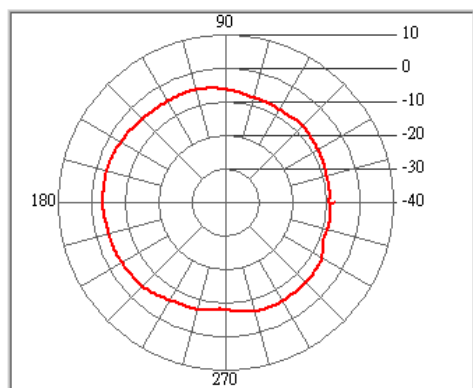
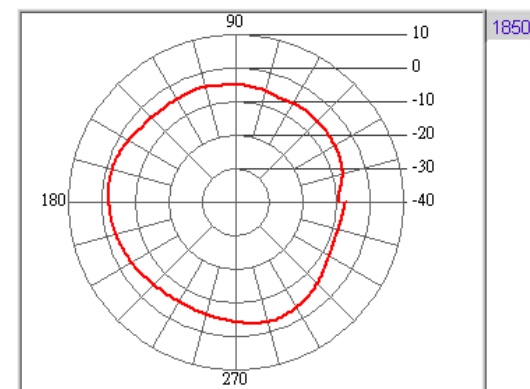
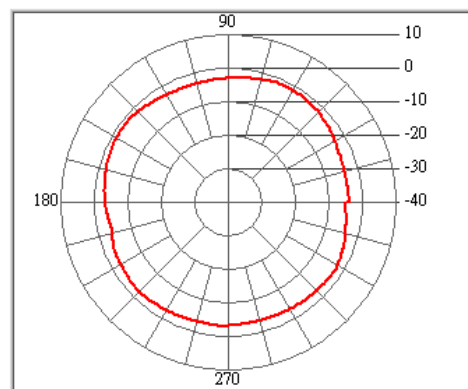
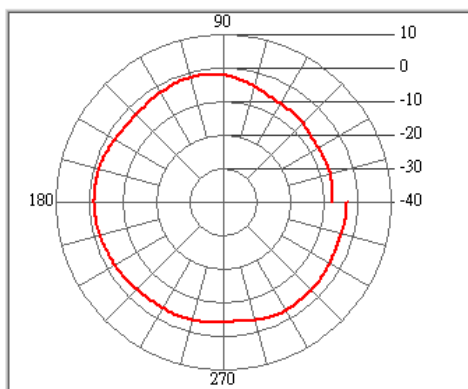
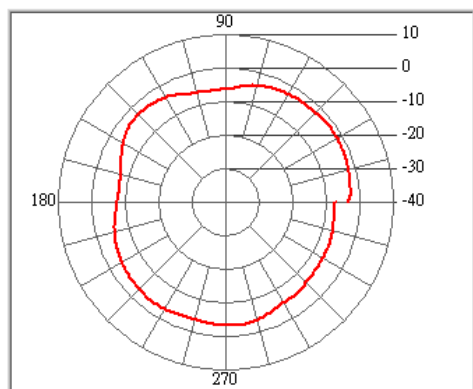
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Temperature (°C): 25.00

Humidity (%): 65.00

Approved by:

Freq. (MHz)	1710	1756	1802	1850	1880	1920	1950	1990	2110	2150	2170	2170
Peak Gain (dBi)	-1.56	-1.41	-1.35	-1.78	-3.22	-2.17	-1.99	-1.48	-0.27	-0.25	-0.59	-0.59
Peak Degree	35	172	141	172	162	235	214	172	350	193	193	193
AV Gain (dBi)	-4.2	-3.31	-2.84	-4.7	-5.89	-4.14	-3.58	-3.47	-1.55	-1.19	-1.76	-1.76





