

Product Number: AN2450-4828RS  
Product Name: Antenna



# Specification For Approval

Date: 2012 / 11 / 28

File No.: 121128003

Version: 1.0

Customer : 奇揚網科股份有限公司

Customer P/N : /

INVAX P/N : AN2450-4828RS

Description : Antenna

Cortec Checked By:



Customer Approved By:



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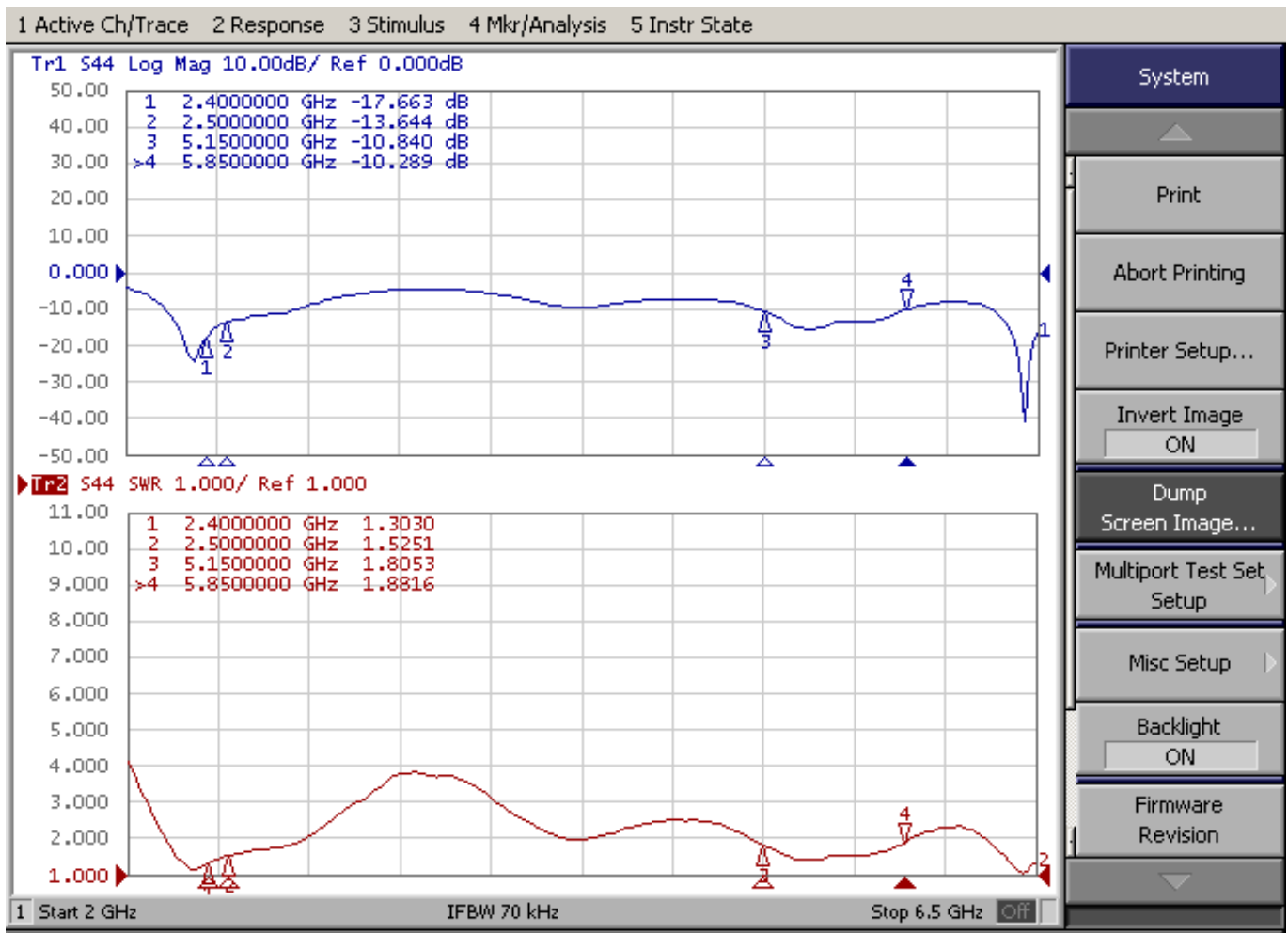
## 1. Specification

