

Specification For Approval

Date: 2025 / 01 / 07

File No.: 2501070001

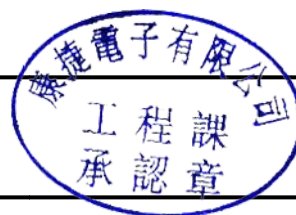
Version: 1.4

Customer : 研華股份有限公司

Customer P/N : 1750009372-01

INVAX P/N : AN0750-64S01BSM

Description : Antenna



Cortec Checked By:	RD 2025.01.07 SF
Customer Approved By:	



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Taipei, TAIWAN

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1. Revision History

Revision	Date	Change Notification	Description
1.0	2020.08.21	初版	
1.1	2022.06.28	增加測試點	增加 617~698MHz 測試數據
1.2	2022.12.02	增加測試點	增加 1400~1710MHz 測試數據
1.3	2023.11.02	修改工作溫度	第四頁工作溫度修改為-40+80°C
1.4	2024.07.11	增加測試點	增加 1166~1186MHz 測試數據
	2024.07.19	增加測試點	增加 3400~3800MHz 測試數據
	2025.01.07	增加測試點	增加測試點 704~716 MHz / 788~798 MHz

Product Number: AN0750-64S01BSM

Product Name: Antenna



2. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	617~698 MHz / 704~ 960 MHz / 1166~1186 MHz 1400 ~1710 MHz / 1710~2700 MHz 3300 MHz ~ 3800 MHz / 5000 ~ 5850 MHz
V.S.W.R.	<= 3.0 @ 617~ 960 MHz <= 2.5 @ 1166~1186 MHz <= 3.0 @ 1400~1710MHz <= 3.5 @ 1710~2700MHz <= 3.0 @ 3300 ~3800 MHz <= 4.0 @ 5150~5850MHz The data is tested with 1M cable
Peak Gain	1.78 dBi @ 617~ 960 MHz 2.73 dBi @ 1166~1186 MHz 0.95 dBi @ 1400~1710MHz 3.27 dBi @ 1710~2700MHz 0.18 dBi @ 3300 ~3800 MHz 4.02 dBi @ 5150~5850MHz
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	PCB
Material of Plastic	ABS
Cable Type	RG178
Connector Type	SMA Male
C. Environmental	
Operation Temperature	- 40 °C ~ + 80 °C
Storage Temperature	- 40 °C ~ + 80 °C

Product Number: AN0750-64S01BSM

Product Name: Antenna



3. Characteristics and Reliability Test

Test Items 測試項目		Test Condition and Procedure 測試方法	Requirements 要求	Result 結果
C1	V.S.W.R. 電壓駐波比	Set DUT on Network Analyzer; make individual calibration to test 設置網路分析儀參數進行測試	Directive DUT specification 符合待測物規範	PASS
C3	Antenna Gain 天線增益	Set DUT on Antenna Chamber; make individual calibration to test 設置天線暗室參數進行測試	Directive DUT specification 符合待測物規範	PASS
M1	Vibration 震動	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction 振幅 1.5mm ; 頻率 20~80~20Hz ; 3 個方向各 2H	1. No Visual Damage 2. Frequency Tol.≤5% 無明顯外觀不良;頻率偏移≤5%	PASS
M2	Random Drop 跌落	GB / T2423.8-1995 Single : Height: 1.0 Meter; 3 directions; 1 time for each direction 單支天線, 高 1m ; 3 個方向各 1 次	1. No parts separated · fracture 2. Frequency Tol.≤5% 產品無脫落、斷裂;頻率偏移≤5%	PASS
M4	Pull Test 拉力	Holding with individual specification; force applied to axis of terminal .單獨定義產品端子拉力	1. Directive DUT specification 2. Frequency Tol.≤5% 符合待測物規範;頻率偏移≤5%	PASS
M6	Dimension 尺寸	Inspection of dimension, color, material, package, surface process.檢查尺寸,顏色,材料,包裝,表面處理	Directive DUT specification 符合待測物規範	PASS
E2	Salt Spray 鹽霧	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H 溫度 35°C ; 濕度≥95%;鹽水濃度≥5% ; 測試 24H	1. No Visual Damage 2. Frequency Tol.≤5% 無明顯外觀不良;頻率偏移≤5%	PASS
E3	Temperature and Humidity Chamber 恒溫恒濕	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H 溫度 80°C 測試 12H 轉-40°C 測試 12H; 濕度≥ 90% ; 時間 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% 恢復 2H 后, 無明顯外觀不良;頻率偏移≤5%	PASS
E4	Thermal Shock 冷熱衝擊	GB / T 2423.22 - 2008 - 40°C (30 minutes) to + 80°C (30 minutes) ; Cycles: 24 - 40°C 測試 30 分轉 80°C 測試 30 分為一個週期; 共 24 週期	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% 恢復 2H 后, 無明顯外觀不良;頻率偏移≤5%	PASS
E5	Aging test 老化	GB / T 2423.2 - 2008 Temp: 80°C; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage	PASS

