



Tengxiang Technology.Inc

Dongguan Tengxiang Electronics Co., Ltd.

Product Number:AN2450-02C01BX-W

Product Name: Antenna

Specification For Approval

Date: 2024.9.30

Version: 2.0

Customer Name

Customer: Jiuan

Customer Material No.

Customer P/N:

Tengxiang Material No.

T X P/N: AN2450-02C01BX-W

Specification Description

Description:2.4G/5G white antenna, 1.13 mm black cable, L=240 mm + IP EX

Tengxiang Checked By: Tengxiang Review		Customer Approved By: Customer Review	
Made by DRAWN	Lu Ting	TESTED BY	
Reviewed by	Hu Chao	Reviewed by	
Q.C. DEPT. Quality Control	Qi Zhipeng	Q.C. DEPT. Quality Control	
APPROVED BY: Approval	Wei Jia	APPROVED BY: Approval	



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Product Number:AN2450-02C01BX-W

Product Name: Antenna

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Revision History

Revision	Date	Change Notification	Description
1.0	2024.8.16	Editio princeps	
2.0	2024.9.30	Version B	

Product Number:AN2450-02C01BX-W

Product Name: Antenna

1. Specification

Sample Photo



A. Electrical Characteristics

Frequency	2400 -2500MHz/5150-5850MHz	
S.W. R. standing wave ratio	≤ 2.0	≤ 2.5
Antenna Gain	2.17dBi	2.19dBi
Polarization mode	Linear	
Impedance	50 Ohm	

B. Material & Mechanical Characteristics

Plastic Material: Plastic material	TPE/ABS/PC+PBT/POM	
Cable Type: Cable specifications	OD1.13mm ,Black	
Connector Type Specifications	I-PEX	

C. Environmental

Storage Temperature	- 30 °C ~ + 65 °C	
Operating Temperature	- 30 °C ~ + 65 °C	
Antenna Color Storage Life	< 2 year	

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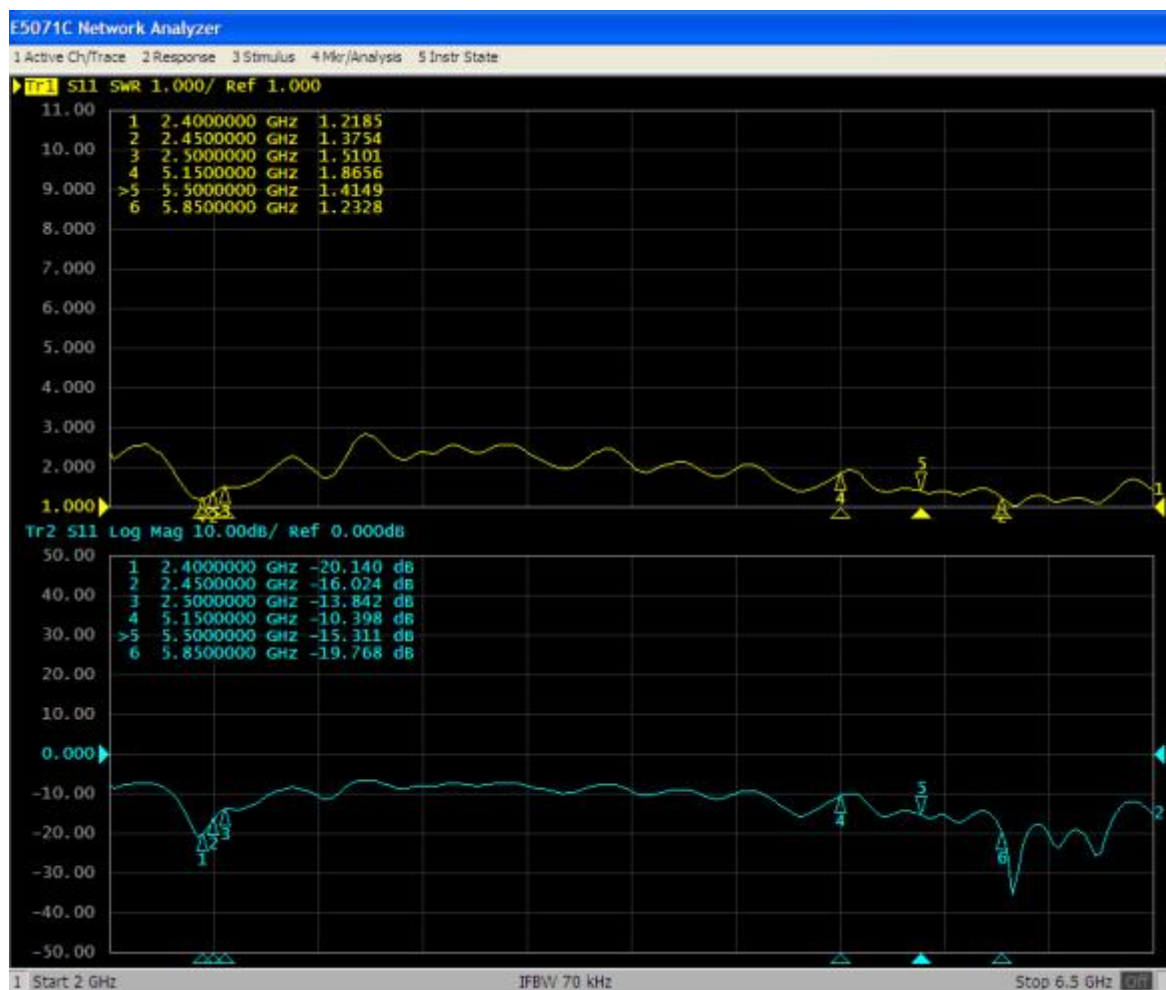
2. Characteristics and Reliability Test

