

**Product Number: AN2400-6001RS**  
**Product Name: Antenna**

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## 1. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz
S.W.R.	$\leq 2.0$
Antenna Gain	7 dBi $\pm$ 0.7dBi
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Material of Plastic	Body: TPE Hinge: PA+ABS
Cable Type	RG-178
Connector Type	SMA Male Reverse
Connector Pull Test	$\geq 3$ Kg
Connector Torque Test	520~1400 g.cm
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C

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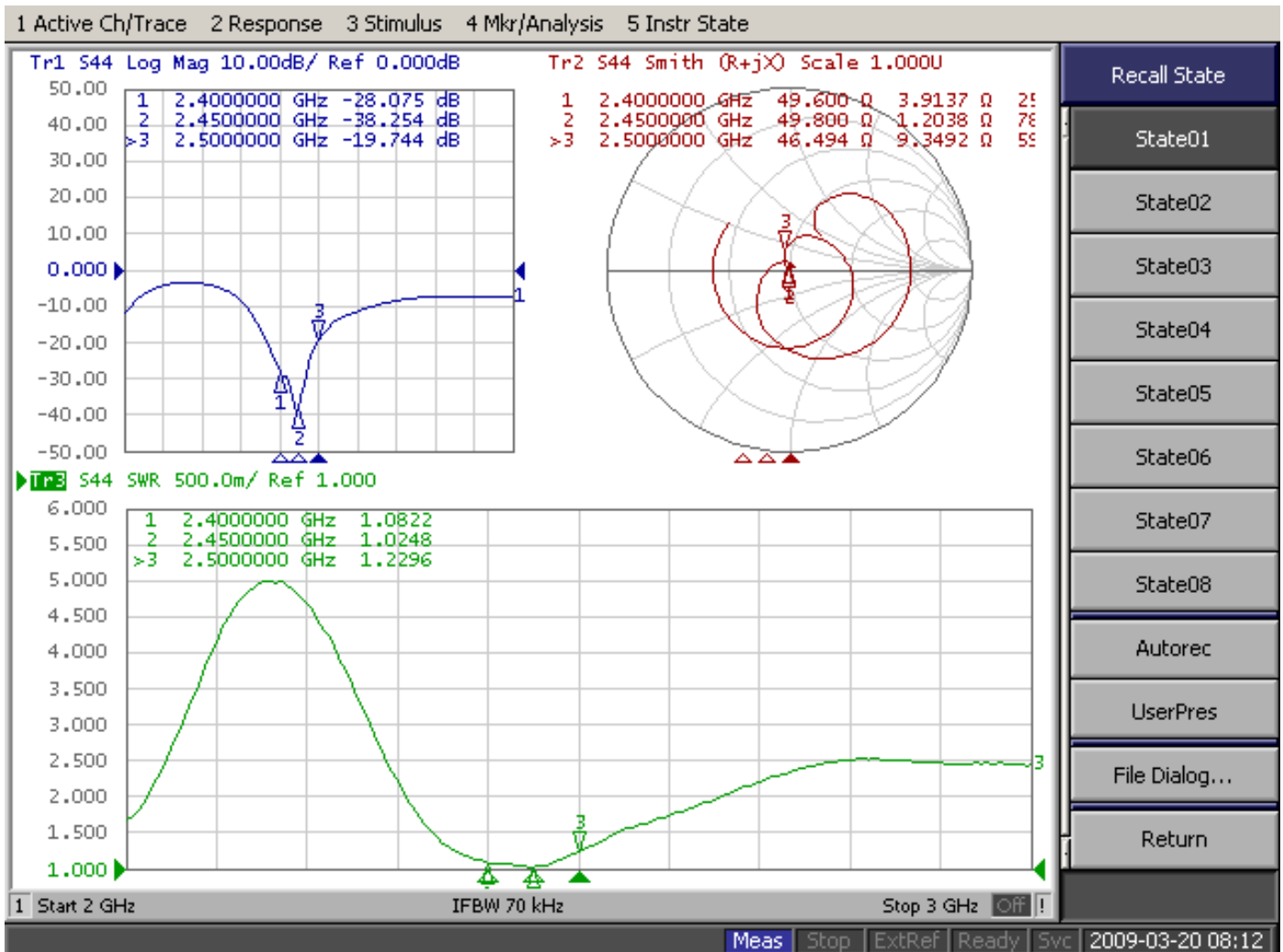
## 2. Characteristics and Reliability Test