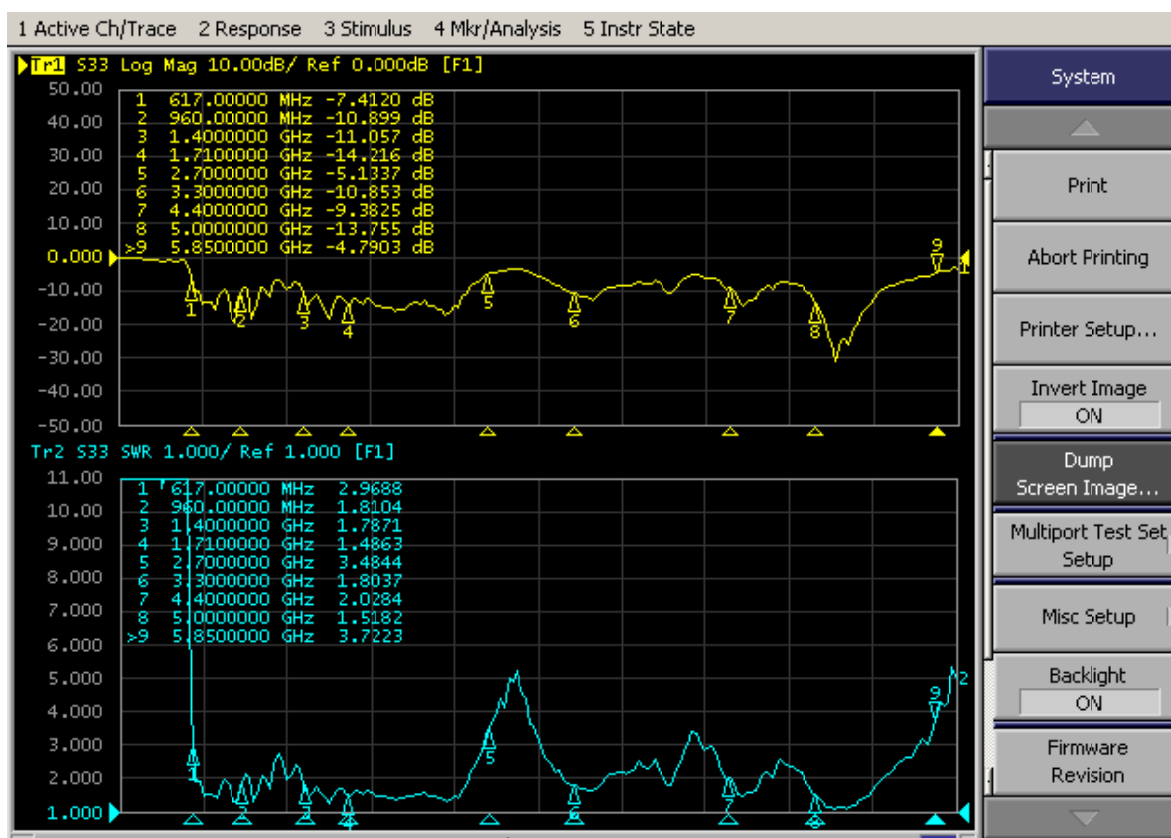
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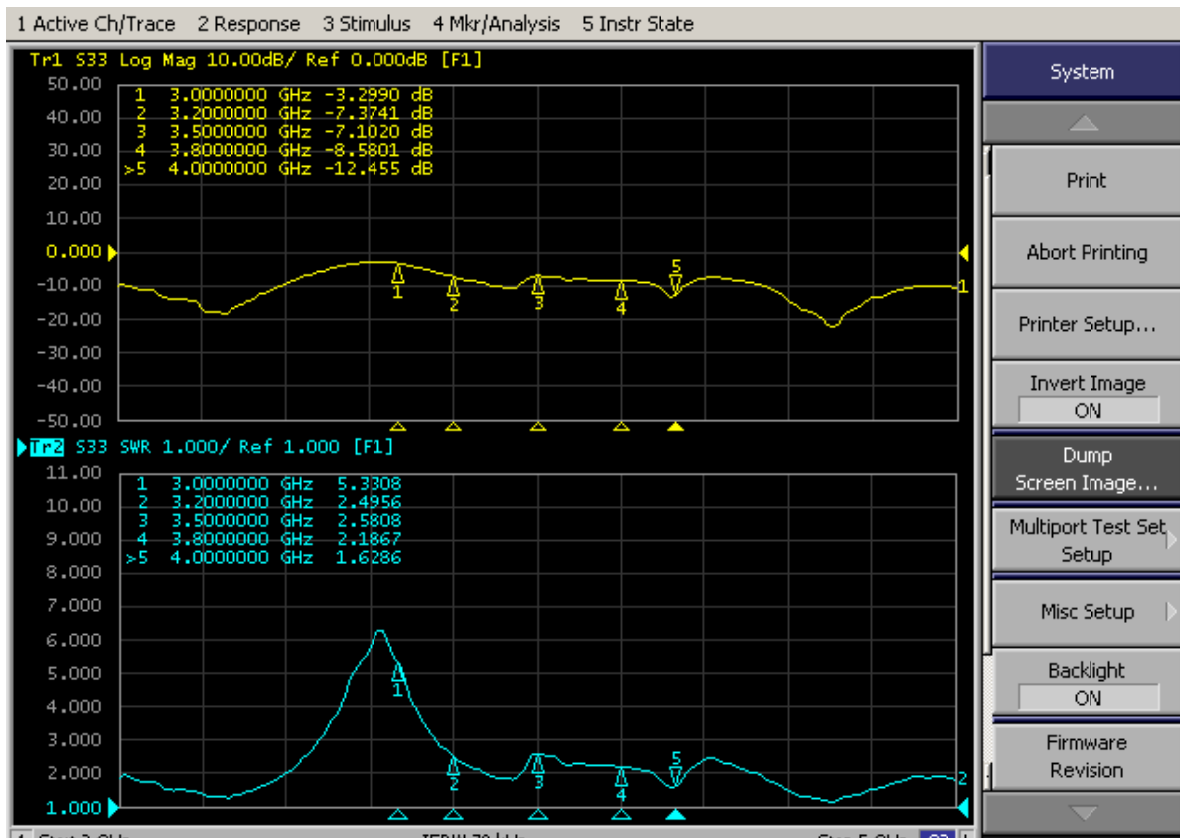
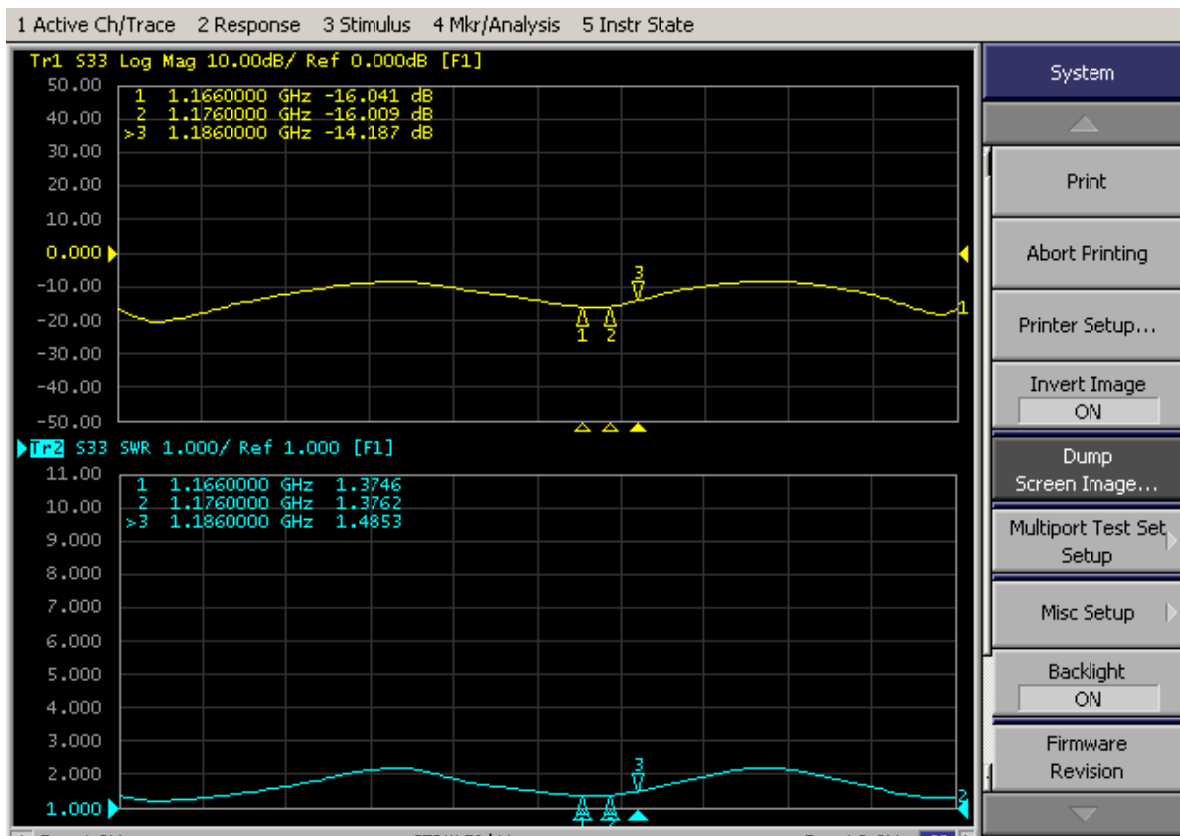
Product Name: Antenna



