

Specification For Approval

Date: 2025 / 02 / 20

File No.: 2502200002

Version: 1.0

Customer : H00595

Customer P/N : /

INVAX P/N : AN2400-5002BRS

Description : Antenna

Cortec Checked By:

RD
2025.02.20
SF

Customer Approved By:



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1. Revision History

Revision	Date	Change Notification	Description
1.0	2024.08.30	First Edition	

Product Number: AN2400-5002BRS

Product Name: Antenna



2. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz
V.S.W.R.	≤ 2.0
Peak Gain	4.55 dBi
Antenna Type	Dipole
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Material of Plastic	TPEE / ABS
Cable Type	RG-178
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C
Antenna Color Storage life	< 2 year

Product Number: AN2400-5002BRS

Product Name: Antenna



3. Characteristics and Reliability Test

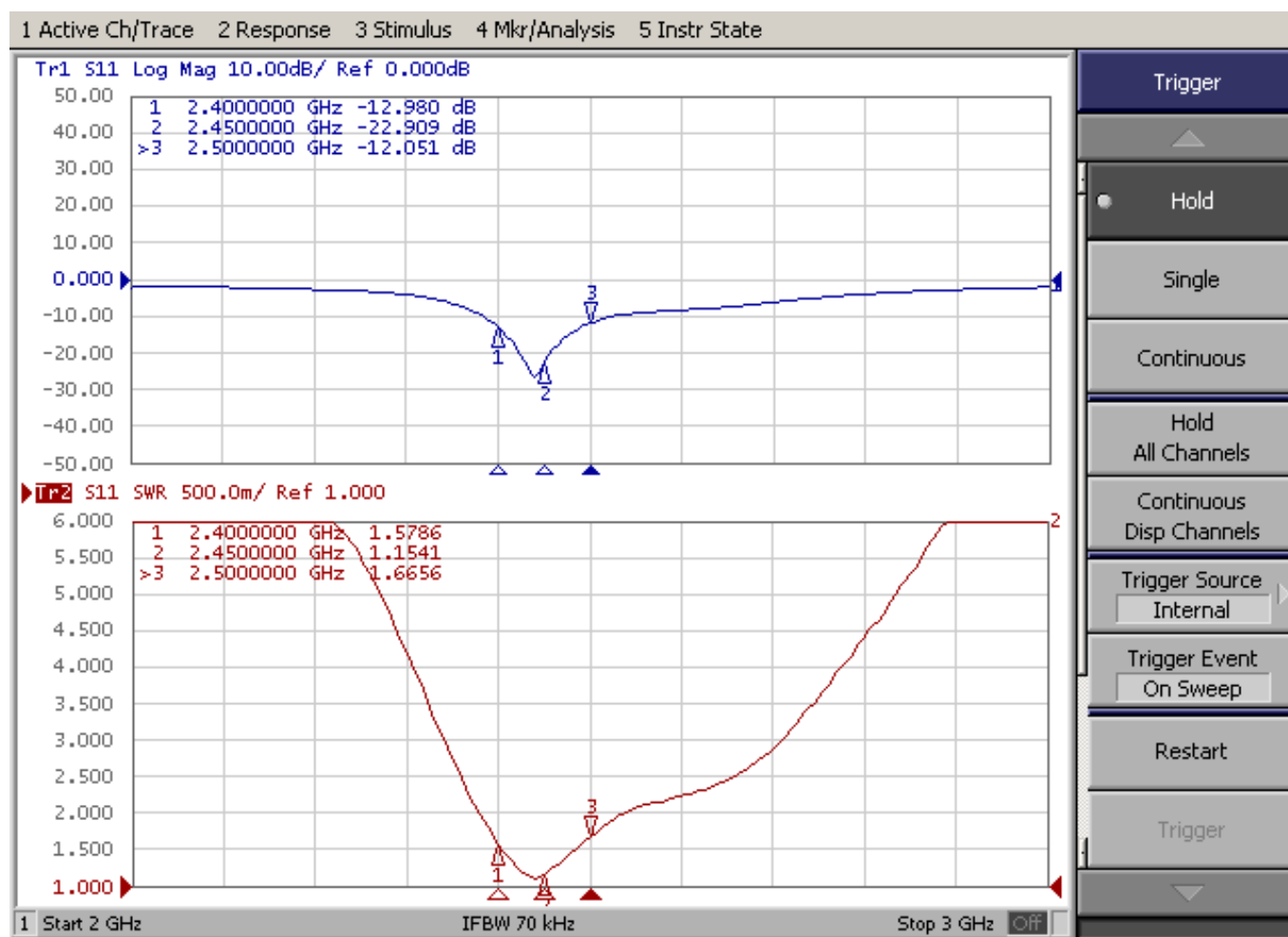
Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	GB / T2423 . 48-1997 Amplitude: 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: AN2400-5002BRS

