

SPECIFICATION FOR APPROVAL

CUSTOMER: SHENZHEN FREEDCONN(FDC) ELECTRONIC CO.,LTD
CUSTOMER PARTNO:BL07.0043.0288

SUPPLIER: ShenZhen MyAntenna RF Technology Co., Ltd.

PRODUCT MODEL: D10

PRODUCT NAME : Copper Tube Antenna PRODUCT

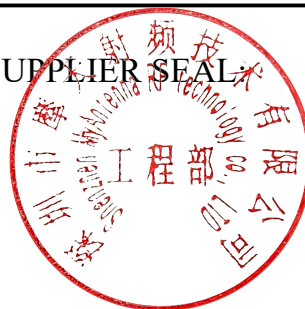
CODE : M01-0601630R0A

CUSTOMER SIGNATURE:

CUSTOMER SEAL:

SUPPLIER SIGNATURE:

SUPPLIER SEAL:



NOTE: PLEASE RETURN THIS COPY AS A CERTIFICATION OF YOUR APPROVAL

Prepared by :
Chunling Dong

Date :
2024. 04. 18

Add:

Room 410, Building A, Fenghuang Zhigu, No. 50
Tiezi Road, Gongle Community, Xixiang Street,
Baoan District, Shenzhen

Tel:

0755-86503881

Fax:

0755-27801677

VERSION INFORMATION

[illegible]

PERFORMANCE PARAMETER

1. Electrical Characteristics

1	Frequency Range	2400 MHz ~2500 MHz
2	VSWR	< 3.0
3	Peak Gain	1.03 dBi
4	Max Efficiency	60.32%
5	Impedance	50 Ω
6	Polarization	Linear polarization

