

Specification For Approval

Date: 2024 / 05 / 13

File No.: 240513003

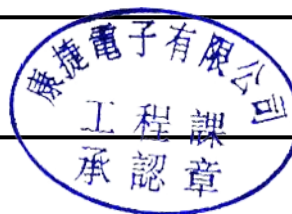
Version: 1.0

Customer : 海華科技

Customer P/N : /

INVAX P/N : AN0915-5001BSM

Description : Dipole Antenna



Cortec Checked By:

RD
2024.05.13
SF

Customer Approved By:



INVAX System Technology Corp.
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1. Revision History

Revision	Date	Change Notification	Description
1.0	2024.05.13	初版	

Product Number: AN0915-5001BSM

Product Name: Antenna



2. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	902 ~ 928 MHz
S.W.R.	≤ 2.0
Peak Gain	2.0 dBi
Efficiency	90 %
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Material of Plastic	ABS / TPEE
Cable Type	RG-178
Connector Type	SMA Male
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C
Antenna Color Storage life	< 2 year

Product Number: AN0915-5001BSM

Product Name: Antenna



3. Characteristics and Reliability Test

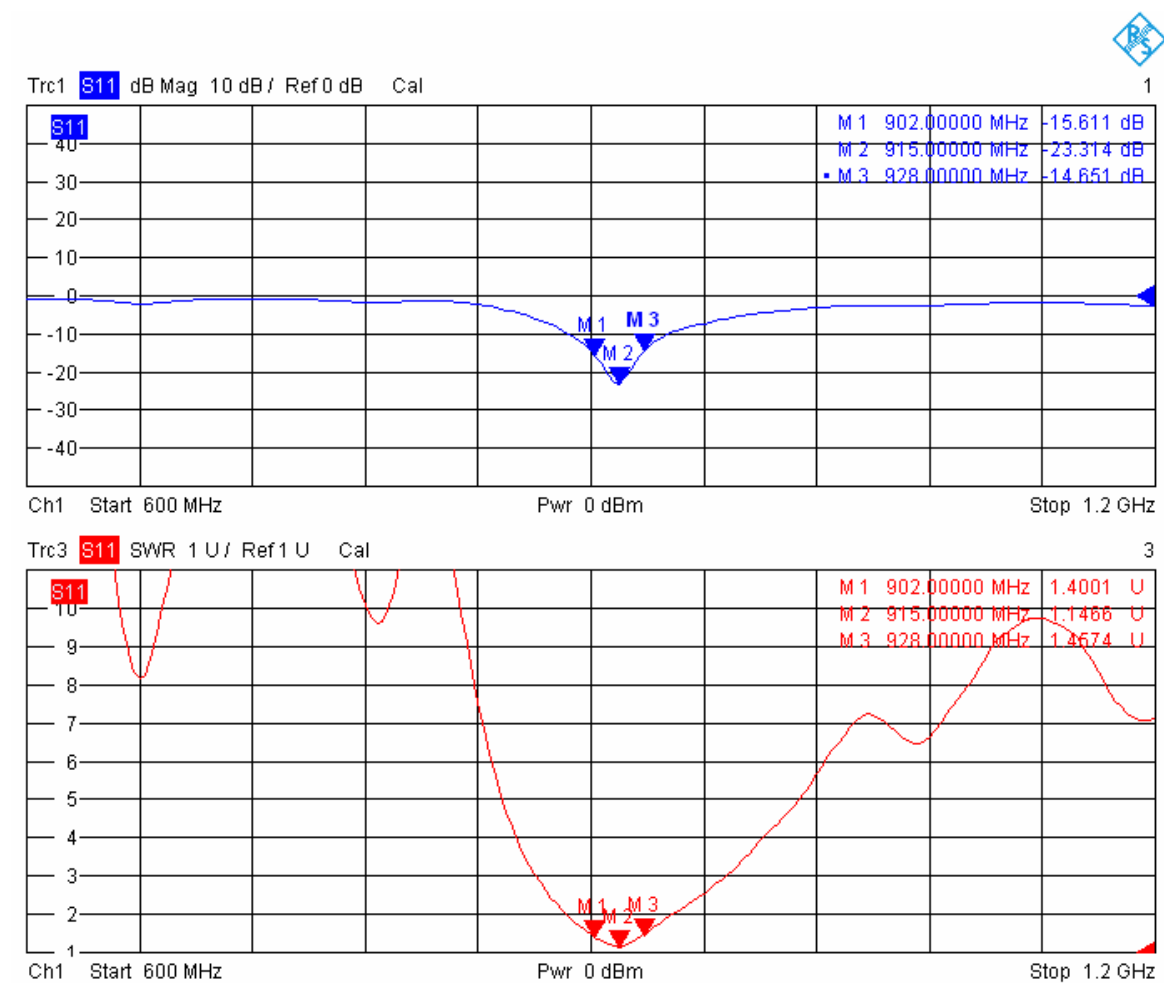
Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	GB / T2423 . 48-1997 Amplitude: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