		溫度 80°C，測試 24H	2. Frequency Tol.≤5% 無明顯外觀不良;頻率偏移≤5%	
R1	RoHS	With Reference to IEC 62321:2008 with flow chart 參考 IEC 62321 測試流程	Directive RoHS 2015/863/EU 符合 RoHS 2015/863/EU 標準	PASS

4. Antenna - S Parameter Test Data



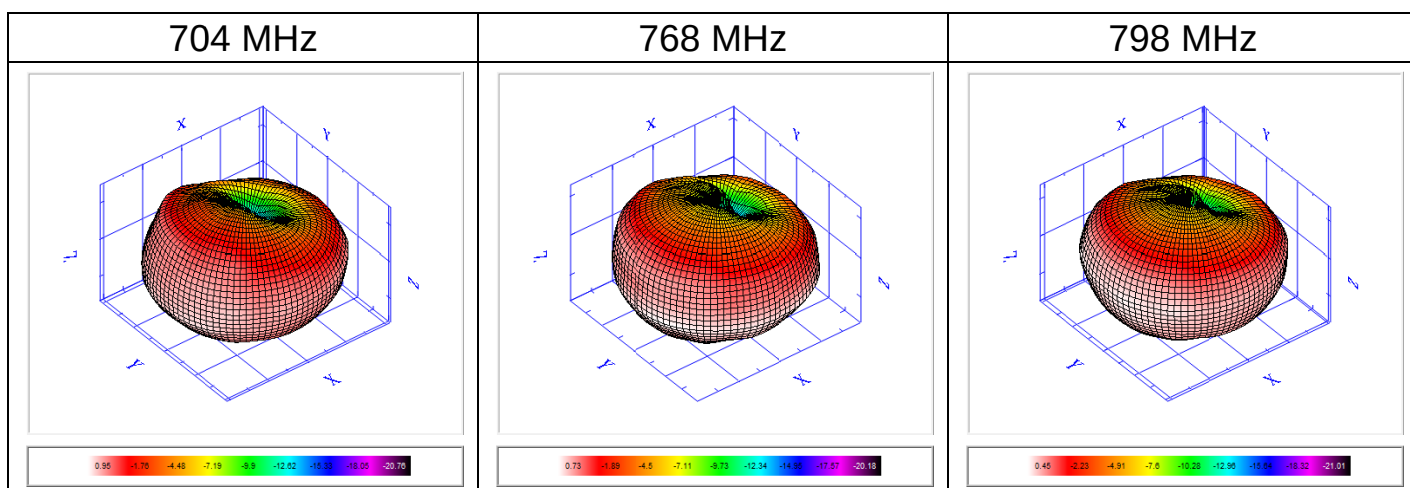
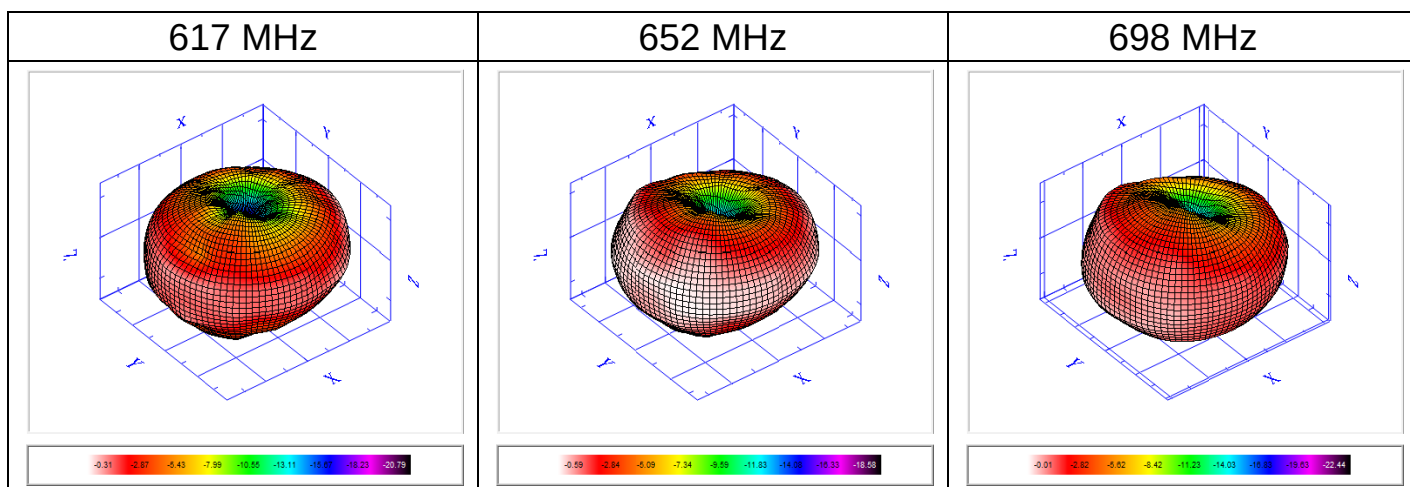