2. Mechanical Parameters

1	Dimensions	$\Phi 4.0 \times 76$ mm
2	Color	Black+Silvery

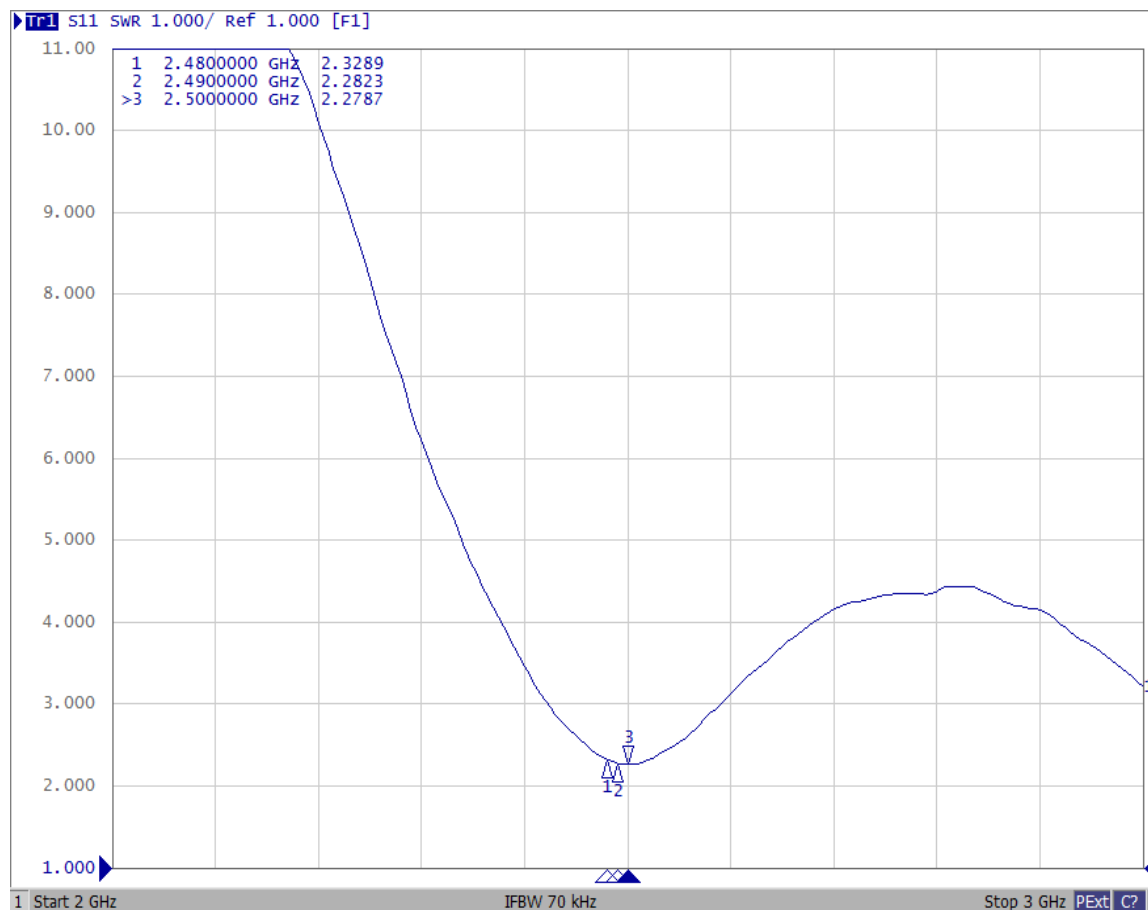
3. Environment Condition

1	Working Temp	- 40 $^{\circ}\text{C}$ ~ 85 $^{\circ}\text{C}$
---	--------------	---

TESTING CURVE

1. Performance test

1.1 V.S.W.R



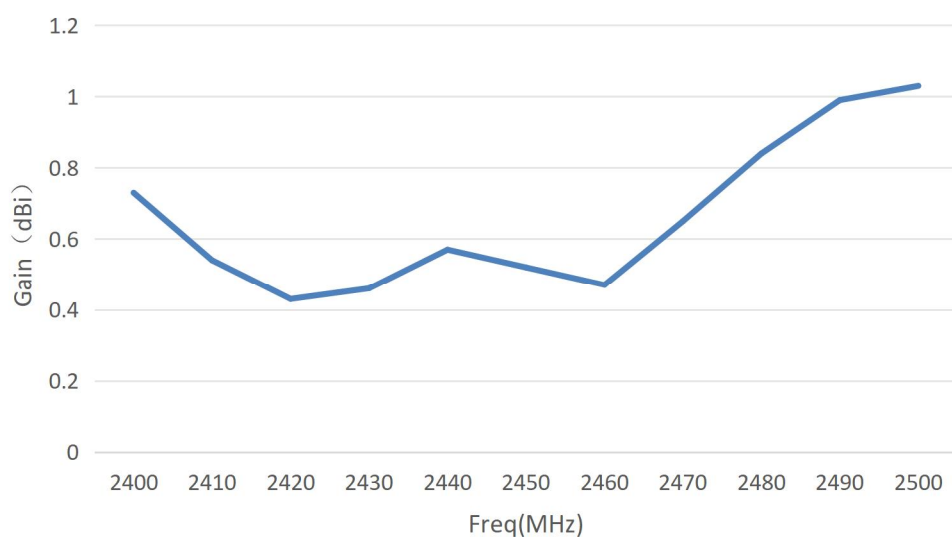
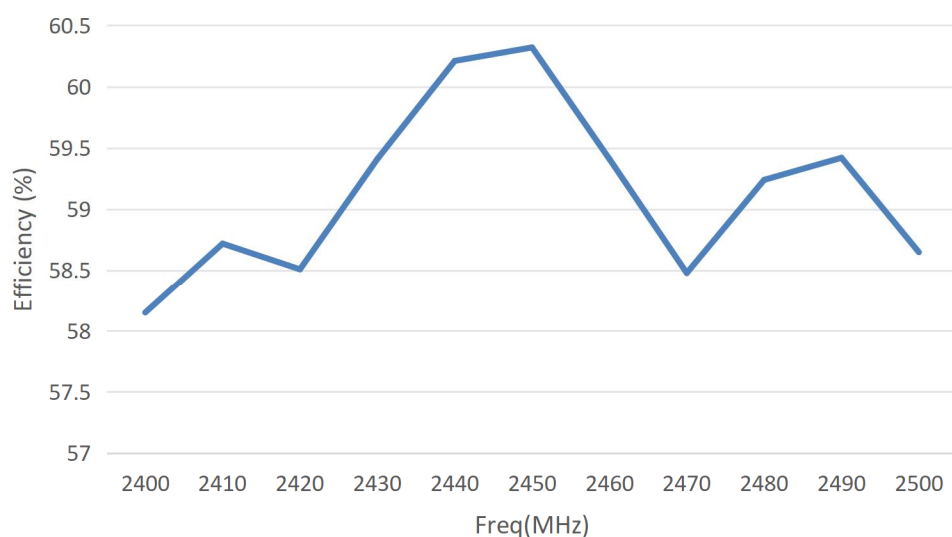
Data List