Test Items		Test Condition and Procedure: Testing Method	Requirements	Results
1	V.S.W. R. Voltage Standing Wave Ratio	Set up the DUT on the network analyzer; perform individual calibrations for testing by configuring the network analyzer parameters.	The DUT specification complies with the test object specifications.	PASS
2	Antenna Gain	Set up the DUT in the antenna chamber; perform individual calibration and testing by configuring the antenna chamber parameters for testing.	Directive DUT specification complies with the test object specification	PASS
3	Pull Test	Holding with individual specification; force Applied to the axis of the terminal; define the product terminal tensile strength separately.	1. Directive DUT specification 2. Frequency Tol. $\leq 5\%$ Complies with the test substance specifications; frequency offset $\leq 5\%$	PASS
4	Dimension	Inspection of dimensions, color, material, packaging, and surface finish.	Directive DUT specification complies with the test object specification	PASS
5	Salt Spray	GB / T 2423.17-2008 Temp: 35°C; RH: $\geq 95\%$; NaCl solution: $\geq 5\%$; Time: 24H Temperature: 35°C; Humidity: $\geq 95\%$; Saline concentration: $\geq 5\%$; Test duration: 24 h	1. No Visual Damage 2. Frequency Tol. $\leq 5\%$ No obvious visual defects; frequency deviation $\leq 5\%$	PASS
6	Temperature and Humidity Chamber: Constant Temperature and Constant Humidity	GB / T 2423.3-2006 Temp: 65°C / 12 H; -30°C / 12H RH: $\geq 90\%$; Time: 24H Temperature: 65°C for 12 h, followed by -30°C for 12 h; humidity $\geq 90\%$; duration: 24 h	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. $\leq 5\%$ After recovery in the second half of the cycle, no significant visual defects were observed; frequency deviation was $\leq 5\%$.	PASS
7	Aging test: aging	GB / T 2423.2 - 2008 Temp: 65°C; Time: 24 hours Temperature: 65 °C; test duration: 24 h	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. $\leq 5\%$ No obvious visual defects; frequency deviation $\leq 5\%$	PASS
8	RoHS	With reference to IEC 62321:2008, including a flowchart: Reference to the IEC 62321 test procedure	Directive RoHS 2011/65/EU Complies with the RoHS 2015/863/EU standard	PASS

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3. Antenna - S Parameter Test Data



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4. Antenna - Radiation Pattern Test Data

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0	5150.0
Gain (dBi)	1.66	1.77	1.70	1.83	1.93	2.17	2.01	1.98	1.51	1.27	1.62	1.59
Efficiency (%)	61.19	62.46	60.26	61.22	62.60	67.32	66.95	69.92	66.73	65.37	61.85	52.14