Product Name: Antenna



4. Antenna - S Parameter Test Data

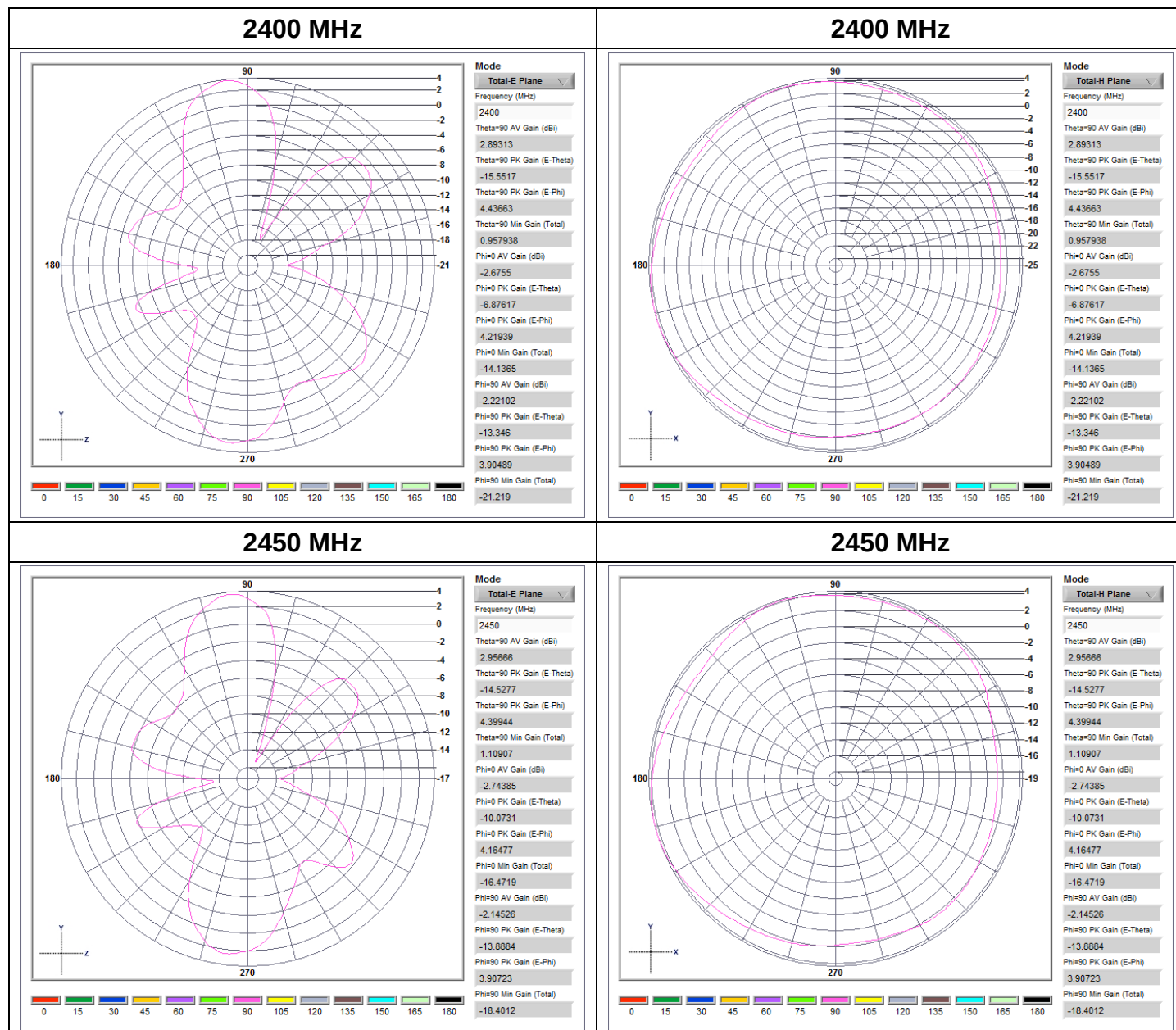