<b>Sample Photo</b>	
	
<b>A. Electrical Characteristics</b>	
<b>Frequency</b>	2400 ~ 2500 MHz 5150 ~ 5850 MHz
<b>S.W.R.</b>	<= 2.0 @ 2400 ~ 2500 MHz <= 2.5 @ 5150 ~ 5850 MHz
<b>Antenna Gain</b>	< 0 dBi @ 2400 ~ 2500 MHz 2.0 dBi @ 5150 ~ 5850 MHz
<b>Efficiency(%)</b>	70~80% @ 2400~2500 MHz 60~70% @ 5150~5850 MHz
<b>Radiation Pattern</b>	Omni-Directional
<b>Max Input Power</b>	>= 2 W
<b>Polarization Linear</b>	
<b>Impedance</b>	50 Ohm
<b>B. Material &amp; Mechanical Characteristics</b>	
<b>Material of Radiator</b>	CU
<b>Material of Plastic</b>	Body: TPEE Hinge: ABS Holder: ABS
<b>Cable Type</b>	RG-178U
<b>Connector Type</b>	SMA Male Reverse
<b>Connector Pull Test</b>	>= 3 Kg
<b>C. Environmental</b>	
<b>Operation Temperature</b>	- 40 °C ~ + 65 °C
<b>Storage Temperature</b>	- 40 °C ~ + 80 °C
<b>Antenna Color Storage life</b>	< 2 year