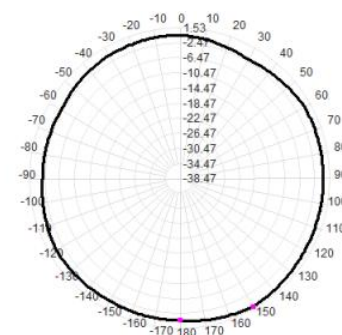
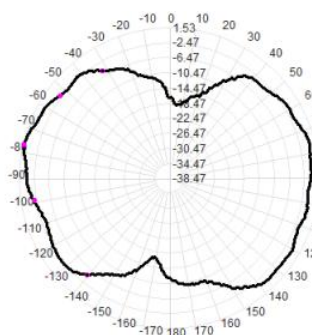
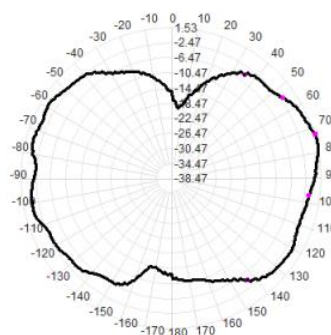
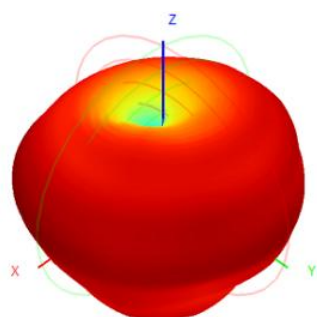
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
5150.0	5200.0	5250.0	5300.0	5350.0	5400.0	5450.0	5500.0	5550.0	5600.0	5650.0	5700.0	5750.0	5800.0	5850.0
1.59	1.72	1.59	1.66	1.59	1.55	2.15	1.43	1.75	1.67	2.09	1.70	2.03	2.19	1.68
52.14	53.27	53.98	54.25	53.38	54.66	52.31	53.18	56.87	53.96	51.24	50.92	51.12	50.08	52.51

XZ

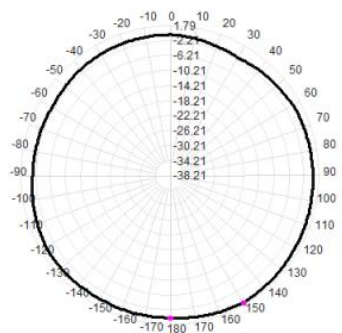
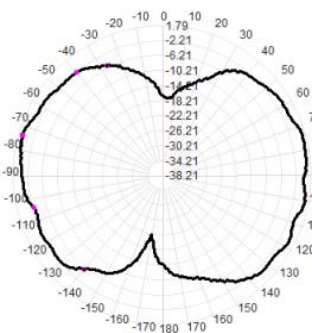
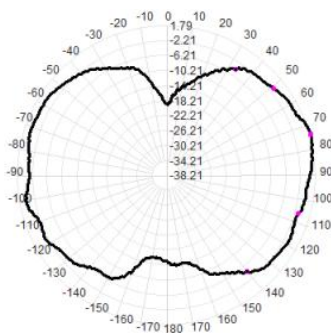
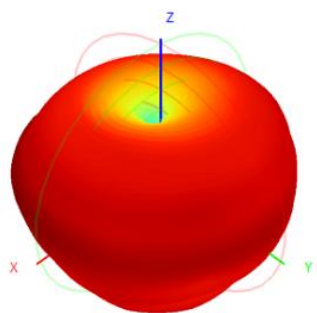
YZ