Freq	2480MHz	2490MHz	2500MHz
VSWR	2.32	2.28	2.27

Testing CURVE

2. Passive Testing

2.1 Efficiency and Gain

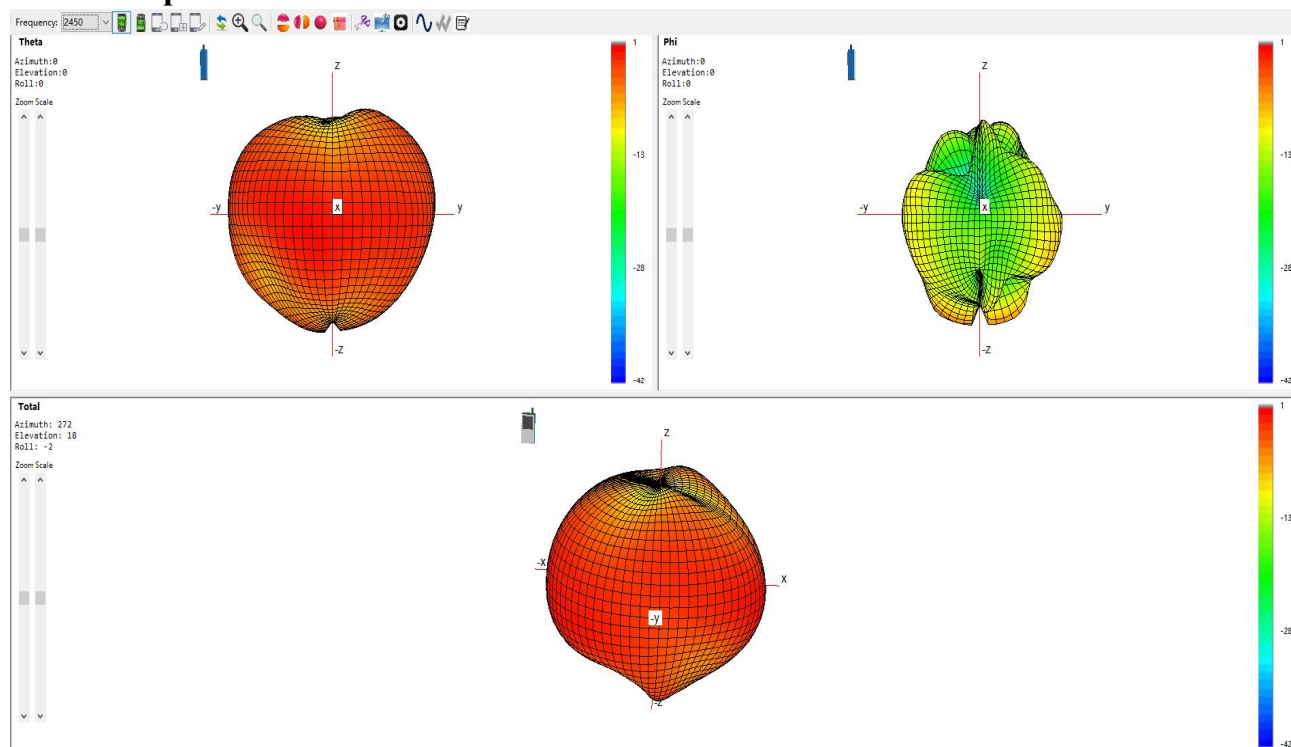


Data List

Freq (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	0.73	0.54	0.43	0.46	0.57	0.52	0.47	0.65	0.84	0.99	1.03
Efficiency (%)	58.15	58.72	58.51	59.41	60.21	60.32	59.41	58.48	59.24	59.42	58.65

