Product Number: NB2400-128
Product Name: 2.4GHz Antenna

Specification For Approval

Date: 2021 / 03 / 19

File No.:

Version: 1.0

Customer : 广东南光影视器材有限公司

Customer P/N : /

Yi Zong P/N : NB2400-128

Description : 2.4GHz Antenna

Cortec Checked By:	Wang Chao Xing
Customer Approved By:	chen junrong

一纵电子
YIZONG ELECTRONICS

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1. Revision History

Revision	Date	Change Notification	Description
1.0	2021.03.19	初版	

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2. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz
V.S.W.R.	⩽ 2.0
Peak Gain	2.32 dBi
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	CU
Cable Type	OD1.13mm
Connector Type	Mini Connector
C. Environmental	
Operation Temperature	- 40 ˚C ~ + 65 ˚C
Storage Temperature	- 40 ˚C ~ + 80 ˚C

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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

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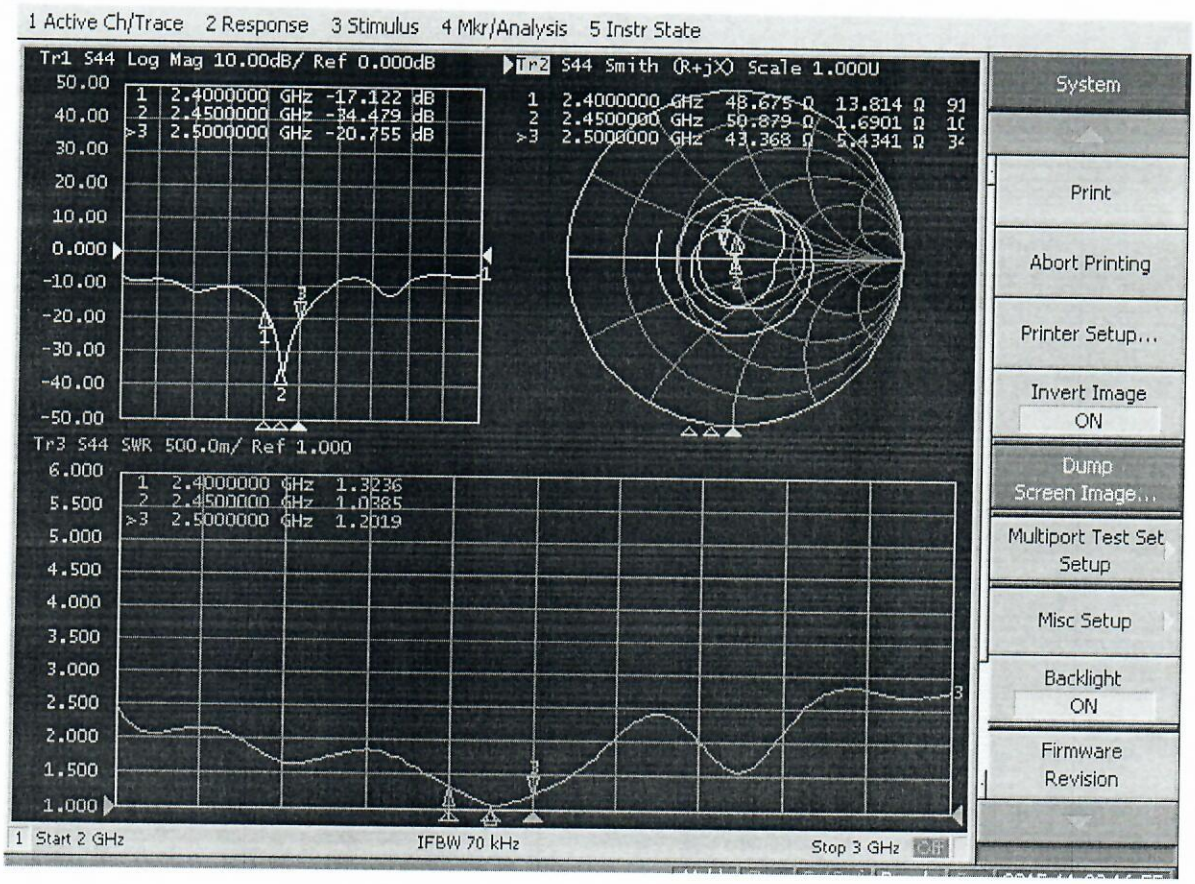
4. Antenna - S Parameter Test Data