XY

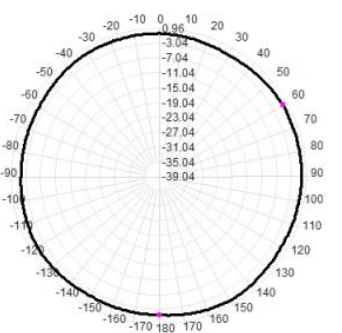
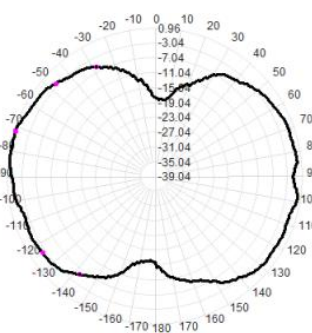
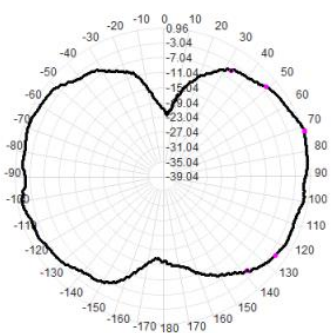
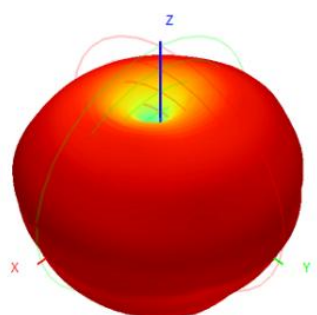
2400MHz



2450MHz



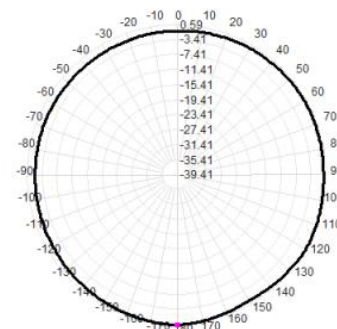
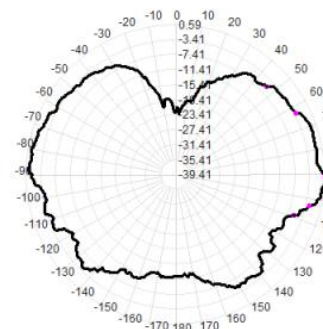
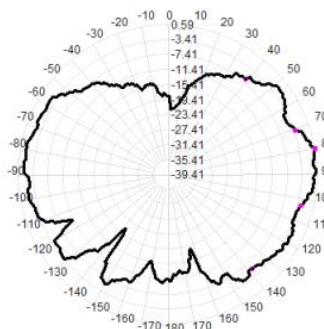
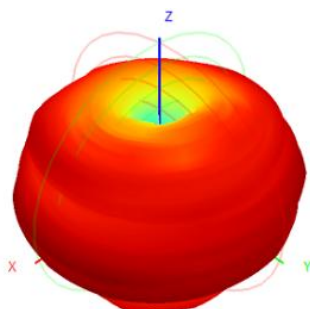
2500MHz



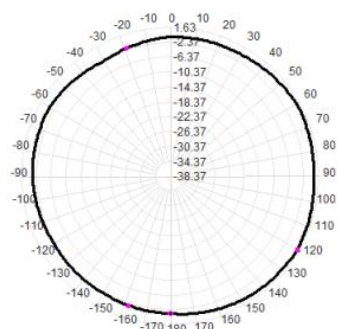
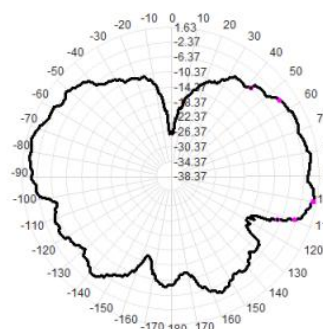
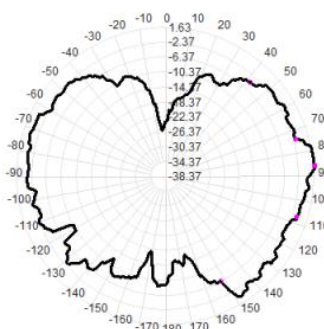
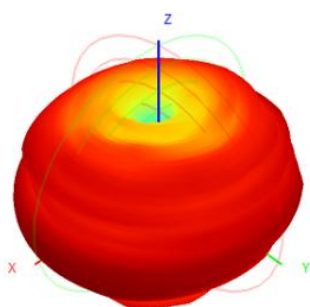
Product Number:AN2450-02C01BX-W

