

Specification For Approval

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Version: 1.1

Customer : HICOM

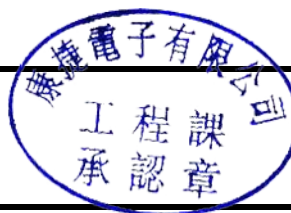
Customer P/N : /

INVAX P/N : AN2400-06C01BBF

Description : Antenna

Cortec Checked By:

R@D Dept
2014.05.20
Jack



Customer Approved By:



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Province, China
TEL:86-769-85388261 FAX:86-769-85317869
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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: AN2400-06C01BBF

Product Name: Antenna



1. Revision History

Revision	Date	Change Notification	Description
1.0	2014.05.15		
1.1	2014.05.20	ECR	变更图纸和包装

Product Number: AN2400-06C01BBF

Product Name: Antenna



2. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz
S.W.R.	≤ 2.0
Antenna Gain	$2.0 \pm 0.5\text{dBi}$
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Material of Plastic	Body 1: PC
Cable Type	OD1.13mm(Black)
Connector Type	Mini Connector
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C
Antenna Color Storage life	< 2 year

Product Number: AN2400-06C01BBF

Product Name: Antenna



3. Characteristics and Reliability Test

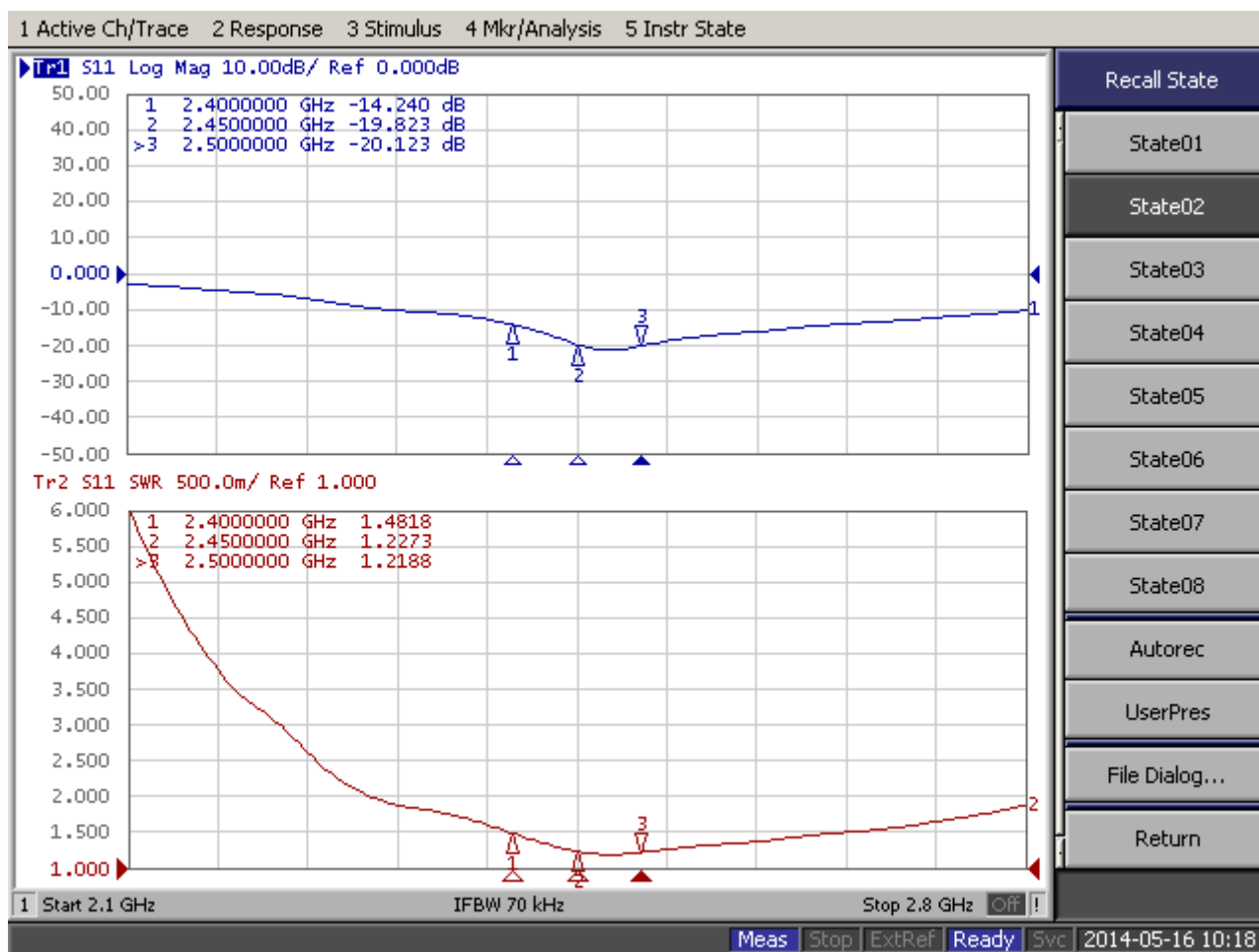
Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	GB / T2423 . 48-1997 Amplitude: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