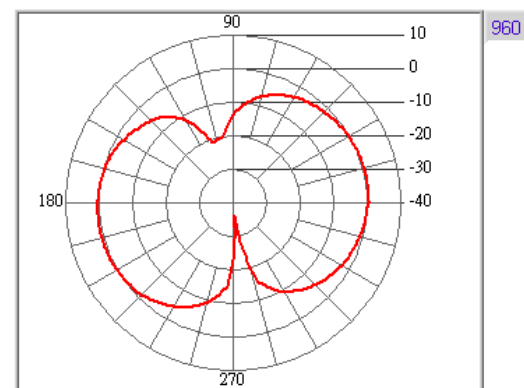
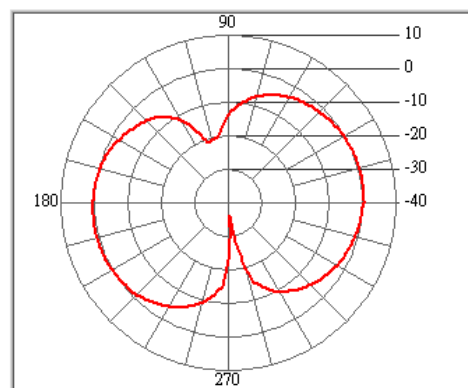
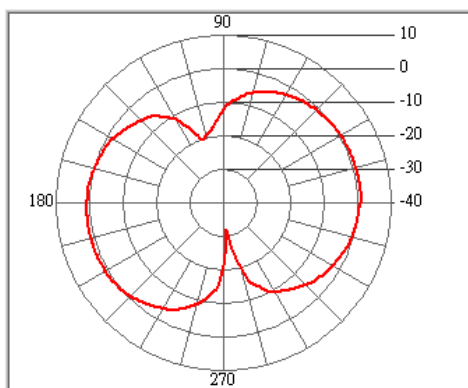
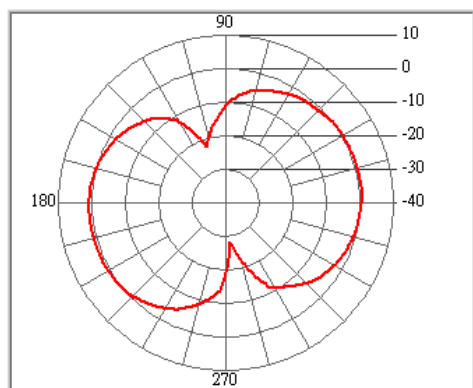
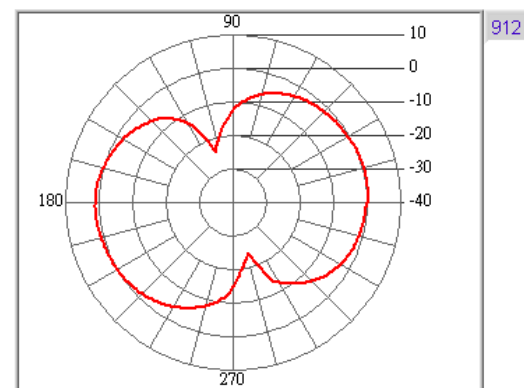
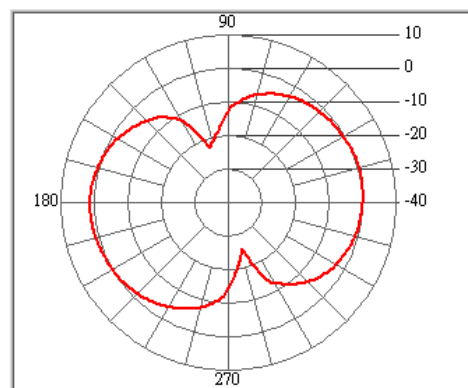
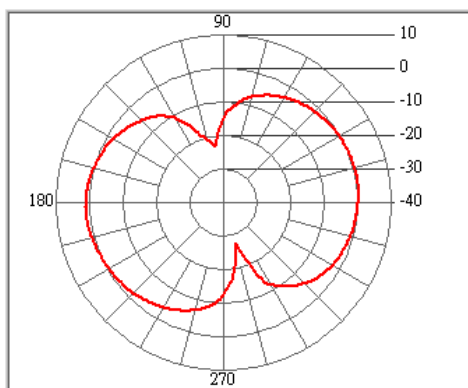
