

Specification For Approval

Date: 2022 / 09 / 30

File No.: 220930003

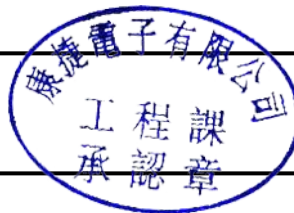
Version: 1.0

Customer : 西柏科技股份有限公司

Customer P/N : /

INVAX P/N : AN2450-4828RS

Description : Antenna



Cortec Checked By:	RD 2022.09.30 SF
Customer Approved By:	



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Index:

- 1. Revision History / Page 3**
- 2. Specification / Page 4**
- 3. Characteristics and Reliability Test / Page 5**
- 4. Antenna - S Parameter Test Data / Page 6**
- 5. Antenna - Radiation Pattern Test Data / Page 7**
- 6. Mechanical and Packing Drawing / Page 8 ~ 9**
- 7. Material Description and RoHS Test Report / Page 10 ~ end**

Product Number: AN2450-4828RS

Product Name: Antenna



1. Revision History

Revision	Date	Change Notification	Description
1.0	2022.09.30	初版	

Product Number: AN2450-4828RS

Product Name: Antenna



2. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz 5150 ~ 5850 MHz
V.S.W.R.	≤ 2.0 @ 2400 ~ 2500 MHz ≤ 2.5 @ 5150 ~ 5850 MHz
Peak Gain	2.46 dBi @ 2400 ~ 2500 MHz 2.31 dBi @ 5150 ~ 5850 MHz
Radiation Pattern	Omni-Directional
Max Input Power	≥ 2 W
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	CU
Material of Plastic	TPEE / ABS / POM
Cable Type	RG-178U
Connector Type	SMA Male Reverse
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C
Antenna Color Storage life	< 2 year

Product Number: AN2450-4828RS

Product Name: Antenna



3. Characteristics and Reliability Test

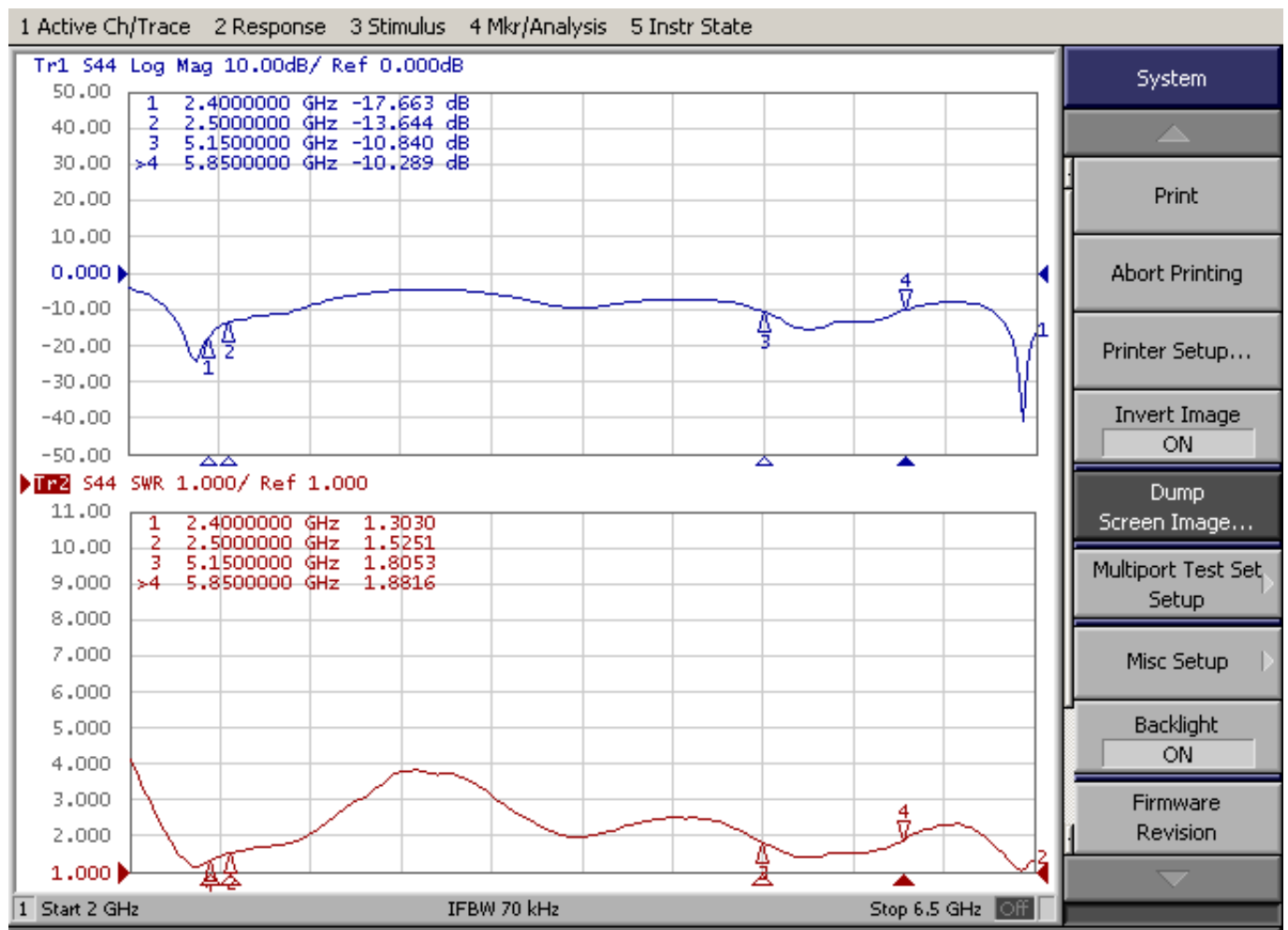
Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	GB / T2423 . 48-1997 Amplitude: 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 2015/863/EU