Product Number: AN2400-06C01BBF

Product Name: Antenna



4. Antenna - S Parameter Test Data

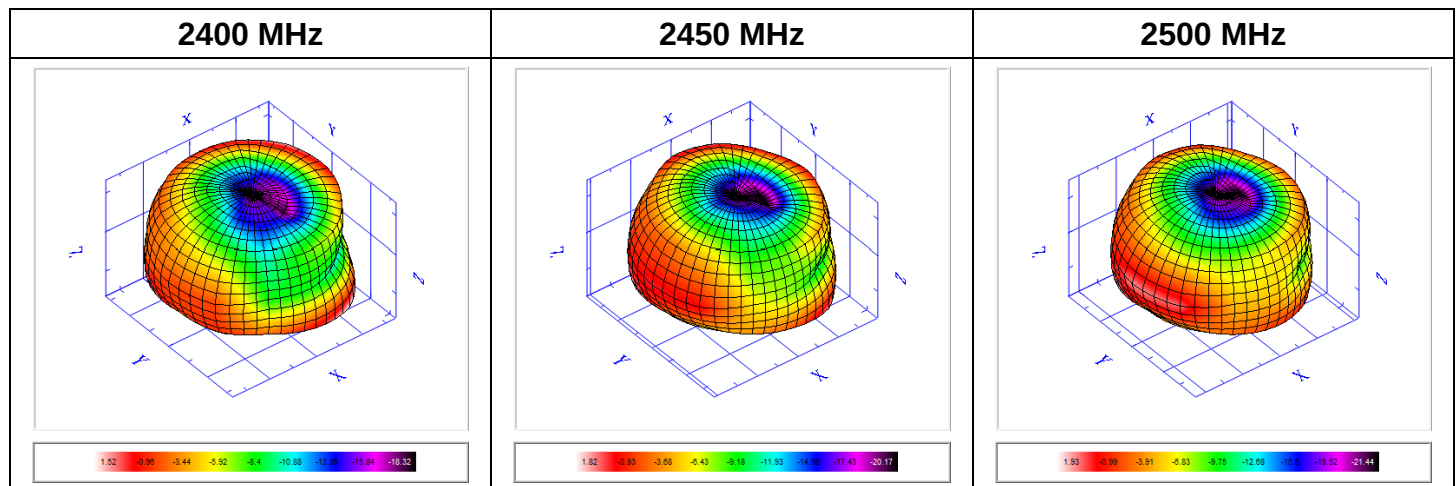


Product Number: AN2400-06C01BBF

Product Name: Antenna



5. Antenna - Radiation Pattern Test Data



Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
TRP (dBm)	-1.4	-1.4	-1.3	-1.19	-1.09	-1.15	-0.89	-1.03	-0.97	-1.34	-1.27
Peak EIRP (dBm)	1.52	1.57	1.64	1.74	1.97	1.82	2.18	1.78	2.25	2.06	1.93
NHPRP +/- 45 (degree)	-1.53	-1.55	-1.46	-1.35	-1.26	-1.31	-1.05	-1.19	-1.12	-1.48	-1.4
NHPRP +/- 30 (degree)	-2.22	-2.19	-2.08	-1.96	-1.83	-1.86	-1.6	-1.72	-1.66	-2.01	-1.93
E-Theta Peak Gain (dBi)	-11.4	-11.5	-10.3	-10.6	-10.6	-11.8	-11.4	-11.6	-10.9	-11.8	-11.3
E-Phi Peak Gain (dBi)	1.41	1.55	1.61	1.7	1.95	1.79	2.17	1.75	2.23	2.04	1.91
E-Total Peak Gain (dBi)	1.52	1.57	1.64	1.74	1.97	1.82	2.18	1.78	2.25	2.06	1.93
Directivity (dBi)	2.92	2.97	2.94	2.93	3.06	2.96	3.07	2.81	3.23	3.4	3.2
Efficiency (%)	72.41	72.39	74.12	76.09	77.84	76.77	81.39	78.82	79.91	73.5	74.66