Product Name: Antenna

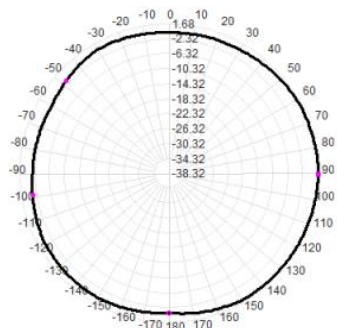
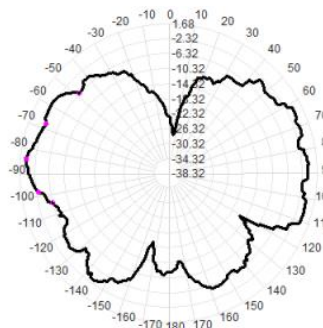
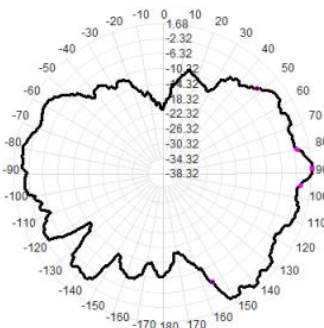
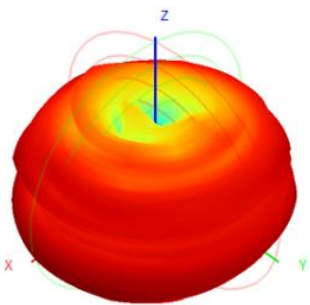
5150MHz