Product Number: AN0750-64S01BSM

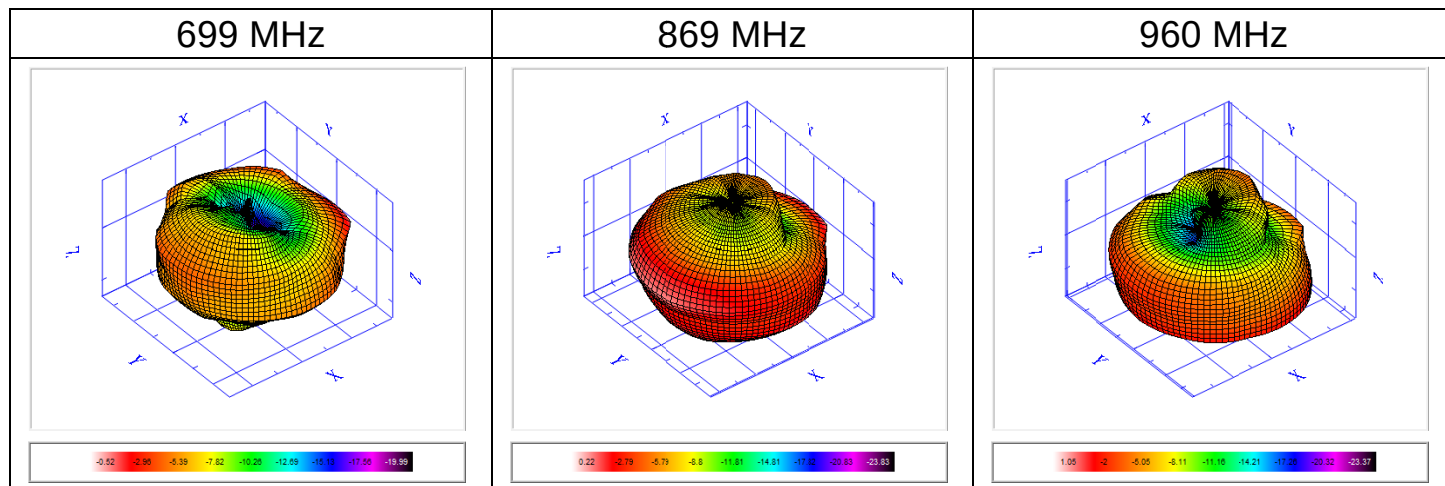
Product Name: Antenna



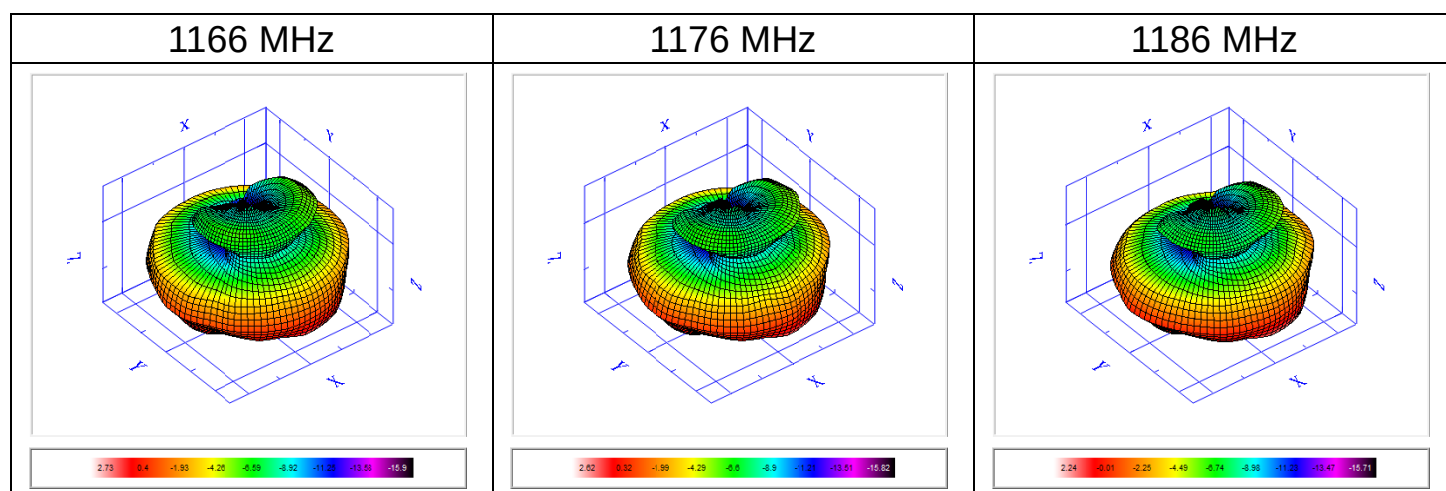
5. Antenna - Radiation Pattern Test Data