6. Mechanical Drawing

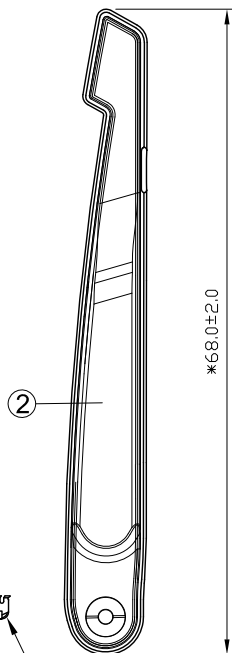
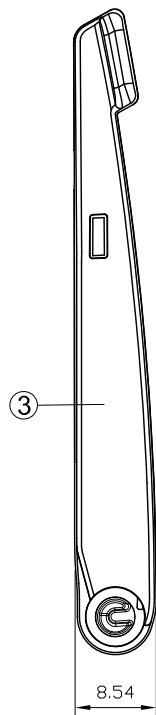
See attached files

7. Material Description and RoHS Test Report

See attached files

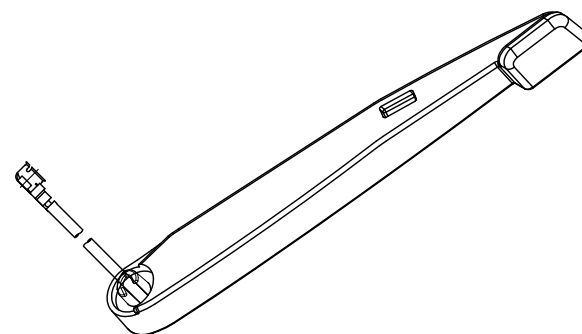
RoHS

Compatible



*24.0±2.0

注意端子方向



Note:

- 1.Mark * is important dimension;"CpK "Identify for process control(CpK $\geq$ 1.33).
- 2.Tolerance:Unmarked tolerance refer to the standard tolerance please.
- 3.Pay attention to the direction of the connector.

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

TITLE: ANTENNA-2.4GHz

PART NO.: AN2400-06C01BBF

CUSTOMER P/N: /

APP BY

CHK BY

RF BY

DES BY



Tolerance

Grant
2014.05.19

Jack
2014.05.19

ZGR
2014.05.19

UNITS: mm
SCALE: 1/1
REVISION: B

X.X ±0.5
X.XX ±0.2
X° ±1

3	BODY-AN06C-02B	本體	PC	Black	1
2	BODY-AN06C-01B	本體	PC	Black	1
1	AN2400-06187BF	ANTENNA		89.0mm	1
No.	Part Number	Description	Material	Finish	Q'ty