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

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### 3. Antenna - S Parameter Test Data



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

**Testing Equipment Specification:**

**Antenna Anechoic Chamber Dimension: 8 x 4 x 4 m**

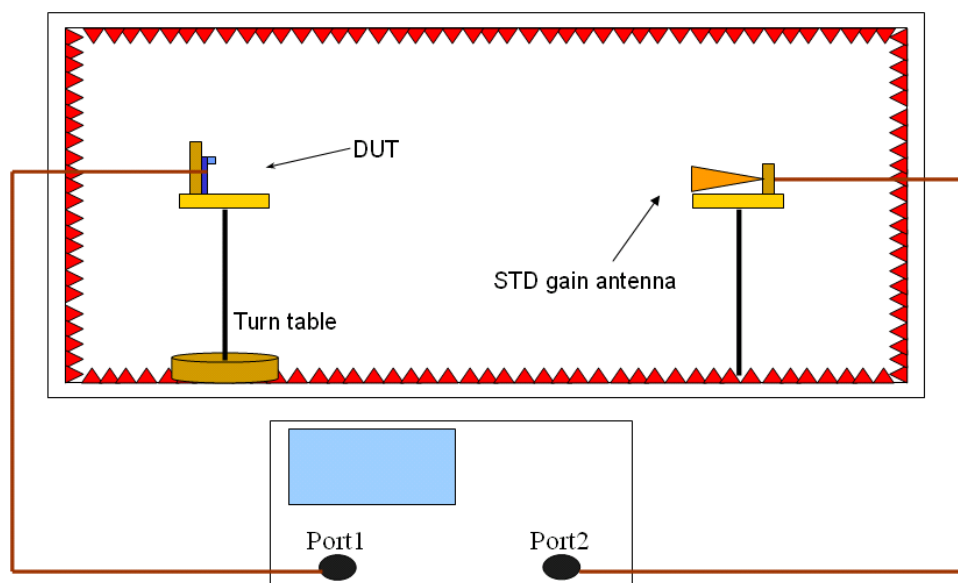
**Quiet Zone: 600mm @1 GHz**

**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**

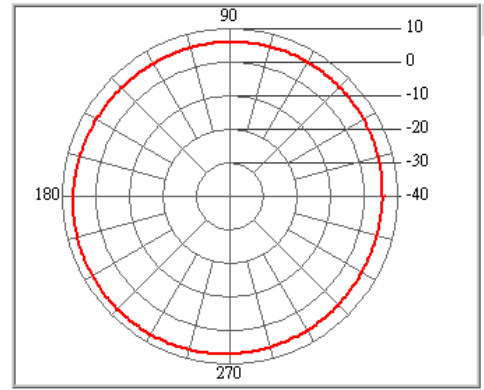
#### **6. Material Description and RoHS Test Report**

**See attached files**

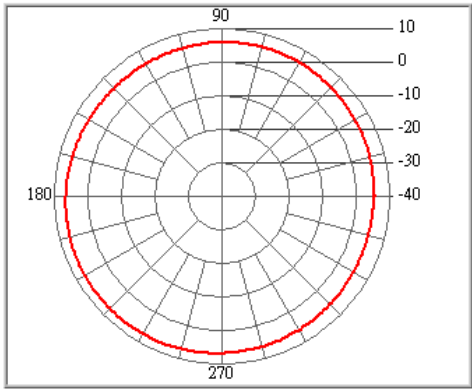
Model : 2.4GHz Antenna  
 Remark :H-Plane // Vertical Polarization  
 Tested by : CORTEC Antenna 3D Lab // Zhang Bing Xiang

Location: **Chamber**      Date: **2008/9/22**      Time: **上午 08:41:10**  
 Temperatur (°C): **22.00**      Humidity (%): **55.00**      Approved by:

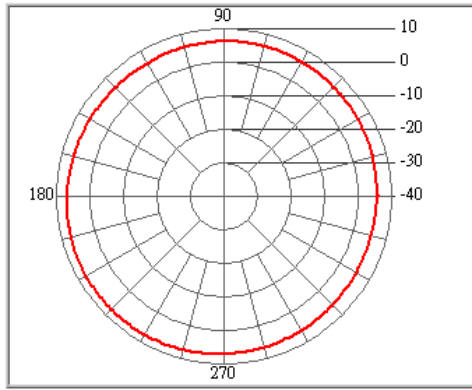
Freq. (MHz)	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	7.56	7.37	7.65	7.65	7.58	7.35	7.23	7.11	7.07	6.46	6.12	6.07
Peak Degree	234	234	228	234	234	240	234	234	240	240	234	240
AV Gain (dBi)	6.36	6.19	6.45	6.47	6.39	6.17	6.02	5.85	5.8	5.19	4.87	4.83



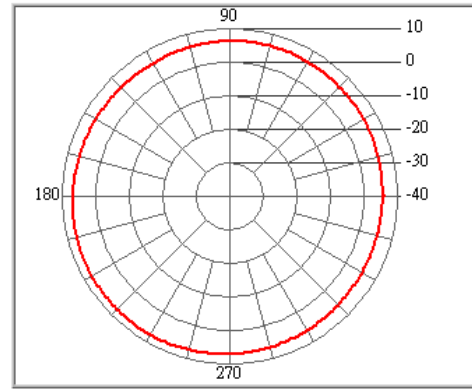
2390



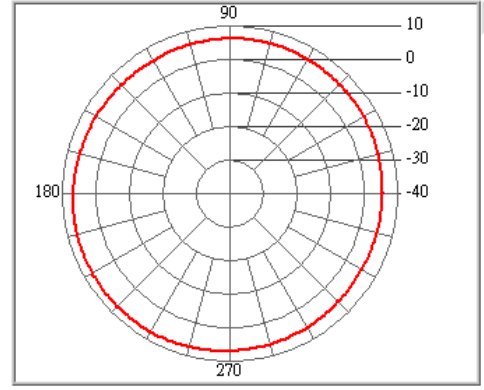
2400



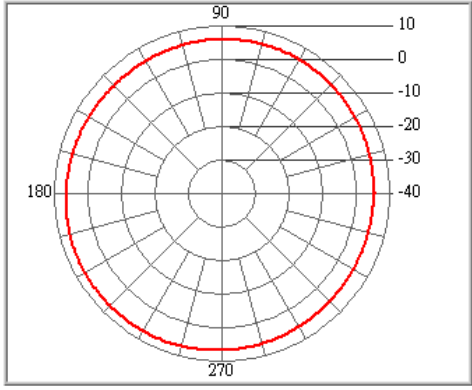
2410



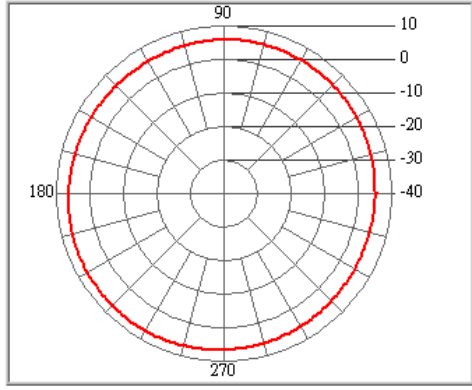
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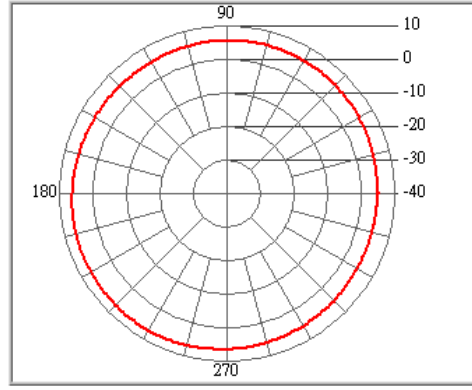
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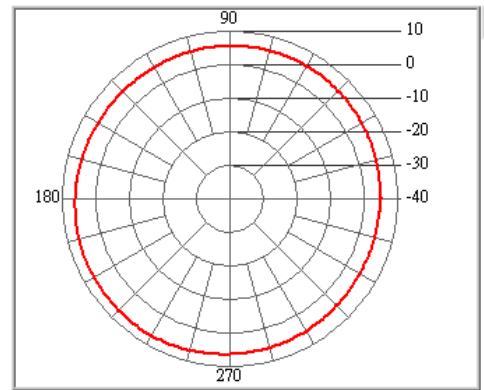
2440