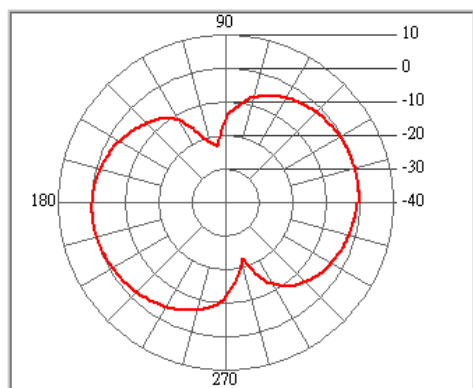
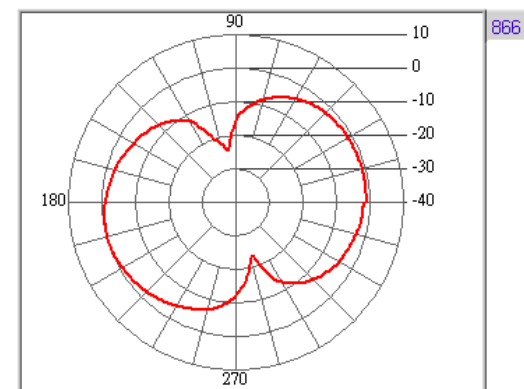
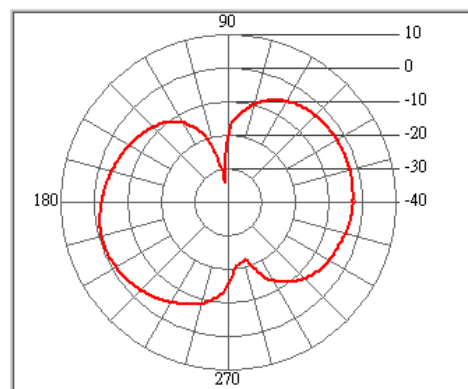
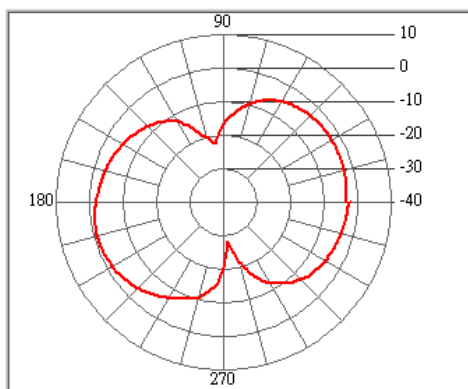
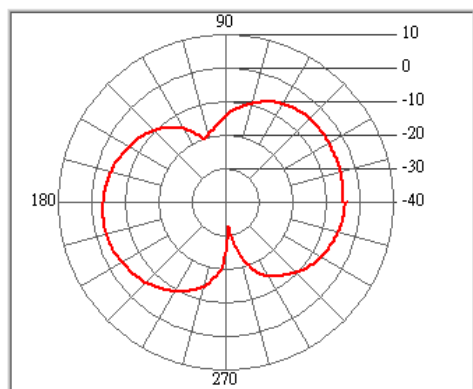
Antenna 3GHz Antenna  
Remark E-Plane/H-Pol  
Tested by : Antenna 3D Lab