## 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 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

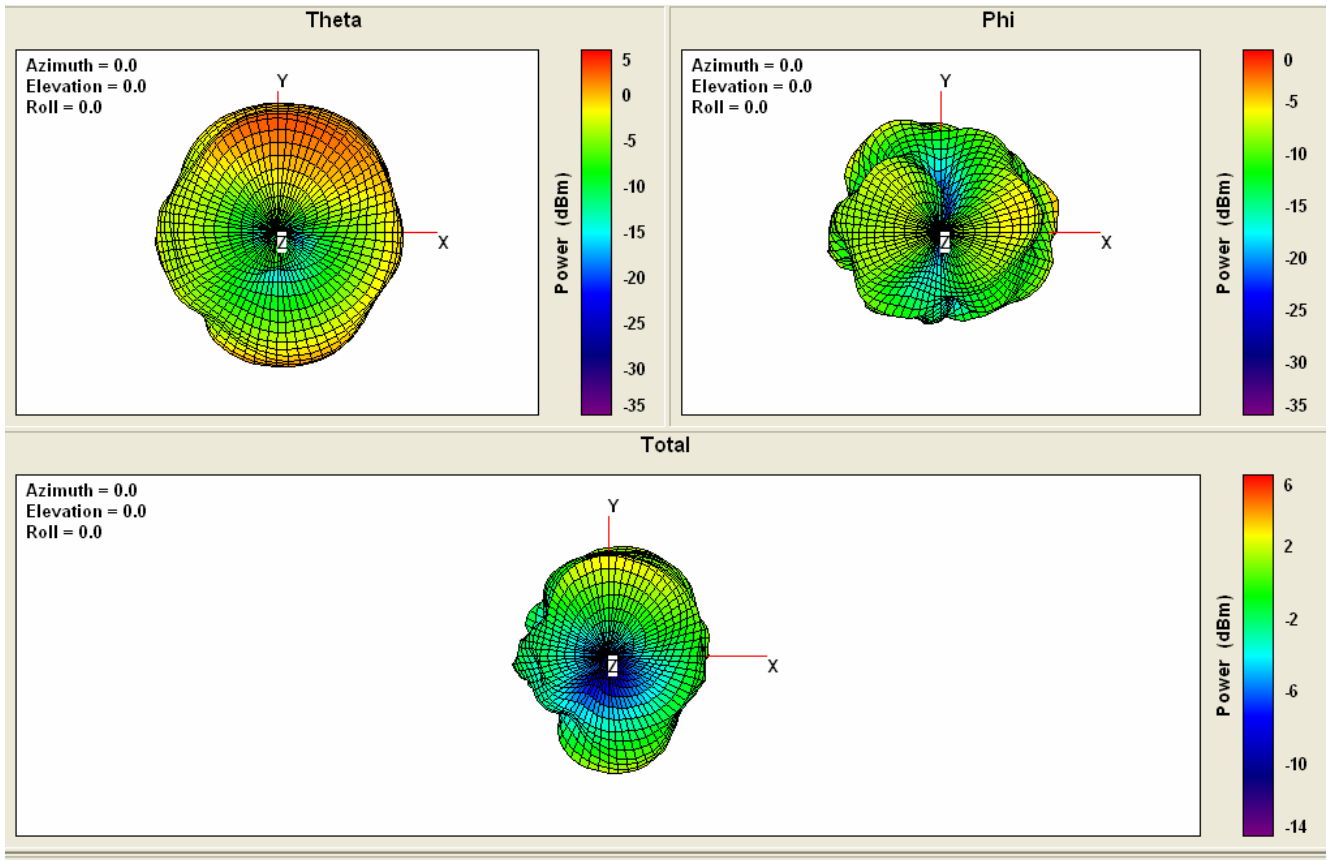


Product Number: AN2450-4828RS

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



#### 5. Mechanical Drawing

See attached files

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

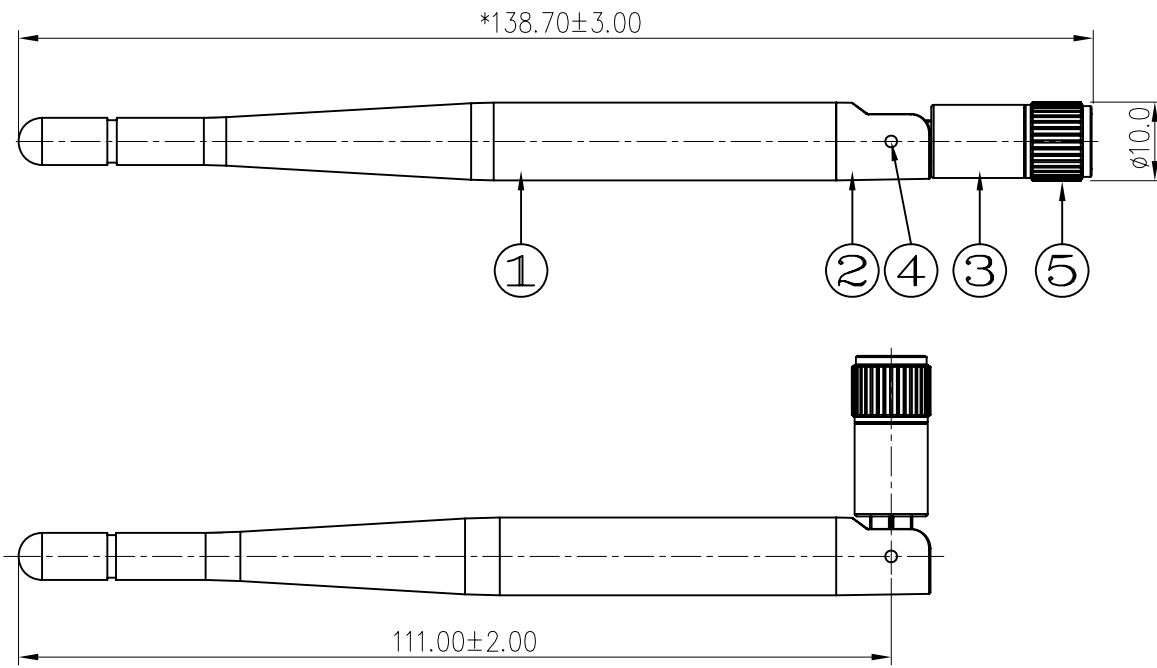
See attached files

# RoHS

## Compatible



SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			



**Note:**  
 1. Dimension: Take \* is the important dimension  
 2. Tolerance: Unmarked tolerance refer to the standard tolerance please