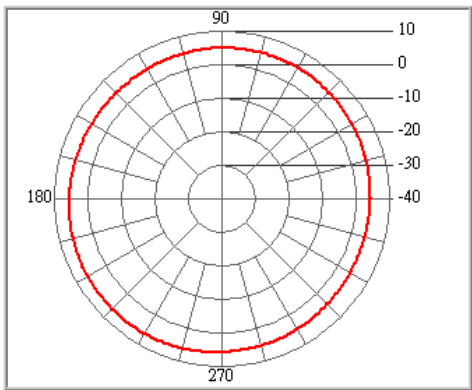
2450



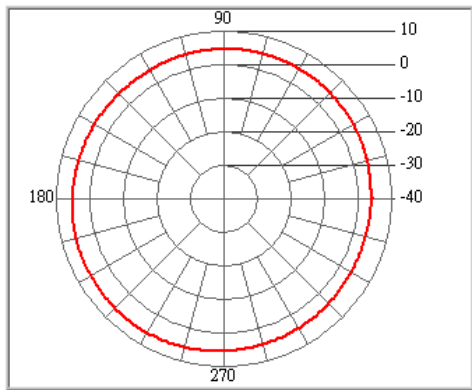
2460



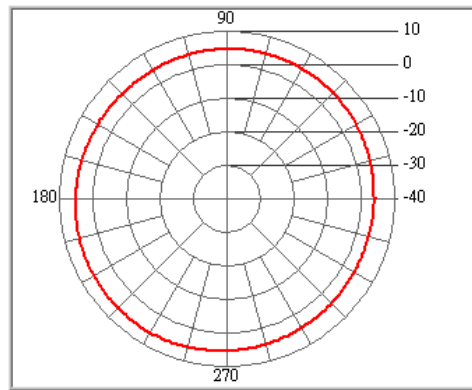
2470



2480



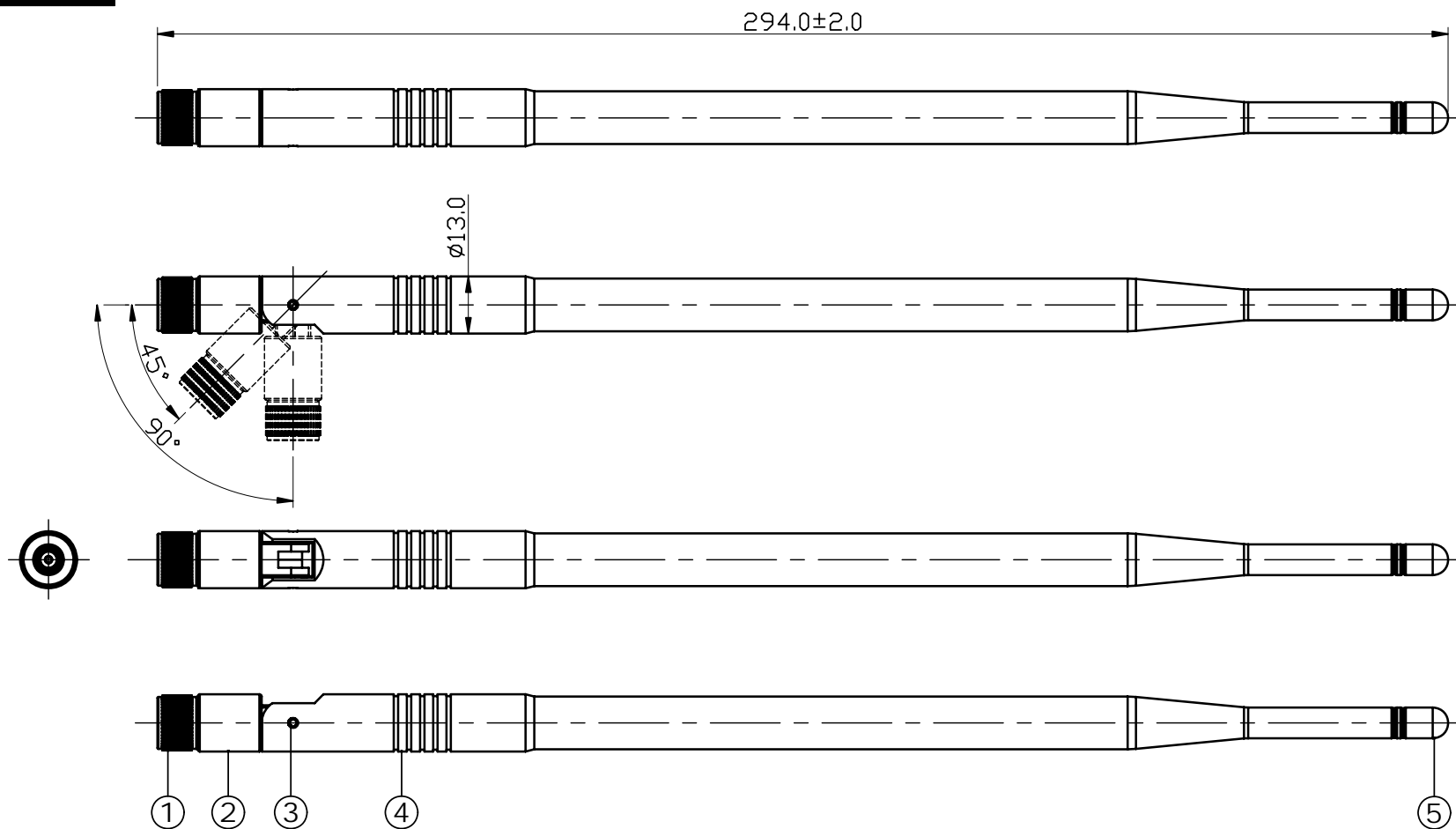
2490



2500

**RoHS**  
Compatible

SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			



5	R-AN60-01B	Aerial cap	PVC	Black	1
4	R-AN60-01	Body-1	ABS	Black	1
3	R-AN03-514CZ	Pin	Cu	Black Zn Plated	2
2	R-AN03-T01	Body-2	PA+ABS	Black	1
1	SMA336-CC8MRANT	SMA Male Reverse	Cu	Eletrodeposition	1
No.	Part Number	Description	Material	Finish	Q'ty