Product Number: AN2450-4828RS

Product Name: Antenna



4. Antenna - S Parameter Test Data

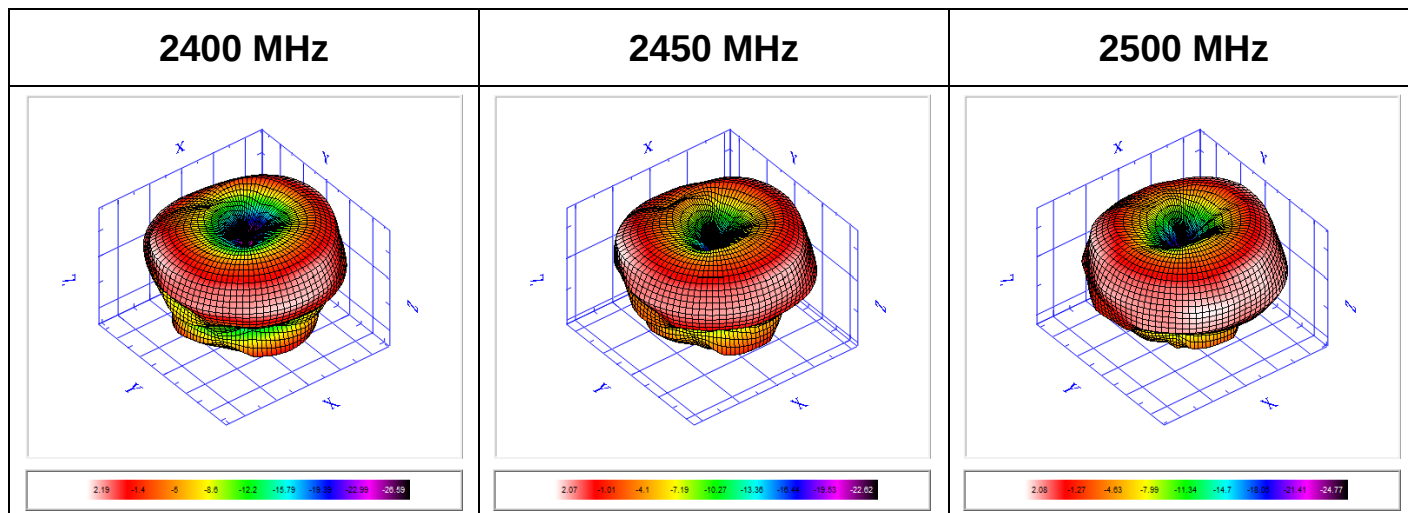


Product Number: AN2450-4828RS

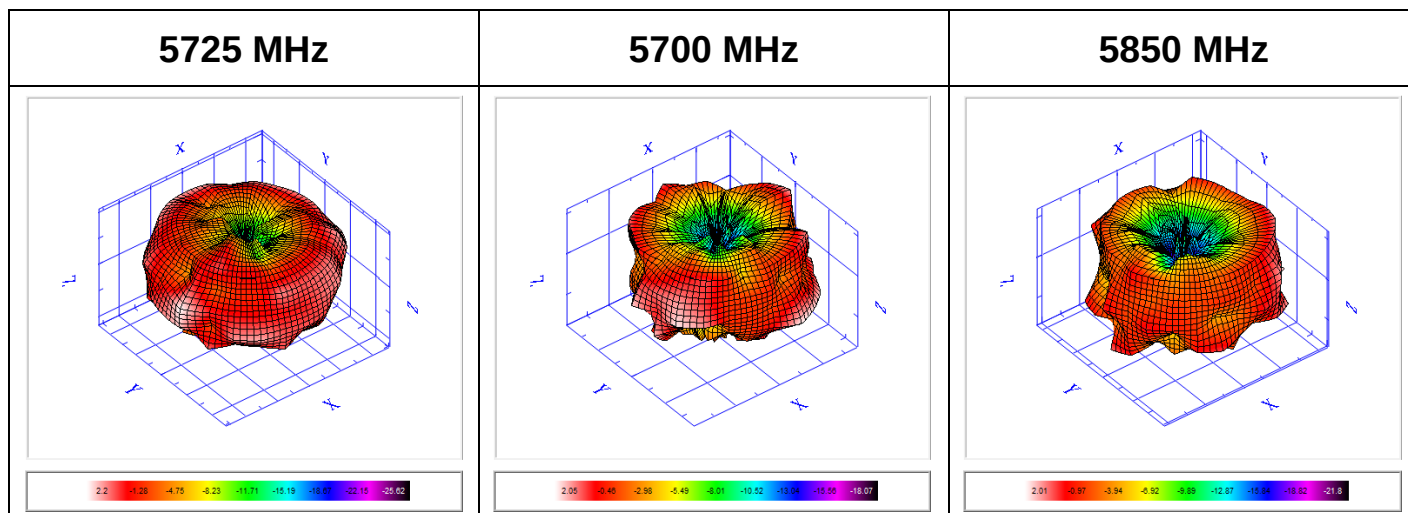
Product Name: Antenna



5. Antenna - Radiation Pattern Test Data



Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
E-Total Peak Gain (dBi)	2.19	2.05	2.34	2.33	2.2	2.07	2.46	2.08	2.21	2.01	2.08
Efficiency (%)	72.6	69.56	74.51	74.41	71.56	70.12	69.42	72.23	74.42	73.45	73.81