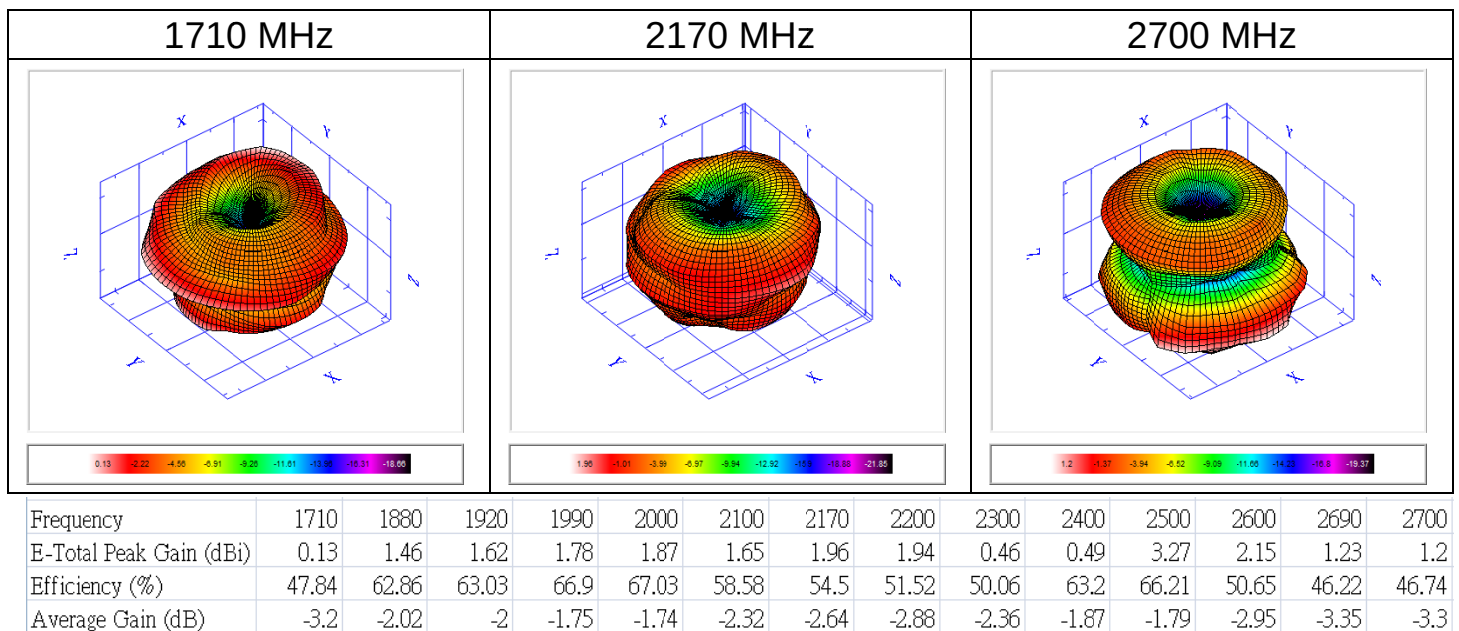
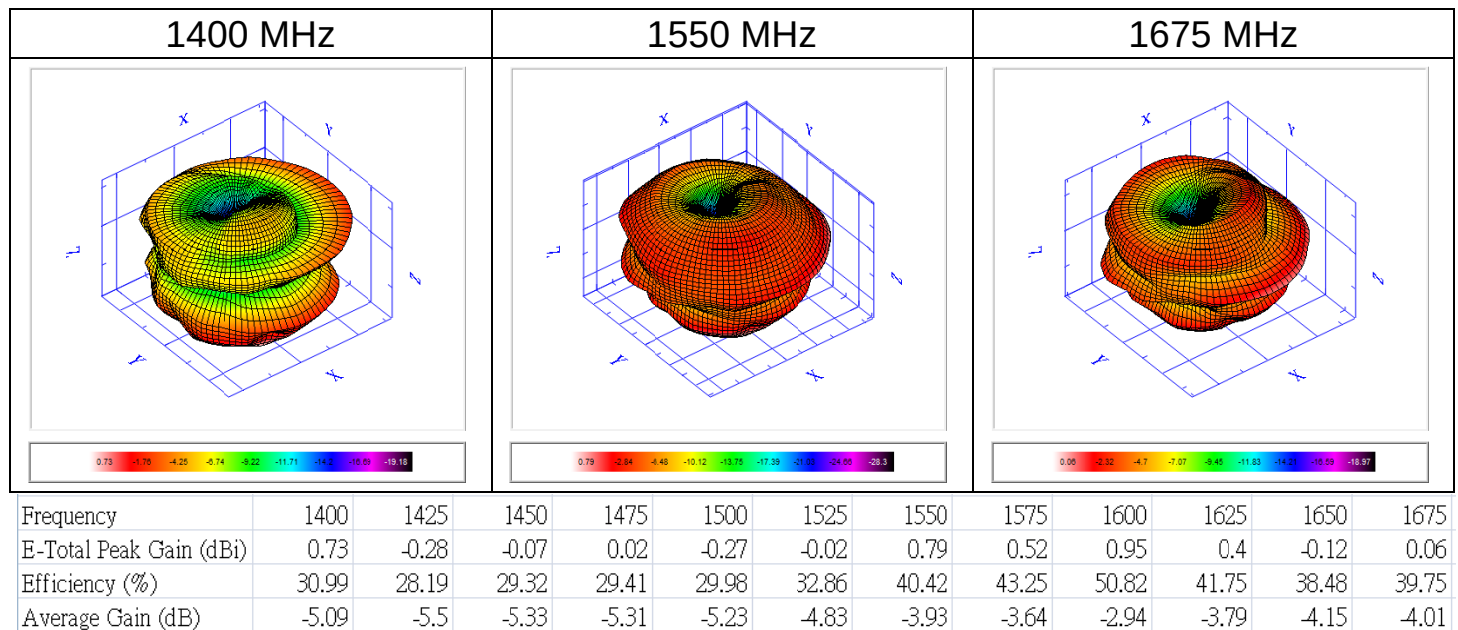
Frequency	617	637	652	663	680	698	704	716	756	768	788	798
E-Total Peak Gain (dBi)	-0.31	0.75	-0.59	-0.35	0.52	-0.01	0.95	-0.18	0.37	0.73	0.17	0.45
Efficiency (%)	47.77	61.79	50.91	49.7	55.07	48.47	64.95	49.79	53.54	61.15	56.61	59.6
Average Gain (dB)	-3.21	-2.09	-2.93	-3.04	-2.59	-3.14	-1.87	-3.03	-2.71	-2.14	-2.47	-2.25