Location: **Chamber**  
Temperatuer (°C): **25.00**

Date: **2012/7/2**  
Humidity (%): **65.00**

Time: **下午 08:20:07**  
Approved by:

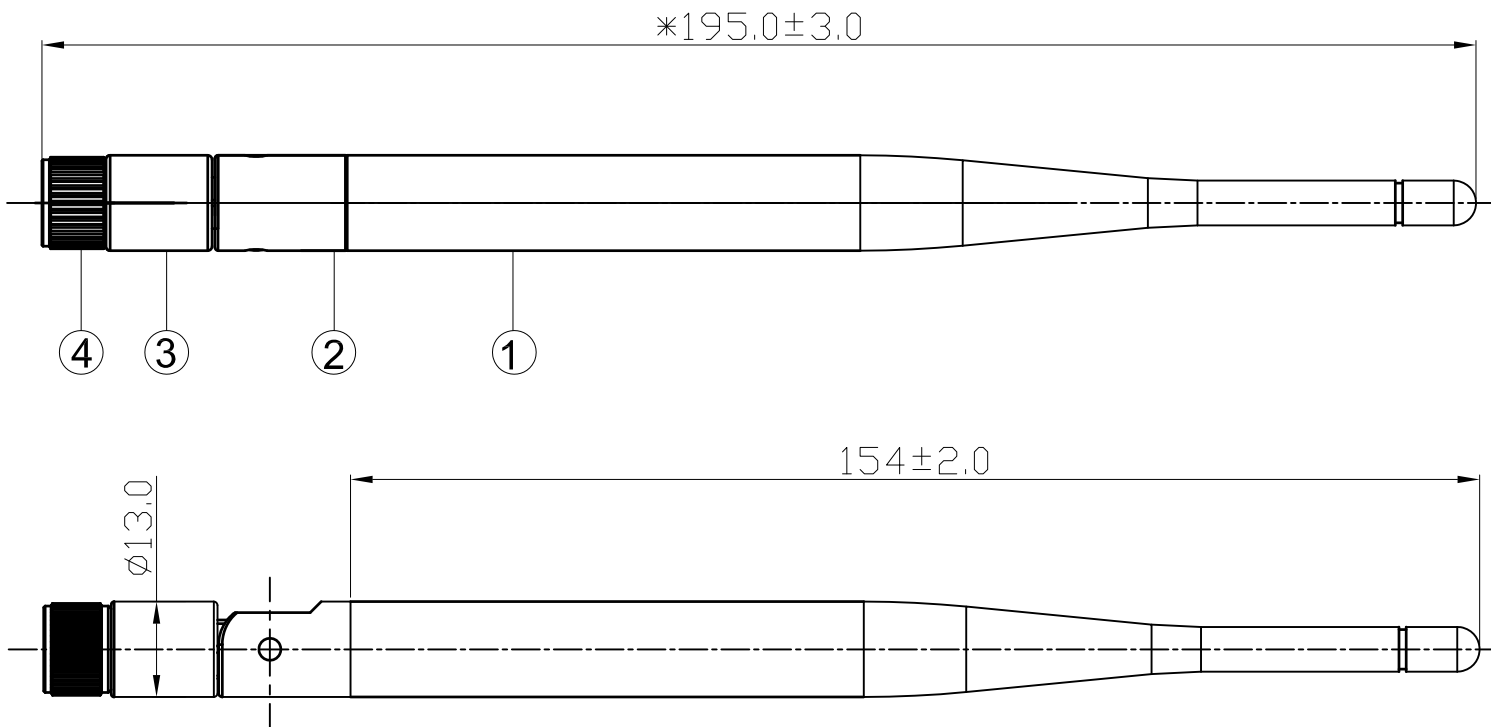
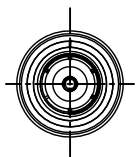
Freq. (MHz)	824	838	852	866	880	894	908	912	936	950	960	960
Peak Gain (dBi)	-3.07	-1.08	-0.94	-0.29	0.05	1.07	1.26	1.09	0.93	1.16	0.64	0.64
Peak Degree	193	193	203	193	0	182	182	182	4	4	0	0
AV Gain (dBi)	-6.94	-5.23	-5.08	-4.07	-3.44	-2.71	-2.66	-2.78	-2.41	-2.27	-2.79	-2.79



# RoHS

## Compatible

SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			



4	SMA194-CCT5AN19	SMA Male Reverse	Cu	Eletrodeposition	1
3	AN03-T07B	Body1	PA+ABS	Black	1
2	AN9201-07B	Body2	PA+ABS	Black	1
1	AN9201-04B	Body	TPE	Black	1
No.	Part Number	Description	Material	Finished	Q'ty

*Invax System Group.*

**Cortec** Cortec Technology Inc.

Http://www.invaxsystem.com Tel:886-2-27885218  
E-mail: info@invax.com.tw Fax:886-2-27831658