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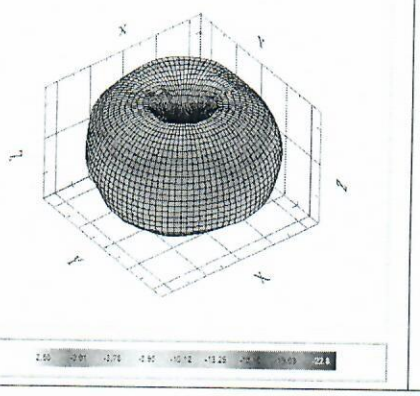
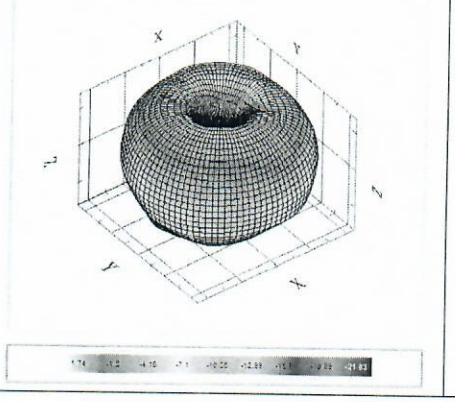
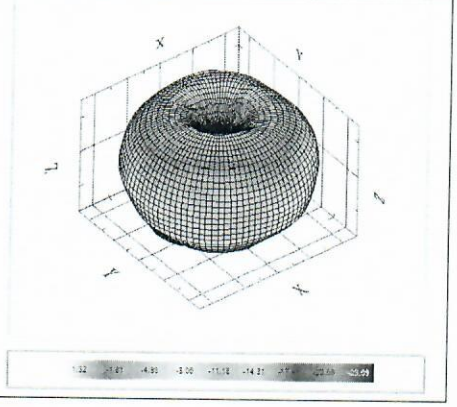
5. Antenna - Radiation Pattern Test Data

2400 MHz	2450 MHz	2500 MHz
		

Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
TRP (dBm)	-2.33	-2.29	-2.17	-1.96	-1.73	-1.6	-1.45	-1.58	-1.48	-1.62	-1.37
Peak EIRP (dBm)	1.89	1.71	1.8	1.89	2.12	2.17	2.32	1.97	2.04	2.01	2.09
NHPRP +/- 45 (degree)	-2.88	-2.82	-2.67	-2.44	-2.19	-2.06	-1.9	-2.03	-1.91	-2.02	-1.75
NHPRP +/- 30 (degree)	-3.91	-3.83	-3.62	-3.34	-3.06	-2.92	-2.75	-2.87	-2.75	-2.82	-2.53
E-Theta Peak Gain (dBi)	-9.22	-9.7	-10.14	-10.13	-11.06	-10.41	-10.28	-11.06	-11.32	-11.34	-10.95
E-Phi Peak Gain (dBi)	1.86	1.69	1.78	1.8	1.99	2.07	2.22	1.87	1.96	1.93	2.05
E-Total Peak Gain (dBi)	1.89	1.71	1.8	1.89	2.12	2.17	2.32	1.97	2.04	2.01	2.09
Directivity (dBi)	4.21	4	3.97	3.85	3.84	3.77	3.77	3.55	3.52	3.62	3.45
Efficiency (%)	58.54	58.99	60.73	63.62	67.2	69.11	71.68	69.43	71.06	68.91	72.99

6. Mechanical Drawing

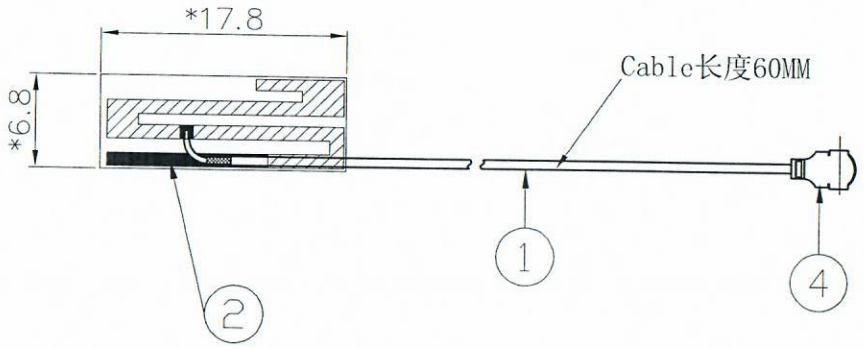
See attached files

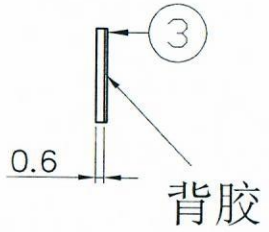
7. Material Description and RoHS Test Report

See attached files

RoHS
Compatible

SIGN	DATE	DESCRIPTION	APPRC
B			
A			





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

No.	Part Number	Name	Material	Finish	Q'ty
4	IPEX	Mini connector	Cu	Au Plating	1
3	GS-NB1183-02A	Adhesive	SONY-G9000	16*5.0mm	1
2	PB-NB1183-03FB	PCB	FR4	T=0.6mm	1
1	R-CB-113B	Coaxial Cable	O.D.1.13	BLACK	1

东莞 一纵电子有限公司

TITLE: 2.4G Embedded Antenna					
PART NO.: NB2400-128			CUSTOMER P/N: 65-031-254306E		
APP BY	CHK BY	RF BY	DES BY		Toleranc
			LiXUKE 2021/03/19	UNITS: mm SCALE: 2/1 REVISION: A	X.X ± X.XX ± X° ±