*Invax System Group.*  
**Cortec**

**Cortec Technology Inc.**  
[Http://www.invaxsystem.com](http://www.invaxsystem.com)  
 E-mail: info@invax.com.tw

Tel: 886-2-27885218  
Fax: 886-2-27831658

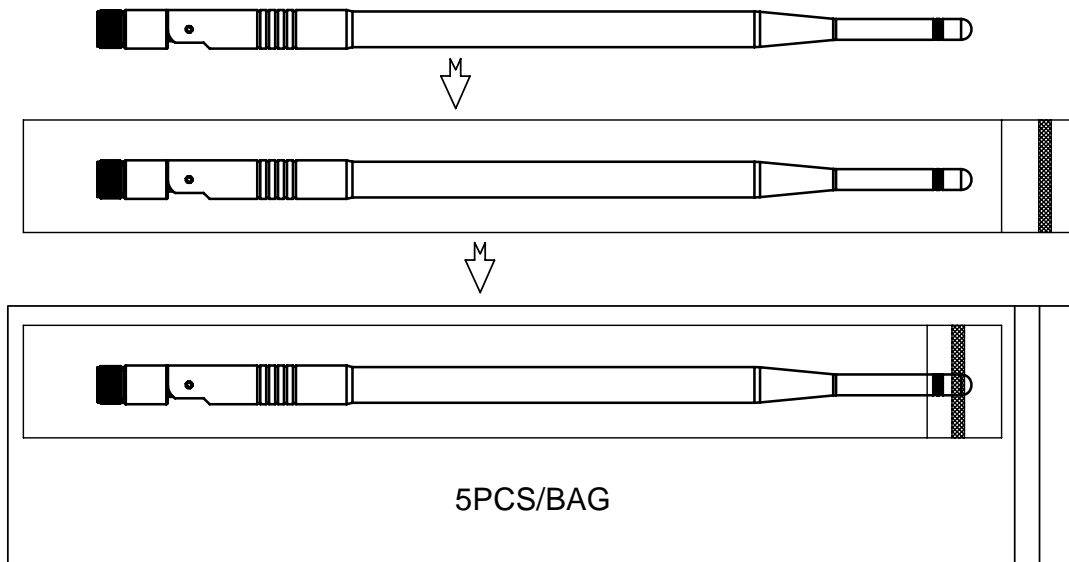
TITLE: 2.4 GHz 7dBi Antenna

PART NO.: R-AN2400-6001RS      DWG NAME: R-AN2400-6001RS.dwg

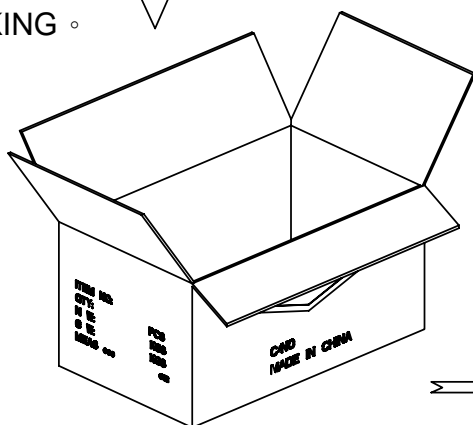
APPROVED BY	CHECKED BY	DESIGNED BY		Tolerance	
Grant	Liu Kui	Zhang yue xin		UNITS: mm	X.X ±0.3
2009.03.30	2009.03.30	2009.03.30		SCALE: 1/1	X.XX ±0.05
			REVISION: A	X° ±1°	

Part Number : R-AN2400-6001RS	Revision : A
Name: 2.4GHz Antenna	Customer : ALL

1. Enter PE bag.

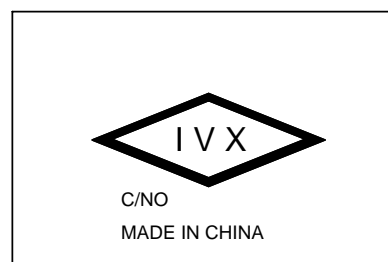
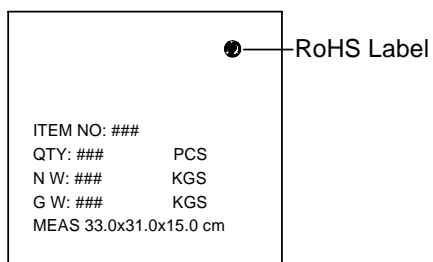
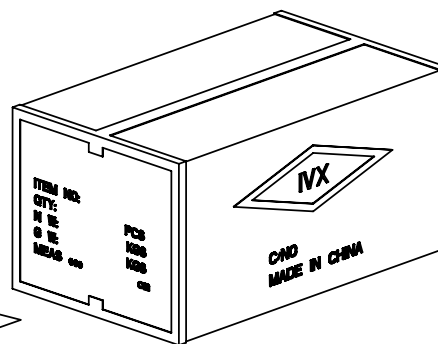


2. PACKING



Size: 33.0x31.0x15.0cm  
 120PCS/BOX

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)

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RoHS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：AN2400-6001RS

序號	物料型號	物料各構成名稱	各構成物料的材质	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	SMA366-CC8MRANT R-AN123009	SMA公頭公針 鉚壓銅管	銅	37	22633	N.D.	Negative			CANEC1100044403	2011.01.11	銅棒	SGS