Date:2014.05.19

Page: 1 of 1

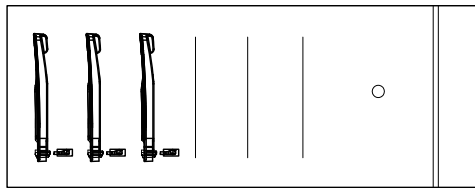
Part Number : AN2400-06C01BBF

Revision : B

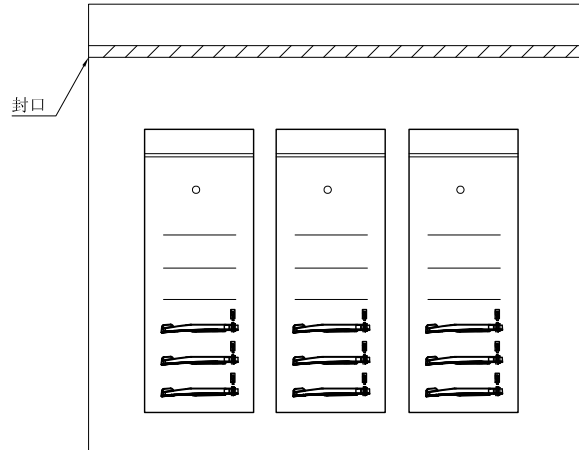
Name: ANTENNA-2.4GHz

Customer : ALL

1. Enter PE bag.

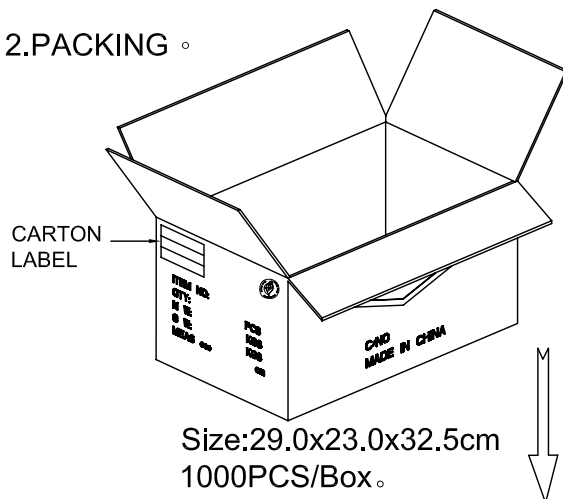


10PCS / 夹链袋
R-NIP-BAG-105155

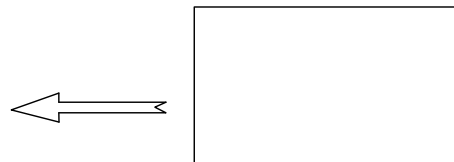


100PCS/ PE bag
R-PE-BAG-220300

2. PACKING.

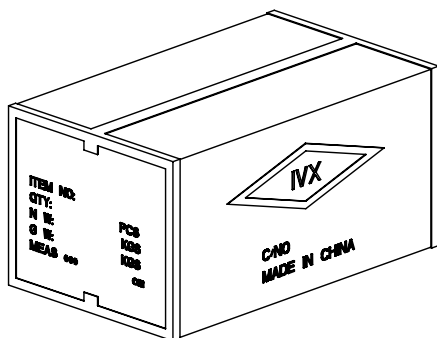


Size:29.0x23.0x32.5cm
1000PCS/Box.

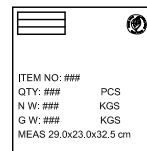


Cardboard :2pcs/BOX.

3. SEALING.



SIDE



FRONT

APPROVED BY : GrantCHECKED BY : JackDESIGNED BY : ZGR

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：AN2400-06C01BBF

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				
1	R-AN12160	Male	銅	60	31000	N.D.	Negative			CE/2013/73960	2013.07.25	FREECUTTINGBRASSBAR	SGS
2	R-HSTUBE-002N	HST	EVA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC1402540003	2014.03.13	HEAT SHRINKABLE TUBING(BK)	SGS
3	TUBE-AN06-04CS	Tube	銅	N.D.	4	N.D.	Negative	N.D.	N.D.	SHAEC1402624401	2014.03.01	BRASS TUBE .	SGS
4	AN65-33	Plug	POM	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC1320256606	2013.12.31	POM rod	SGS
5	BODY-AN06C-02B	本体	PC	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC1312635401	2013.12.16	PC S2000VR	SGS
	BODY-AN06C-01B		黑色色母	N.D.	N.D.	N.D.	N.D.			A001T140306202002-2	2014.03.12	black white color masterbatch pigment	AOV
6	R-CB-113B	Cable	黑色色母	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAEC1404233901	2014.03.22	FEP Colormasterbatch	SGS
			鍍錫銅	N.D.	N.D.	N.D.	Negative	N.D.	N.D.	RHS05F011891003E	2013.08.26	电线电缆料	CTI
			FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	RHS05F011891001E	2013.08.26	电线电缆料	CTI
			镀银铜丝	N.D.	N.D.	N.D.	Negative	N.D.	N.D.	RHS05F011891004E	2013.08.26	电线电缆料	CTI
7	CR-113	Mini Conn	PBT黑色	N.D	6.47	N.D.	N.D	N.D.	N.D.	KA/2013/70363	2013.07.15	PBT	SGS
			銅	N.D.	10	N.D.	N.D.			TSNIND1301164602	2013.11.21	C5210青铜带	SGS
			鍍金層	N.D.	N.D.	N.D.	Negative			RHS05G001036003E	2014.01.14	金镀层	CTI

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%