Average Gain (dB)	-1.7	-1.79	-1.58	-1.59	-1.77	-2.03	-1.59	-1.73	-1.59	-1.65	-1.62



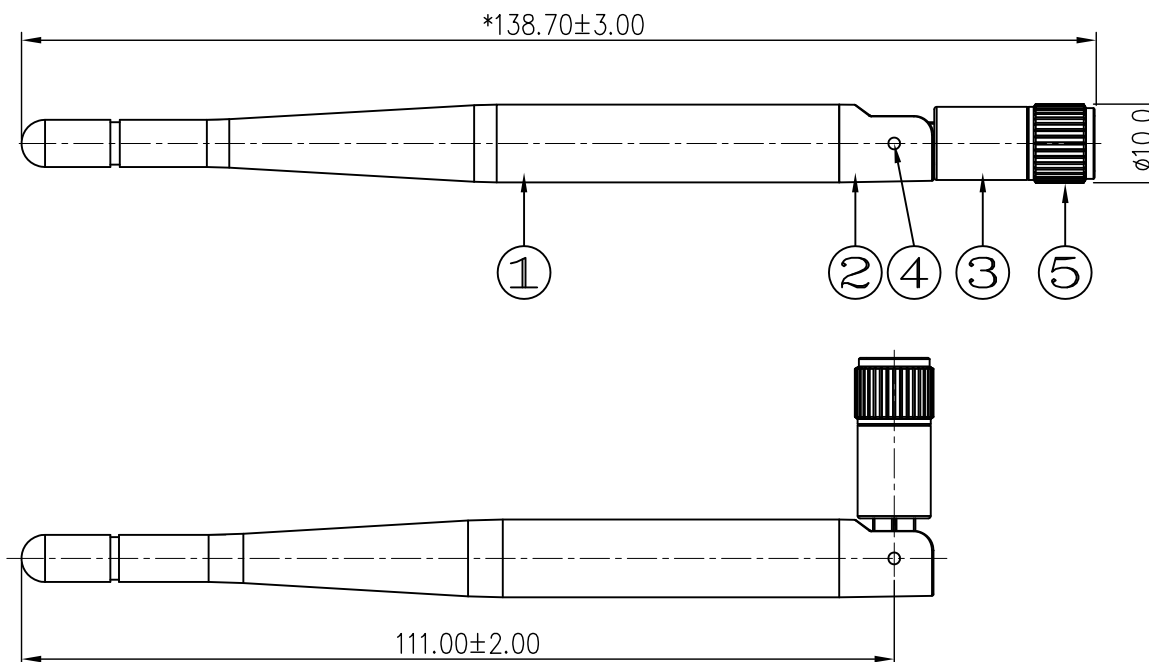
Frequency	5150	5250	5350	5470	5600	5700	5725	5750	5785	5800	5850
E-Total Peak Gain (dBi)	2.2	2.08	2	2.04	2.23	2.05	2.31	2.23	2.03	2.24	2.01
Efficiency (%)	64.38	60.81	58.29	61.34	62.73	63.09	59.74	60.01	60.31	60.12	62.41
Average Gain (dB)	-2.98	-3.3	-3.95	-3.53	-3.03	-2.75	-3.59	-3.22	-3.49	-3.85	-3.51