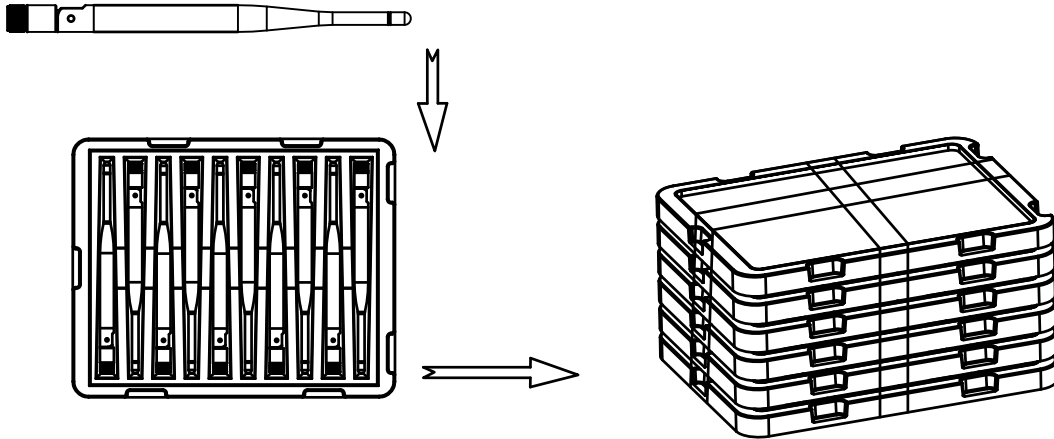
TITLE: 850/900/1800/1900/2100MHz Antenna

PART NO.: AN8921F-9201RS-N DWG NAME: AN8921F-9201RS-N.dwg

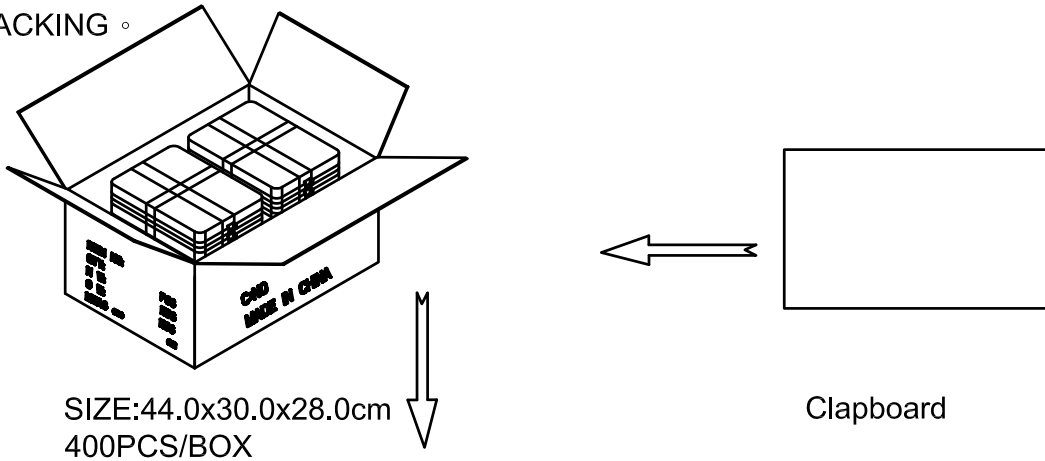
APPROVED BY	CHECKED BY	DESIDNED BY		Tolerance
Grant 2010.09.17	Jack 2010.09.17	Simon 2010.09.17		X.X ±0.3 X.XX ±0.1 X° ±3°
			UNITS: mm	
			SCALE: 1/1	
			REVISION: A	