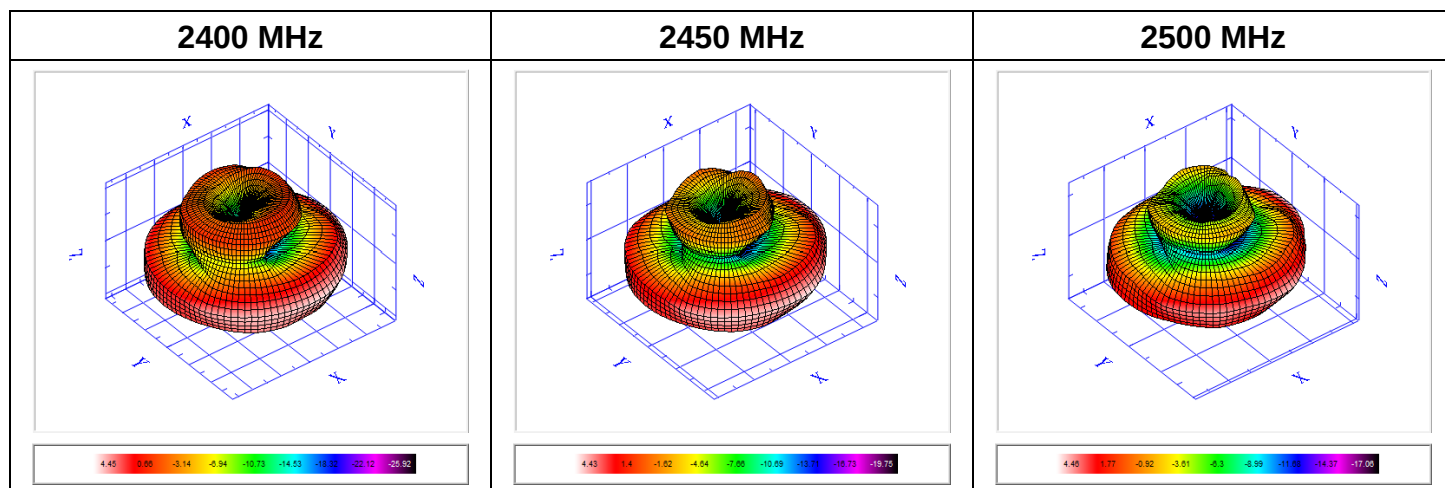
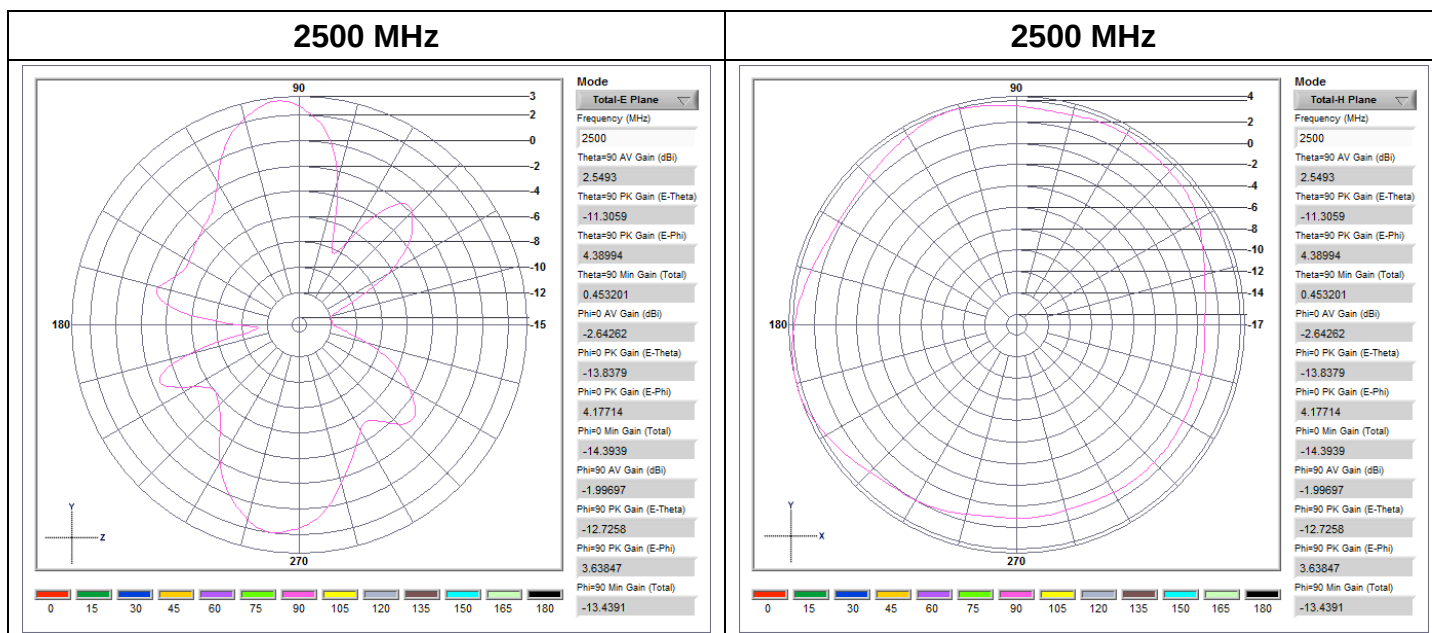
Product Number: AN2400-5002BRS