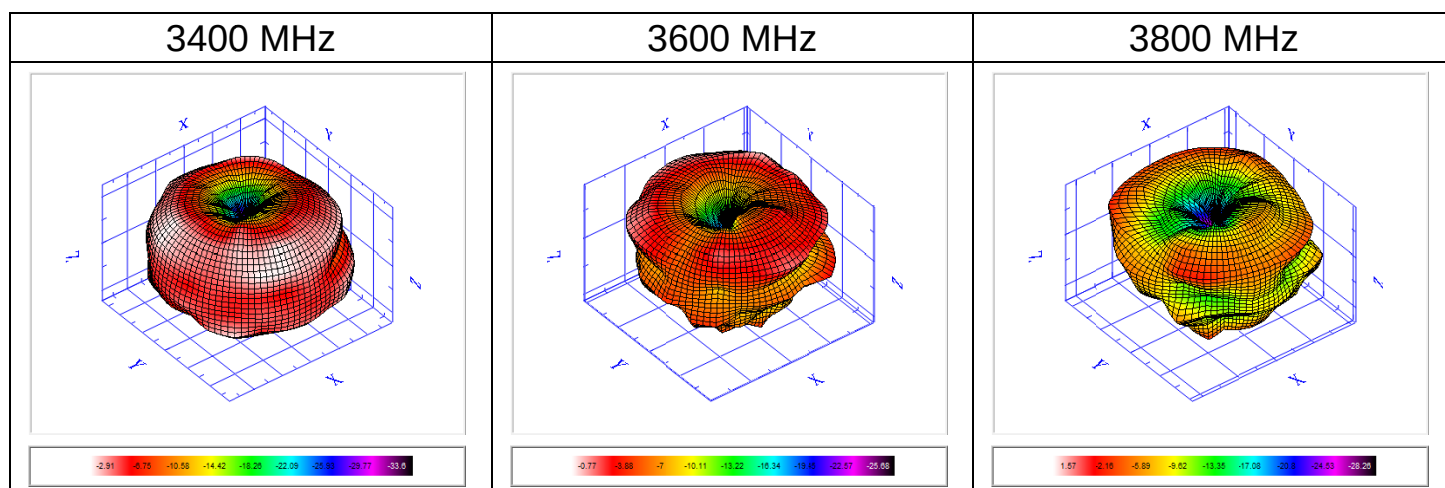
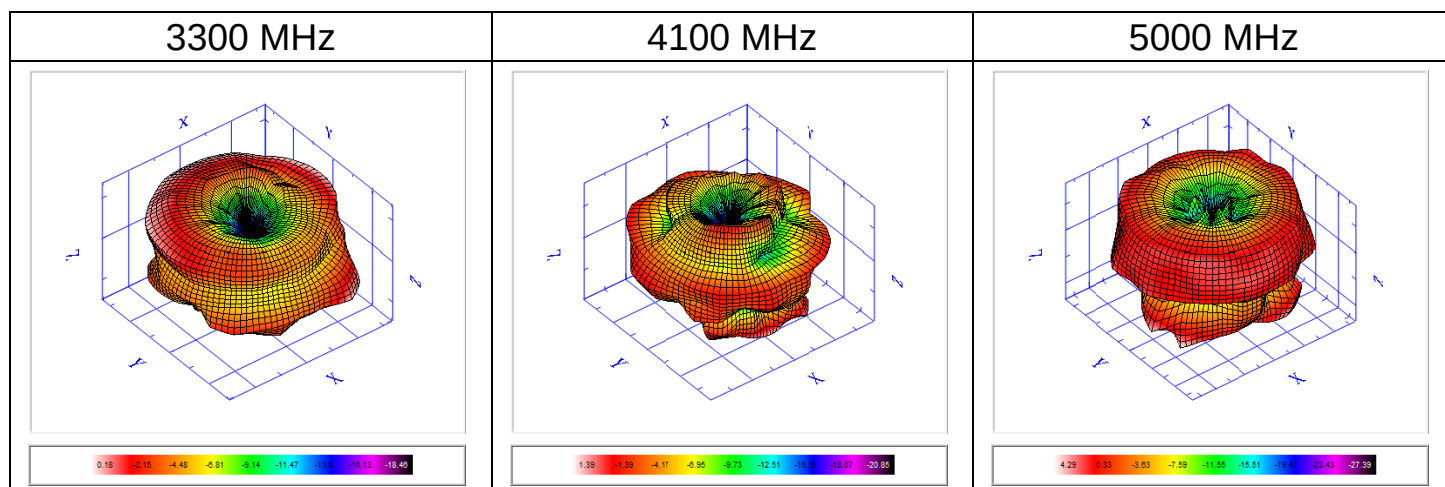


Frequency	699	724	782	824	839	854	869	884	899	914	929	944	960
E-Total Peak Gain (dBi)	-0.52	-0.55	-0.34	1.78	1.12	0.76	0.22	-0.89	-0.66	-0.12	0.01	0.34	1.05
Efficiency (%)	24.37	24.1	32.54	52.03	47.72	50.88	42.25	30.03	32.56	36.54	34.97	33.4	34.26
Average Gain (dB)	-6.13	-6.18	-4.88	-2.84	-3.21	-2.93	-3.74	-5.22	-4.87	-4.37	-4.56	-4.76	-4.65



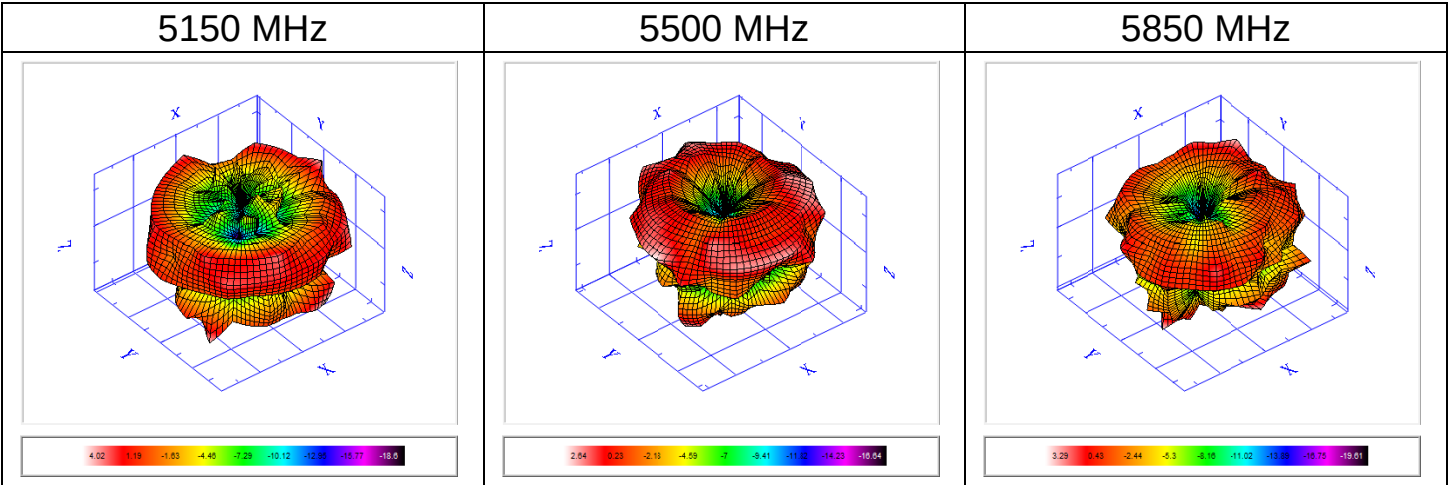
Frequency	1106	1116	1126	1136	1146	1156	1166	1176	1186	1196
E-Total Peak Gain (dBi)	1.86	1.89	2.09	2.34	1.89	2.33	2.73	2.62	2.24	2.16
Efficiency (%)	41.92	38.85	40.5	42.83	39.69	42.76	44.99	44.69	42.54	43.41
Average Gain (dB)	-3.78	-4.11	-3.93	-3.68	-4.01	-3.69	-3.47	-3.5	-3.71	-3.62





Frequency	3300	3500	3700	3900	4100	4300	4500	4700	4900	5000
E-Total Peak Gain (dBi)	0.18	0.42	0.48	0.46	1.39	2.3	2.65	0.44	3.23	4.29
Efficiency (%)	44.75	48.65	50.02	42.49	40.63	42.76	41.67	39.36	51.27	63.32
Average Gain (dB)	-3.49	-2.81	-2.03	-3.72	-3.91	-3.69	-3.8	-4.05	-2.9	-1.98