Product Number: AN0915-5001BSM

Product Name: Antenna



4. Antenna - S Parameter Test Data



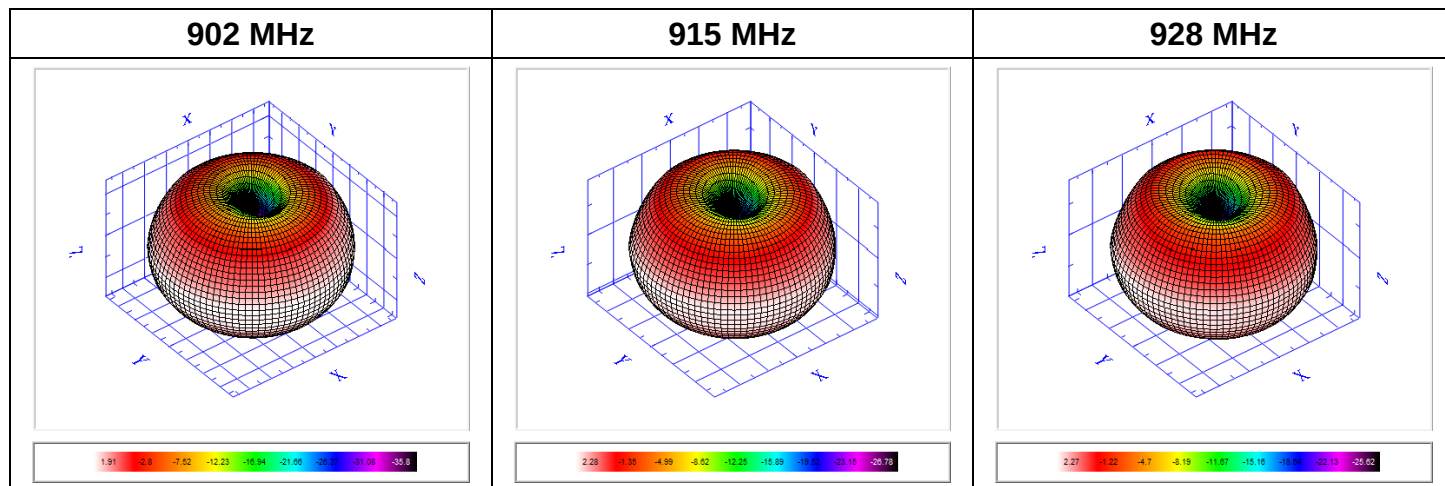
8/6/2015, 5:03 AM

Product Number: AN0915-5001BSM

Product Name: Antenna

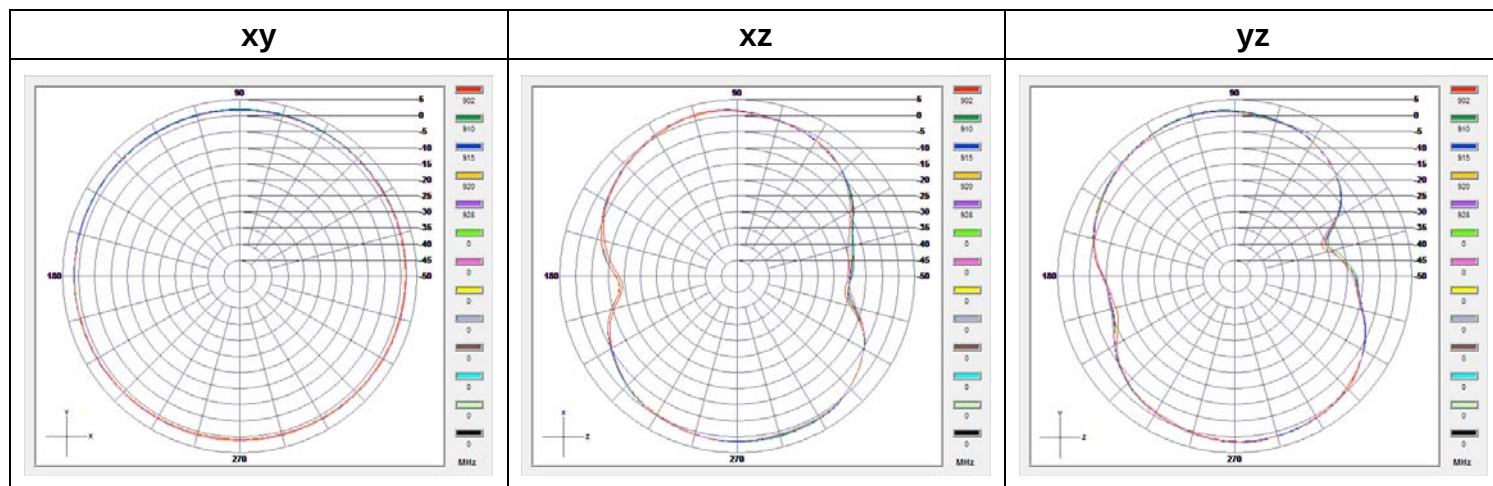


5. Antenna - Radiation Pattern Test Data



Frequency	902	910	915	920	928
TRP (dBm)	-0.4	-0.13	-0.25	-0.35	-0.32
Peak EIRP (dBm)	1.91	2.34	2.28	2.2	2.27
NHPRP +/- 45 (degree)	-0.62	-0.36	-0.48	-0.58	-0.55
NHPRP +/- 30 (degree)	-1.25	-0.99	-1.11	-1.23	-1.21