Part Number : AN8921F-9201RS-N	Revision : A
Name: 2.4GHz Antenna	Customer : ALL

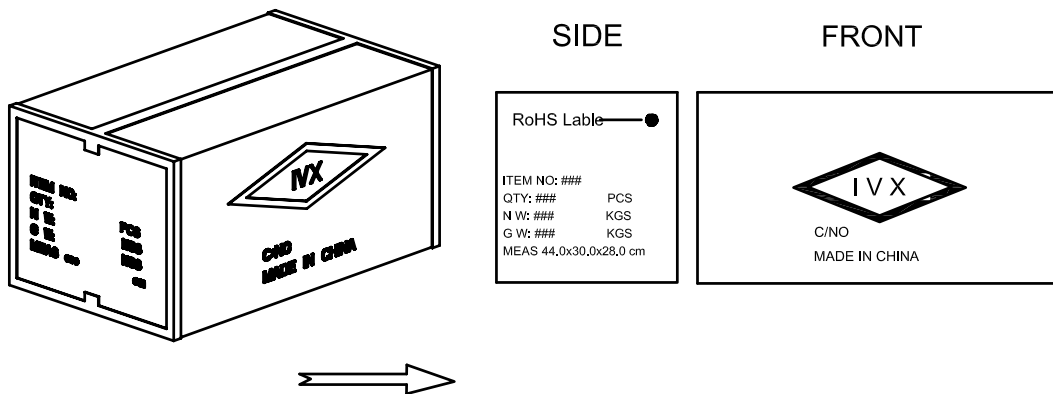
1. Enter the frame ◦



2. PACKING ◦



3. SEALING ◦



SGS 台灣網站 → [http://twap.sgs.com/sgsrsts/chn/cheres\\_tw.asp](http://twap.sgs.com/sgsrsts/chn/cheres_tw.asp)  
 SGS 大陸網站 → [http://rsts.cn.sgs.com/chn/cheres\\_cn.asp](http://rsts.cn.sgs.com/chn/cheres_cn.asp)  
 SGS 韓國網站 → [http://rohs.kr.sgs.com/sgsrsts/en/cheres\\_en.asp](http://rohs.kr.sgs.com/sgsrsts/en/cheres_en.asp)

COR/F-G-47a

請輸入以下報告正確資料及檢查碼以便查核

1. 報告編號
2. 報告日期 (YYYY/MM/DD)
3. 產品名稱 (輸入前 10 個字不含空白)
4. 圖示檢查碼 (依指示畫面)



### 物料中HSF對象物質含量調查表

康捷電子有限公司	
填表：	時麗
部門：	研發部
職務：	文員

物料名稱：AN8921F-9201RS-N

序號	物料型號	物料各構成名稱	各構成物料 的材質	測試報告裡RoHS對應物質測試結果						檢測報告編號	測試日期	測試名稱	測試機構名稱
				Cd	Pb	Hg	Cr(VI)	PBBs	PBDEs				
1	AN9201-04B	Body1	TPEE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	RLSZD001081200002C	2011.11.10	TPEE	CTI
2	AN9201-07B R-AN03-T07	Body2 Body3	PA+ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	RLSZD001042910001C	2011.09.28	膠粒	CTI
3	SMA194-CCT5AN19	SMA Male Reverse	銅	51	28156	N.D.	Negative			CANEC1112556702	2012.01.04	BRASS(IN CHINESE AS	SGS
4	R-AN44340 R-AN6063555	Tube	銅	51	28156	N.D.	Negative			CANEC1112556702	2012.01.04	BRASS(IN CHINESE AS	SGS
5	R-GS-SP2001001	EVA	EVA	N.D.	62	N.D.	N.D.	N.D.	N.D.	CANEC1202131405	2012.03.09	EVA+Adhesive.	SGS
6	R-RG-178U	Cable RG178	鍍銀銅	N.D.	N.D.	N.D.	Negative	N.D.	N.D.	SHAEC1112913601	2011.08.16	氟塑料电线电缆	SGS
7			FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAEC1112913602	2011.08.16	氟塑料电线电缆	SGS
8			鍍銀銅	N.D.	N.D.	N.D.	Negative	N.D.	N.D.	SHAEC1112913601	2011.08.16	氟塑料电线电缆	SGS
9			PTFE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAEC1112913604	2011.08.16	氟塑料电线电缆	SGS

根據測試報告如實填寫鉛、鎘、汞、六價鉻、PBBs和PBDEs六項禁用物質的含量

包裝材料中鉛、鎘、汞、六價鉻總含量不超過100ppm，鎘的允許濃度為5ppm

歐盟ROHS指令豁免條款2009/95/BC、鋼中合金元素中的鉛含量達0.35%、鉛含量達0.4%、銅合金中的鉛含量達4%