Frequency	3400	3600	3800
E-Total Peak Gain (dBi)	-2.91	-0.77	1.57
Efficiency (%)	24	25.6	20.81
Average Gain (dB)	-6.2	-5.92	-6.82



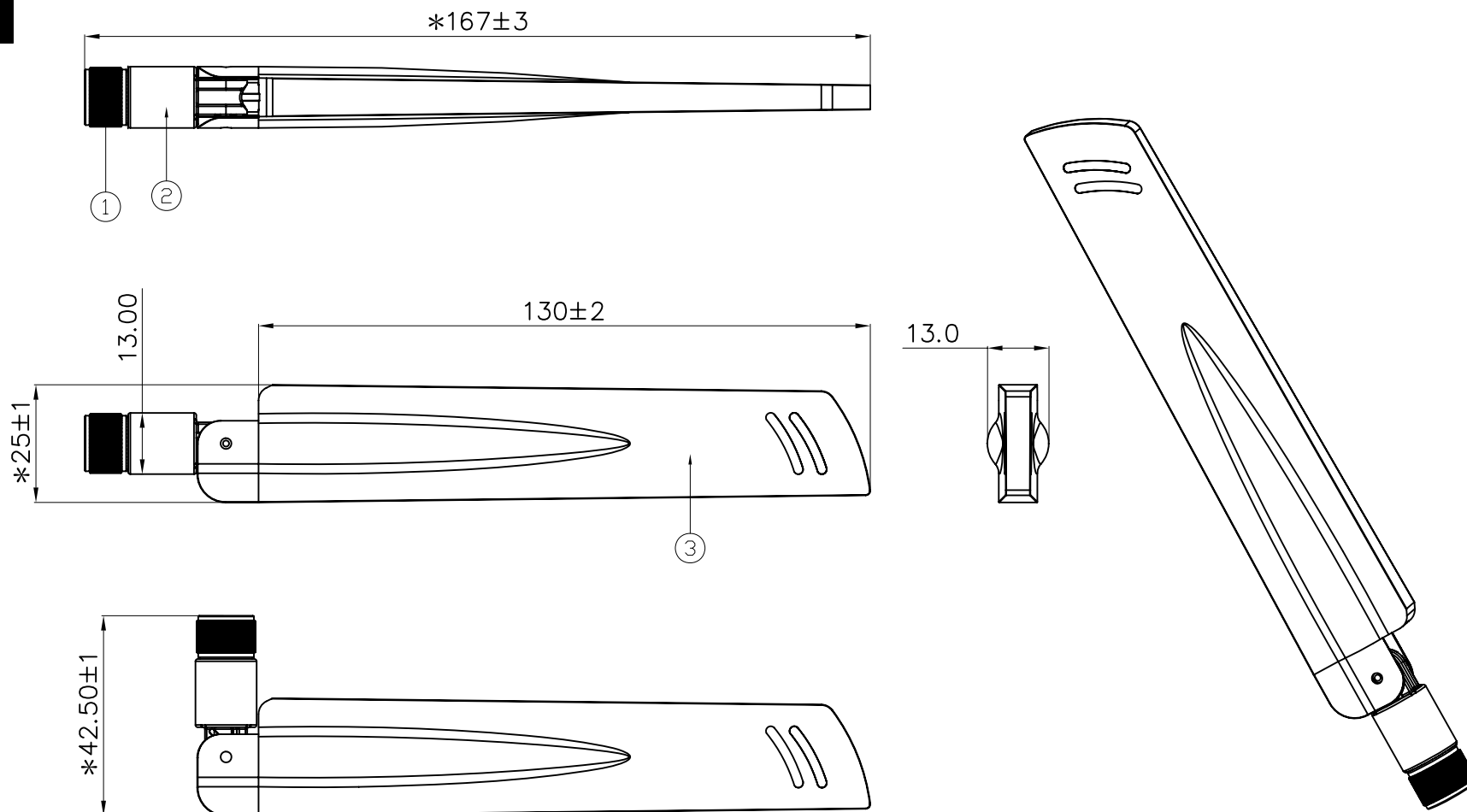
Frequency	5150	5250	5350	5400	5500	5550	5650	5700	5800	5850
E-Total Peak Gain (dBi)	4.02	2.84	1.77	1.53	2.64	2.25	1.39	3.13	1.67	3.29
Efficiency (%)	65.77	59.01	51.63	41.71	54.85	45.22	35.71	41.27	33.57	47.42
Average Gain (dB)	-1.82	-2.29	-2.87	-3.8	-2.61	-3.45	-4.47	-3.84	-4.74	-3.24

RoHS

Compatible



SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			



Note:

- 1.Take" * "is the important dimension.
- 2.Tolerance:Unmarked tolerance refer to the standard tolerance please.

3	BODY-AN64S-01B	Body	ABS	Black	1
2	BODY1-AN67-01B	Body1	ABS	Black	1
1	SMA306-CCT5AN92-Z	SMA公頭公針	Cu+POM	Black	1
No.	Part Number	Name	Material	Finish	Q'ty

Invox System Group.

Cortec

Cortec Technology Inc.

Http://www.invoxsystem.com
E-mail:info@invox.com.tw

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

TITLE: AN64S Type Antenna

PART NO.: AN0750-64S01BSM

CUSTOMER P/N: /

APP BY	CHK BY	RF BY	DES BY		Tolerance
Grant 2019/10/21	Kenny 2019/10/21		任玉浩 2019/10/21	UNITS: mm	X.X ±0.5
				SCALE: /	X.XX ±0.2
				REVISION: A	X° ±1

Date: 2019.10.21

Page: 1 of 1

Part Number : AN0750-64S01BSM	Revision : A
Name: 700~2700MHz&3.3~5GHz Antenna	Customer :

1. Enter PE bag.

R-STI-BAG-20040 → R-PE-BAG-310290

20PCS/BAG

2. PACKING.

SIZE:44.0x30.0x28cm
400PCS/BOX

Cardboard :2pcs/BOX

3. SEALING.

Carton Label SIDE RoHS Label FRONT

ITEM NO: ###
QTY: ### PCS
N W: ### KGS
G W: ### KGS
MEAS 44x30x28cm

IVX
C/NO
MADE IN CHINA

APPROVED BY : GrantCHECKED BY : KennyDESIGNED BY : 任玉浩

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-47b

- 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：AN0750-64S01BSM

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RoHS2.0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-AN64S-01B	Body	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
2	BODY1-AN67-01B	Body	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	/	黑色母粒	黑色色母	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SZHH01659358	2022.03.09	黑色母粒.	INTERTEK
4	SMA306-CCT5AN92-Z	SMA 公頭公針	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
5			銅	22	28719	N.D.	N.D.							CANML2210125003	2022.05.30	黃銅棒C3604	SGS
6			鎳	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SZXEC2202332004	2022.07.19	環保鎳药水	SGS
7			鍍金	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2210552934101005	2022.01.05	Au plating	CTI
8			PTFE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2220455368101001	2022.10.15	PTFE	CTI
9	PB-AN74S-0727FB	PCB	FR4	N.D.	12	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2221844501	2022.10.24	FR-4.0 CCL&insulating	SGS
10	R-RG-178U-03	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
11			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
12			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
13			鍍錫銅	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2220469900101001	2022.10.25	TIN PLATING ROUND	CTI