Product Name: Antenna



5. Antenna - Radiation Pattern Test Data

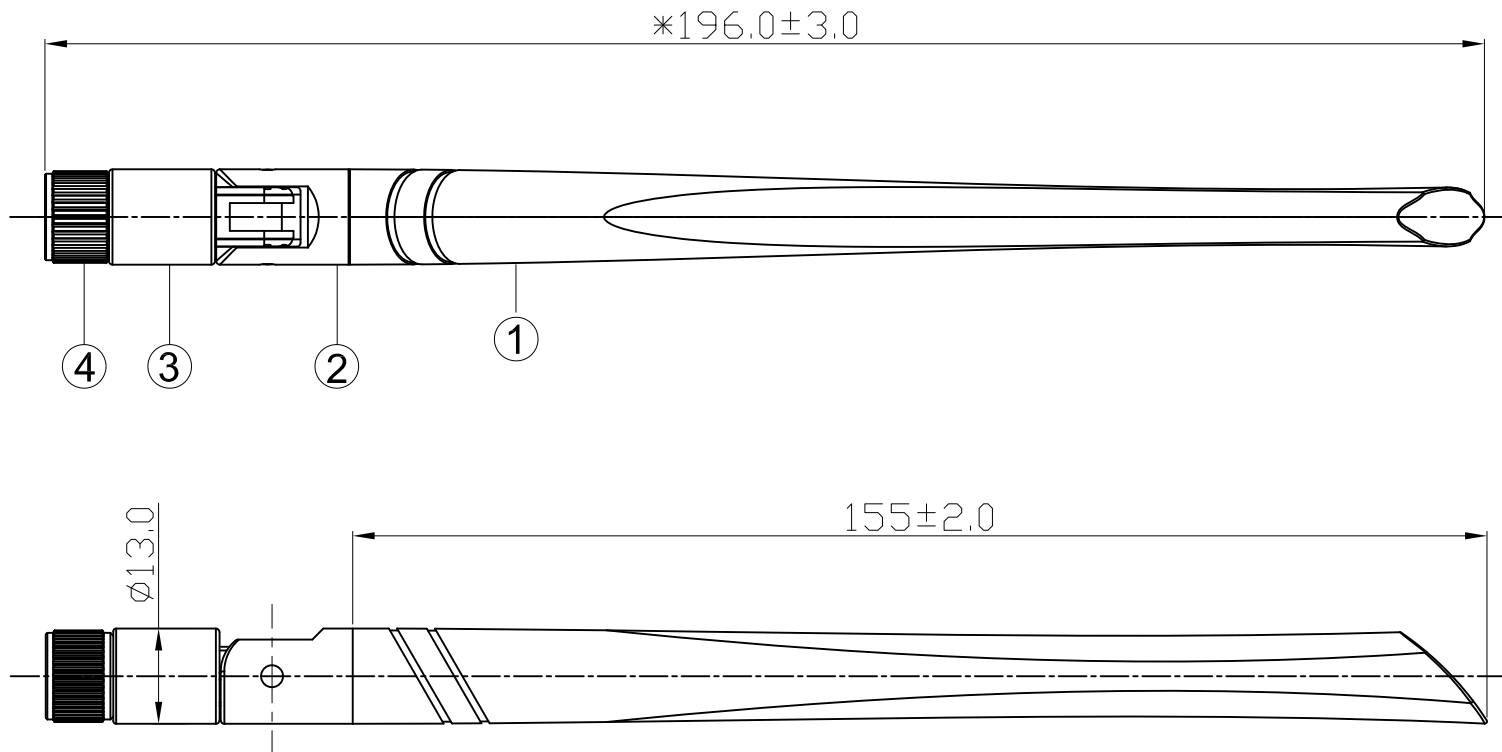
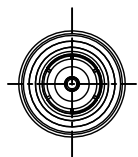




Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
TRP (dBm)	-1.36	-1.34	-1.35	-1.33	-1.62	-1.34	-1.33	-1.26	-1.26	-1.36	-1.3
Peak EIRP (dBm)	4.45	4.46	4.49	4.43	4.23	4.43	4.55	4.52	4.48	4.32	4.46
NHPRP +/- 45 (degree)	-1.81	-1.79	-1.82	-1.8	-2.08	-1.78	-1.75	-1.67	-1.67	-1.77	-1.71
NHPRP +/- 30 (degree)	-2.32	-2.31	-2.33	-2.31	-2.57	-2.27	-2.25	-2.2	-2.23	-2.35	-2.3
E-Theta Peak Gain (dBi)	-6.88	-7.63	-8.35	-8.76	-9.5	-10.07	-9.93	-9.74	-10.85	-11.44	-11.31
E-Phi Peak Gain (dBi)	4.44	4.42	4.46	4.4	4.22	4.4	4.51	4.47	4.46	4.25	4.39
E-Total Peak Gain (dBi)	4.45	4.46	4.49	4.43	4.23	4.43	4.55	4.52	4.48	4.32	4.46
Directivity (dBi)	5.82	5.8	5.84	5.76	5.85	5.77	5.89	5.77	5.74	5.67	5.76
Efficiency (%)	73.08	73.51	73.35	73.61	68.8	73.38	73.55	74.9	74.86	73.18	74.07

RoHS

Compatible



4	SMA194-CCR5AN19-C	SMA Male Reverse	CU	Electrodeposition	1
3	AN0304-T07B	BODY-2	ABS	Black	1
2	AN9201-06B	BODY-3	ABS	Black	1
1	BODY-AN50-01B	BODY-1	TPEE	Black	1
No.	Part Number	Description	Material	Finished	Q'ty

SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			

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: 2.4GHz 5dBi Antenna					
PART NO.: AN2400-5002BRS			CUSTOMER P/N: /		
APP BY	CHK BY	RF BY	DES BY		Tolerance
SF	YS		LISA	UNITS: mm	X.X ±0.3
2025.02.20	2025.02.20		2025.02.20	SCALE: 1/1	X.XX ±0.2
				REVISION: A	X° ±1

Date: 2014.03.31

Part Number : AN2400-5002BRS	Revision : A
Name: 2.4GHz 5dBi 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 : Grant CHECKED BY : Jack DESIGNED BY : ZGR

SGS TaiBei Network---http://twap.sgs.com/sgsrsts/chn/cheres_tw.asp
SGS Mainland Network---http://rsts.cn.sgs.com/zh-cn/cheres_cn.asp
SGS Korea S. Network---http://rohs.kr.sgs.com/sgsrsts/en/cheres_en.asp

COR/F-G-47b

PLS fill out the correct data for search

- 1.Report Number
- 2.Report Date(YYYY/MM/DD)
- 3.Product Name(Input the first 10 figures. Do not include the blank)
- 4.The graphic presentation checking yard

HSF Datasheet



Cortec Technology Inc.	
Writer :	Sally
Dept :	R&D
Job :	Assistant

Part Number : AN2400-5002BRS

Nu mbe r	Detali Part Number	Detail Name	Material	RoHS Test Results										Report Number	Test Date	Test Name	Test Locale
				Cd	Pb	Hg	Cr(VI)	PBBs	PBDEs	DBP	BBP	DIBP	DEHP				
1	BODY-AN50-01B	Body1	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	Body3	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	AN0304-T07B	Body2	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
4	AN068250	Tube	Brass	N.D.	41	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC24019446601	2024.09.09	Appy to H65(C2680,C2700)	SGS
5	ANS12060-002	Spring	Brass	N.D.	41	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC24019446601	2024.09.09	Appy to H65(C2680,C2700)	SGS
6	AN20-39	EVA	EVA	N.D.	14	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC24028865441	2025.01.03	Environmental	SGS
7	R-AN5225013-Z	Zn-alloy	Zn-alloy	4	21	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC24003196402	2024.03.04	HX 3# Zn-alloy	SGS
8	R-RG-178-03	Cable	FEP Brown	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	NGBPC24005315513	2024.09.23	Colored-FEP (Brown)	SGS
9			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
10			Silverplated Copper	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
11			Tinned copper wire	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2240144866101001C	2024.03.22	Tinned copper wire	CTI
12	SMA194-CCT5AN19-A	SMA Male Reverse	Brass	24	28333	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANPC24009508910	2024.05.17	C3604	SGS

PLS refer the SGS report, fill out the content of Pb, Cd, Hg, Cr6+, PBBs, PBDEs

The content of Pb, Cd, Hg, Cr6+, PBBs, PBDEs is less than 100 ppm in the package. The content of Cd is less than 5 ppm.

According to the EU ROHS directive exemption clause 2015/863/EU Lead as an alloying element in steel containing up to 0,35 % aluminium containing up to 0,4% copper alloy containing up to 4%