5	SMA804-CBR5A56	SMA Male Reverse	Cu	Eletrodeposition	1
4	AN01-1215-P-1	Hinge Pin	POM	Black	2
3	AN57-12B-1	Body3	POM	Black	1
2	AN4803-02B-1	Body2	ABS	Black	1
1	AN48A-01B	Body1	TPEE	Black	1
No.	Part Number	Description	Material	Finish	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

PART NAME: ANTENNA-2.4/5.8GHz

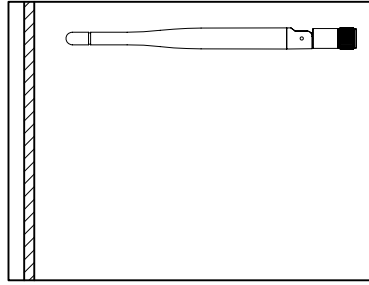
PART NO.: AN2450-4828RS DWG NAME: AN2450-4828RS.dwg

APP BY	CHK BY	RF BY	DES BY	Tolerance
Grant	Jack		HXT	X.X ±0.30
2012.08.28	2012.08.28		2012.08.28	X.XX ±0.15
				X° ±3°

UNITS: mm  
 SCALE:  
 REVISION: A

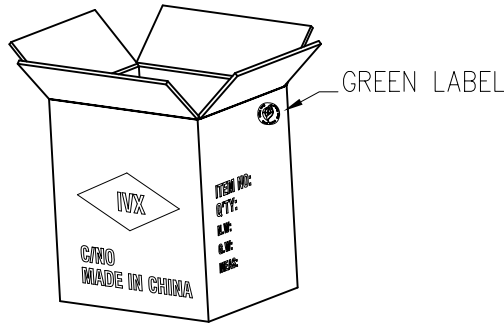
Part Number : AN2450-4828RS	Revision : A
Name: AP ANTENNA	Customer : ALL

一. WITH THE ANT INTO THE BAG



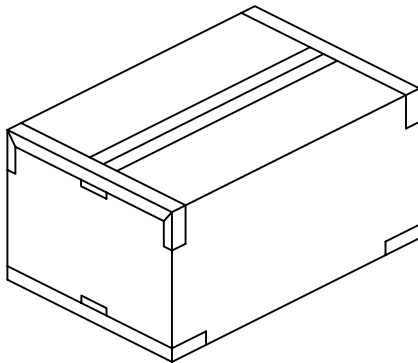
20 PCS/ BAG

二. PACKING

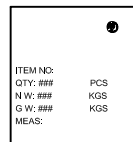


1000PCS / CARTON

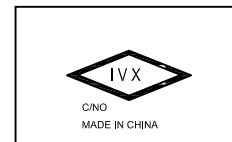
三. SEALING



SIDE



FRONT



UNITS: mm



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：AN2400-4828RS

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	AN48A-01B	Body1	TPEE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	RLSZD001081200002C	2011.11.10	TPEE	CTI
2	AN4803-02B-1 AN57-12B-1	Body2 Body3	ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	KA/2011/C1889	2012.01.02	ACRYLONITRILE	SGS
3	AN01-1215-P-1	Hinge Pin	POM	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	RLSZE001229340002	2012.04.05	POM	CTI
4	R-RG-178U	Cable (RG178)	FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	RLSHE001125120002C	2012.08.21	电线电缆料	CTI
			PTFE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	RLSHE001125120001C	2012.08.21	电线电缆料	CTI
			鍍銀銅	N.D.	N.D.	N.D.	Negative	N.D.	N.D.	RLSHE001125120003C	2012.08.21	电线电缆料	CTI
5	SMA804-CBR5A56	SMA Male Reverse	銅	51	28156	N.D.	Negative			CANEC1112556702	2012.01.04	BRASS(IN CHINESE AS	SGS
6	TUBE-452215 TUBE-452310	Tube	銅	51	28156	N.D.	Negative			CANEC1112556702	2012.01.04	BRASS(IN CHINESE AS	SGS
7	R-AN225010P	Stopper	PTFE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC1202323001	2012.03.21	PTFE ROD	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%、鋁含量達0.4%、銅合金中的鉛含量達4%