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	SMA806-CCR5A56	SMA Male Reverse	Cu	Eletrodeposition	1
4	RVT-AN37-01PB	Hinge Pin	POM	Black	2
3	BODY1-AN57-01B	Body3	POM	Black	1
2	HINGE-AN48-02B	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
E-mail:info@invax.com.tw

Tel :886-2-27885218
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 2016.11.16	Kenny 2016.11.16		LJHUA 2016.11.16	UNITS: mm	X.X ±0.30
				SCALE:	X.XX ±0.15
				REVISION: A	X° ±3°

Date: 2016.11.16

Page : 1 of 1

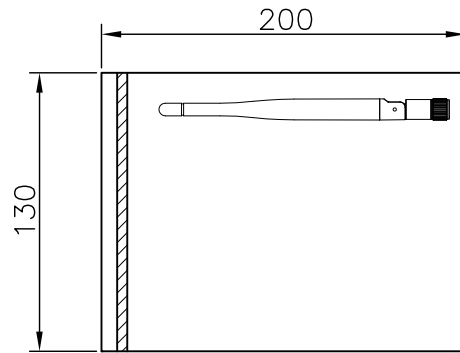
Part Number : AN2450-4828RS

Revision : A

Name: ANTENNA-2.4/5.8GHz

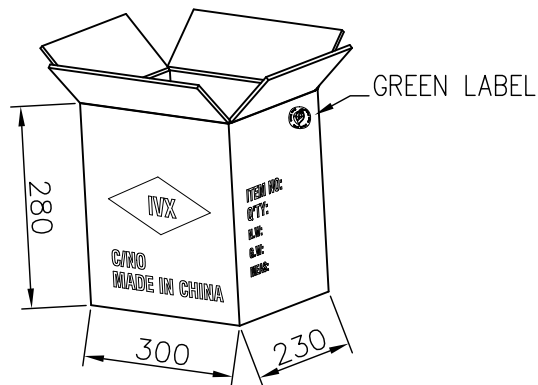
Customer : ALL

一. WITH THE ANT INTO THE BAG



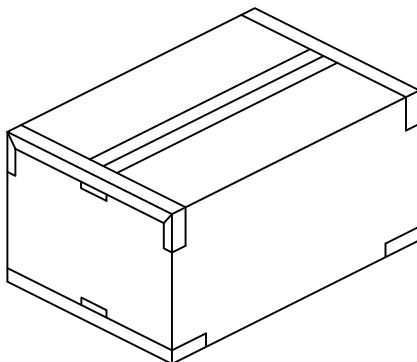
20 PCS/ BAG

二. PACKING

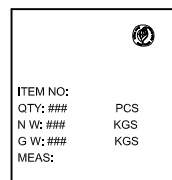


1000PCS / CARTON

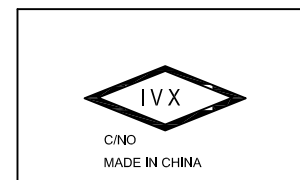
三. SEALING



SIDE



FRONT



UNITS: mm

APPROVED BY : GrantCHECKED BY : KennyDESIGNED BY : LJHUA

SGS 台灣網站 → http://twap.sgs.com/sgsrsts/chn/cheres_tw.asp
SGS 大陸網站 → http://rsts.cn.sgs.com/chn/cheres_cn.asp
SGS 韓國網站 → 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： AN2450-4828RS

序號	物料型號	物料各構成名稱	各構成物料的材料	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	DBP	BBP	DIBP	DEHP				
1	AN48A-01B	Body1	TPEE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2216302802	2022.08.03	TPEE	SGS
2	HINGE-AN48-02B BODY1-AN57-01B	Body2 Body3	ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANML2204785512	2022.03.30	HP171 NP.	SGS
3	RVT-AN37-01PB	Hinge Pin	POM	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	EKR21C00461M01	2021.12.13	台塑鋼	SGS
4	R-RG-178U	Cable (RG178)	FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	NGBML2200124301	2022.01.27	FLUORINATED ETHYLENE	SGS
			PTFE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	NGBML2200121507	2022.01.28	PTFE DISPERSIO	SGS
			鍍銀銅	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2202119401	2022.02.23	Silver plated copper wire	SGS
5	SMA806-CCR5A56	SMA Male Reverse	銅	22	28719	N.D.	N.D.							CANML2210125003	2022.05.30	黃銅棒C3604	SGS
			PTFE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2210419237101001C	2021.10.16	PTFE	CTI
6	TUBE-452215 TUBE-452310	Tube	銅	N.D.	16	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2118648001	2021.10.14	H65	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%