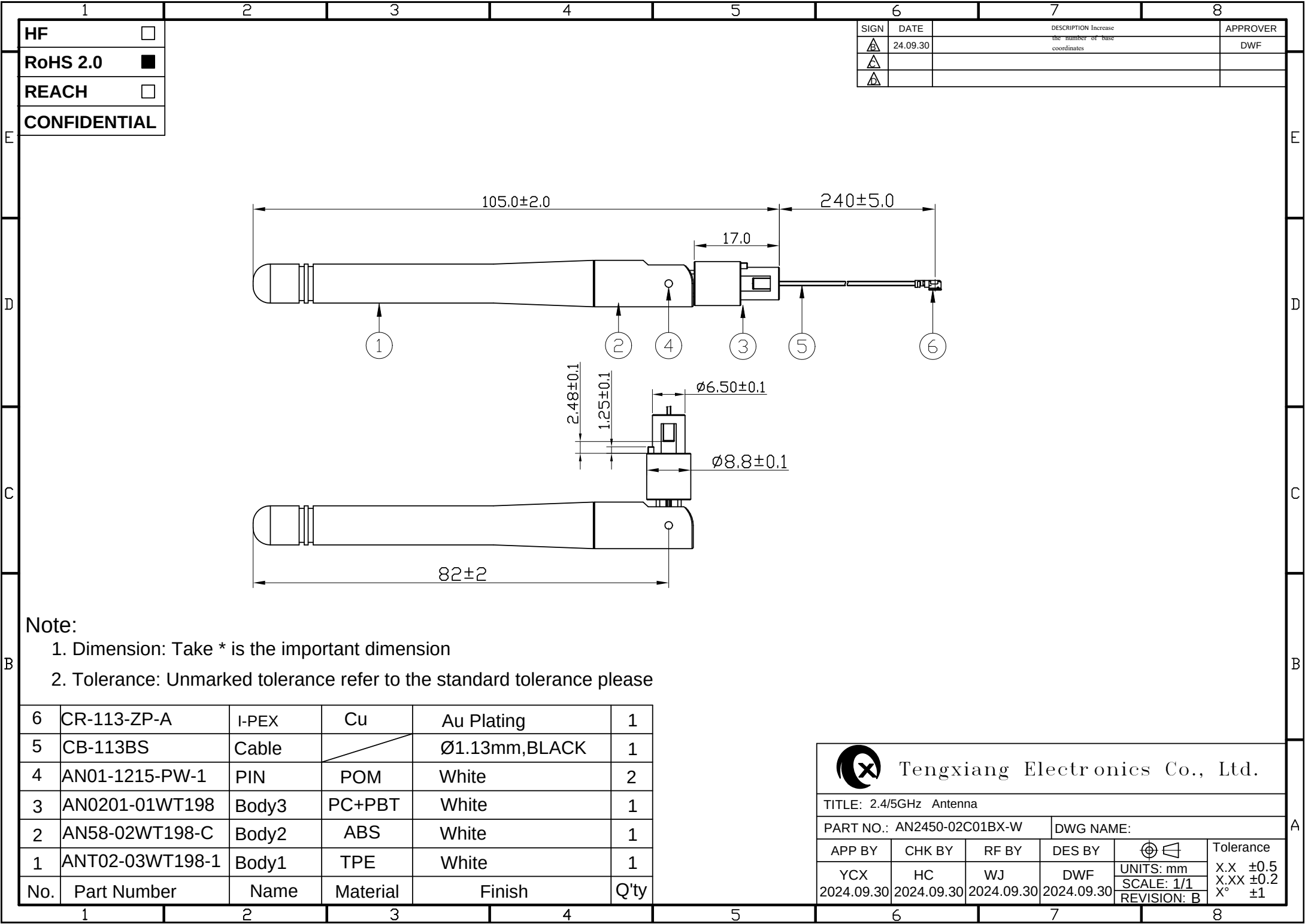
5550MHz



5850MHz



5. Mechanical Drawing See attached files



HF	☐
RoHS 2.0	☒
REACH	☐
CONFIDENTIAL	

SIGN	DATE	DESCRIPTION Increase the number of base coordinates	APPROVER
	24.09.30		DWF

Note:

1. Dimension: Take * is the important dimension

2. Tolerance: Unmarked tolerance refer to the standard tolerance please

6	CR-113-ZP-A	I-PEX	Cu	Au Plating	1
5	CB-113BS	Cable		Ø1.13mm,BLACK	1
4	AN01-1215-PW-1	PIN	POM	White	2
3	AN0201-01WT198	Body3	PC+PBT	White	1
2	AN58-02WT198-C	Body2	ABS	White	1
1	ANT02-03WT198-1	Body1	TPE	White	1
No.	Part Number	Name	Material	Finish	Q'ty

TITLE: 2.4/5GHz Antenna					
PART NO.: AN2450-02C01BX-W			DWG NAME:		
APP BY	CHK BY	RF BY	DES BY		Tolerance
YCX	HC	WJ	DWF	UNITS: mm	X.X ±0.5
2024.09.30	2024.09.30	2024.09.30	2024.09.30	SCALE: 1/1	X.XX ±0.2
				REVISION: B	X° ±1

Product Packaging Specifications

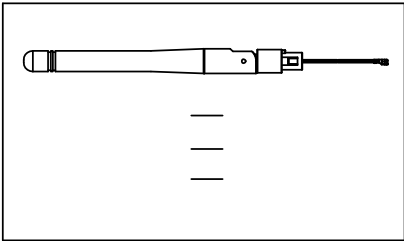
PACKING CRITERION

Date: 2024.09.30

Page: 1 of 1

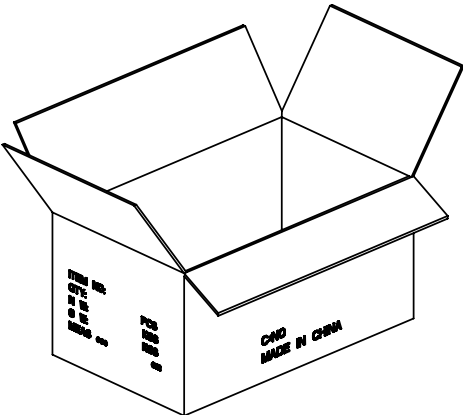
Part Number : AN2450-02C01BX-W	Revision : B
Name: Antenna	Customer : ALL

1 . Enter PE bag 。



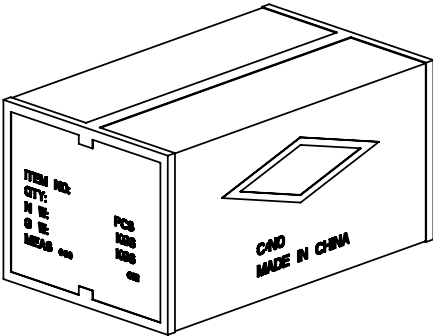
50pcs/ PE bag

2.PACKING 。



1000pcs/Carton

3. SEALING 。



SIDE

ITEM NO:
QTY: 1000
N W:
G W:
MEAS

PCS
KGS
KGS

FRONT



C/NO
MADE IN CHINA



APPROVED BY : YCX CHECKED BY : HC DESIGNED BY : DWF