E-Theta Peak Gain (dBi)	-18.5	-17.7	-18.2	-17.3	-17.6
E-Phi Peak Gain (dBi)	1.9	2.33	2.27	2.18	2.25
E-Total Peak Gain (dBi)	1.91	2.34	2.28	2.2	2.27
Directivity (dBi)	2.3	2.47	2.53	2.55	2.59
Efficiency (%)	91.3	97	94.4	92.2	92.9

2D



6. Mechanical Drawing
See attached files

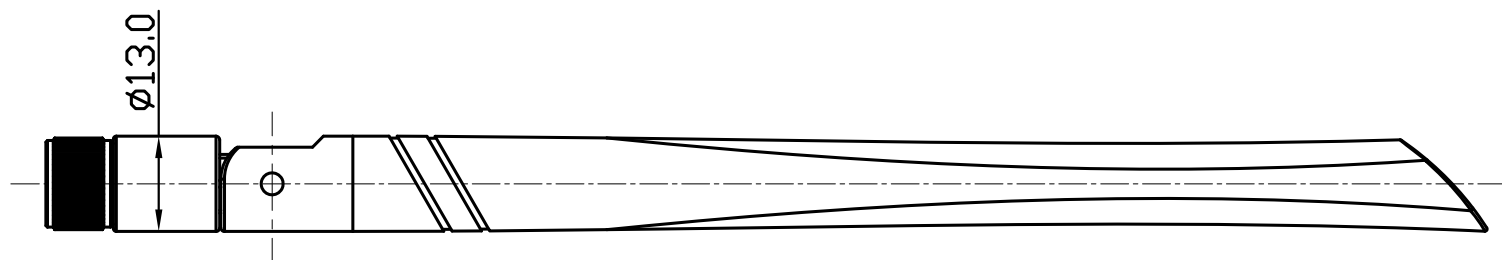
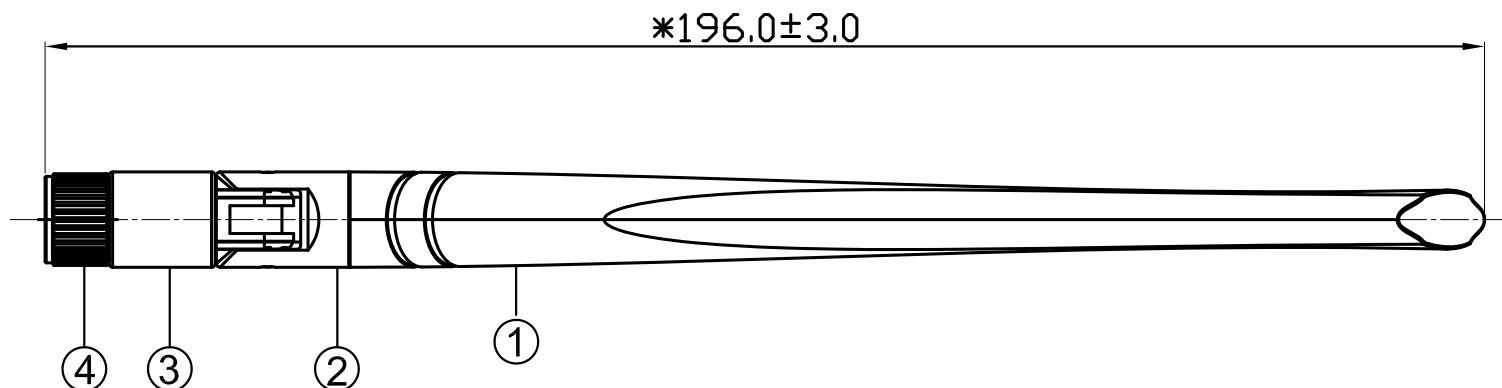
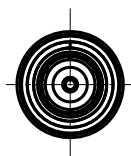
7. Material Description and RoHS Test Report
See attached files