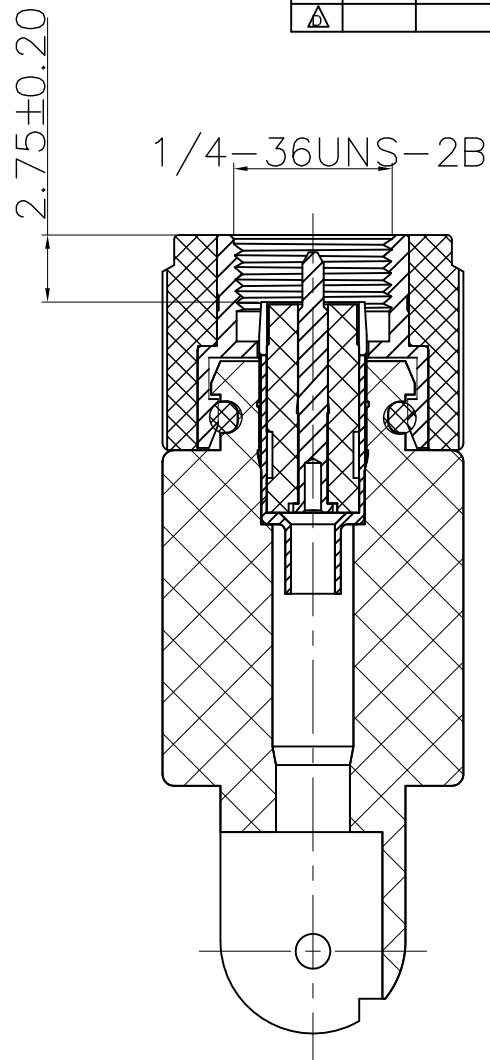
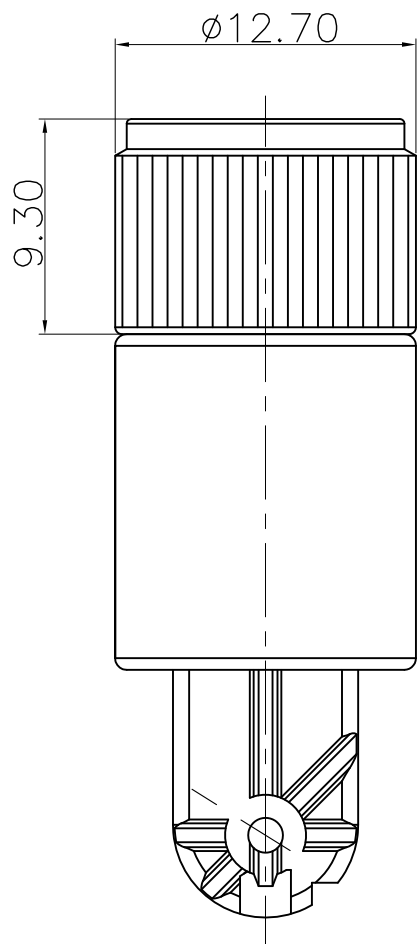
根據測試報告如實填寫鉛、鎘、汞、六價鉻、PBBs和PBDEs六項禁用物質的含量

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2011/65/EU、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%

RoHS

Compatible



备注：
螺纹本体：黄铜，镀镍
中心针：黄铜，镀金
绝缘体：PTFE

SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			

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: RP-SMA PLUG FOR ANT								
PART NO.: SMA306-CCT5AN92-Z					CUSTOMER P/N: /			
APP BY	CHK BY	RF BY	DES BY		Tolerance			
			李禹岐		UNITS: mm	X.X	±0.2	
			2018/04/11		SCALE: 1/2	X.XX	±0.1	
					REVISION: A	X°	±1	

苏州市华诺线缆科技有限公司

电话: 0512-65433584 传真: 0512-65438693 邮编: 215137
地址: 苏州市相城区太平镇工业园

1. 适用范围 Scope:

本规定制定了 50 欧姆 PTFE 绝缘射频同轴电缆 HNRG178 系列的结构和电气特性。

This specification covers the construction and the electrical properties of HNRG178 series 50 ohm PTFE insulation coaxial cable.

2. 结构 Construction:

项目/Item		详细资料/Details
导体 Conductor	材料/material	镀银铜线/Silverplated Copper
	构成 (根/mm) Composition (No./mm)	7/0.102
	单 丝 直 径 Diameter.O.D (mm)	0.102±0.003
	标称直径 Nom.O.D (mm)	0.306±0.03
绝缘 Insulation	材料 Material	PTFE 本色
	绝缘厚度 Nom.Thick (mm)	0.282±0.03
	标称外径 Nom.O.D (mm)	0.87±0.03
	导体和绝缘附着力	≥0.50
屏蔽 Shield	材料/material	镀锡铜线
	构成 Composition	16*3*0.10mm
	覆盖率 (节距)	90%以上
护套 Jacket	材料/material	FEP
	网线和外被附着力	≥0.35
	标称外径 Nom.O.D (mm)	1.80±0.08
	颜色 Color	按与客户确认的颜色. According to corresponding have approved by the suppliers and customers.

3. 电气特性 Electrical Properties(20℃)

项目/Item	单位/Unit	详细资料/Details
速率 Velocity	%	70
绝缘电阻 Insulation Resistance	MΩ . km	Min.500
耐压强度 Dielectric strength	V(AC)/min	2000
静电容 Capacitance	pF/m	96.45(1KHZ)

电话: 0512-65433584 传真: 0512-65438693 邮编: 215137
地址: 苏州市相城区太平镇工业园

4. 包装 Packing

standard unit length of finished cable shall be 500m or 700m one reel, frequency of joint max. 5/reel, the min length is 15m.

The finished cable shall be packed not be damaged during transportation.



This product is not suitable for automobile application in some cases. Please contact with our sales department before you use this product.

规格书结束
END