2	R-AN03-T01 R-AN60-01	連接頭 天線本體	PA+ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC1003336701	2010.08.09	PA/ABS	SGS
3			ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	RLSZC000730820008	2010.11.11	ABS	CTI
4	R-AN03-514CZ	天線轉軸	銅	21	30184	N.D.	Negative			CANEC0904509101	2009.09.05	銅棒	SGS
5	R-RG-178U	Cable (RG178)	外皮 (FEP)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAEC1011131901	2010.08.06	氟塑料电线电缆	SGS
6			PTFE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAEC1011131901	2010.08.06	氟塑料电线电缆	SGS
7			鍍銀銅	N.D.	N.D.	N.D.	Negative	N.D.	N.D.	SHAEC1011131901	2010.08.06	氟塑料电线电缆	SGS
9	R-AN60-01B	天線帽	PVC	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	RLSZC000596620007	2010.06.30	環保型 PVC	CTI
10	R-AN223010P	定位塞	PTFE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	RLSZD000793300001	2011.01.19	铁氟龙	CTI
11	R-AN5225013-Z	鋅合金管	鋅合金	N.D.	49	N.D.	Negative	N.D.	N.D.	A001C110105049001-1	2011.01.08	鋅合金錠	AOV
12	R-AN60-06 R-AN60-08	彈簧	銅	37	22633	N.D.	Negative			CANEC1100044403	2011.01.11	銅棒	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