RoHS

Compatible



SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			



4	SMA194-CCT5AN19-D	SMA公頭公針	銅	電著	1
3	AN0304-T07B	連接頭	ABS	黑色	1
2	AN9201-07B	連接筒	ABS	黑色	1
1	BODY-AN50-01B	天線塑膠外套	TPEE	黑色	1
No.	Part Number	Description	Material	Finished	Q'ty

Invax System Group.			Cortec Technology Inc.		
Cortec			Http://www.invaxsystem.com E-mail:info@invax.com.tw		Tel:886-2-27885218 Fax:886-2-27831658
TITLE: 902~928MHz Antenna					
PART NO.: AN0915-5001BSM			CUSTOMER P/N: /		
APP BY	CHK BY	RF BY	DES BY		Tolerance
Grant	Jack		ZGR	UNITS: mm	X.X ±0.3
2015.08.04	2015.08.04		2015.08.04	SCALE: 1/1	X.XX ±0.2
				REVISION: A	X° ±1

Date: 2015.08.04

Part Number : AN0915-5001BSM	Revision : A
Name: 902~928MHz Antenna	Customer : All

1.Enter OPP bag ◦

R-STI-BAG-25040
1PCS/bag

R-NIP-BAG-250320
50PCS/bag

2.PACKING ◦

SIZE:29.0x23.0x32.5cm
300PCS/CARTON

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：AN0915-5001BSM

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	BODY-AN50-01B	Body	TPEE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2240057268120001	2024.03.13	TPEE	SGS
2	AN9201-06B AN0304-T07B	Body1	ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANPC24004074901	2024.03.14	ABS HP171-NP	SGS
3	SMA207-CCT5AN19-A	SMA Male	銅	23	29211	N.D.	N.D.							CANPC23003365002	2023.05.29	Brass rod (C3604)	SGS
4	R-AN1901-650 R-AN8065-245	Tube	铜	N.D.	23	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC23009815201	2023.09.19	Appy to H65(C2680,C2700	SGS
5	R-GS-SP3001001	泡棉	EVA	N.D.	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC23017402017	2024.01.03	Environmental	SGS
6	R-RG-178U-03	Cable	FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	NGBPC24000131241	2024.01.16	FLUORINATED ETHYLENE	SGS
7			PTFE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	NGBPC24000131217	2024.01.16	PTFE DISPERSION RESIN	SGS
			镀银铜	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC24002005301	2024.01.31	SC	SGS
8			镀锡铜	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2230496550101001	2023.09.26	TIN PLATING ROUND	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、钢中合金元素中的铅含量达0.35%、铝含量达0.4%、铜合金中的铅含量达4%