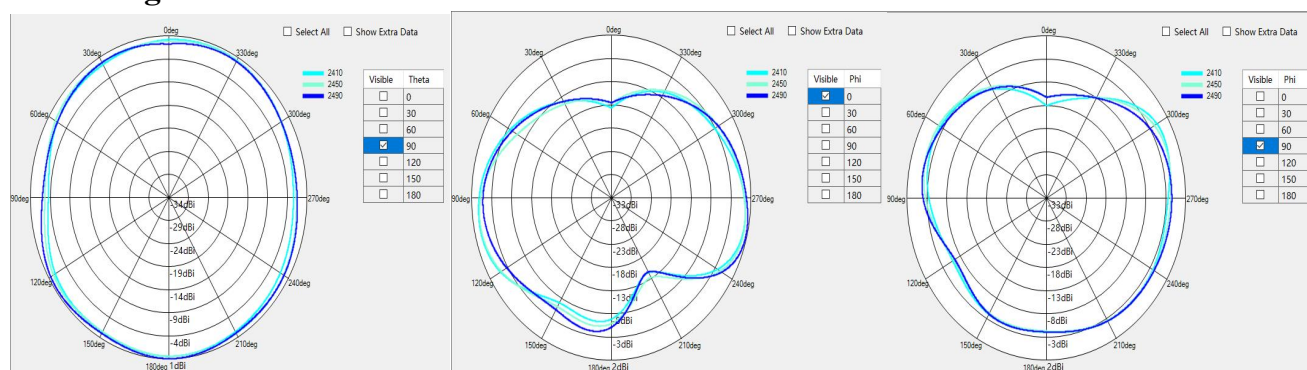
TESTING CURVE

2.2 3D Map



2450 MHz Gain=0.52dBi

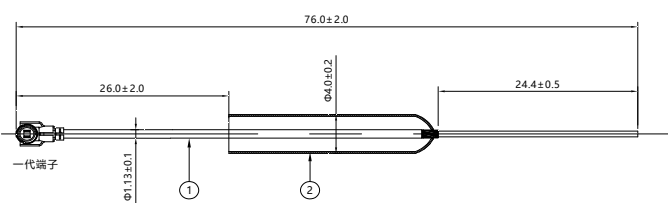
2.3 2D Figure



2410 MHz Gain=0.54dBi/ 2450 MHz Gain=0.52dBi /2480 MHz Gain=0.84dBi


SCHEDULE DRAWING

	1	2	3	4	5	6	7	8
REV.	DESCRIPTION		APPD.	DATE				
A	INITIAL RELEASED		Chen	2024/04/18				



备注:

- 频率范围: 2400-2500MHz
- 阻抗: 50Ω
- 驻波: ≤3.0
- 最大增益: 1.03dBi
- 线极化/线极化
- 温度范围: -30℃ - 85℃
- 各零件符合ROHS

DIMENSIONS ARE IN MILLIMETERS		CUS P/N: D10			
UNLESS OTHERWISE SPECIFIED		PART NO.: M01-0601630R0A			
TOLERANCES		APPD: 陈建伟		TITLE: D10	
ANGLES = ±3°		CHKD: 陈建伟		DWG NO.:	
UP TO 6 = ±0.1		DR: 陈建伟		SCALE: 1:1	
6-40 = ±0.2				SHEET: 1/1	
40-120 = ±0.6				REV.:	
120-315 = ±1.0				V01	
ABOVE 315 = ±1.6					


2	Copper Tube		Silver	Φ4.0*25.0mm	1	
1	Coaxial Line		Black	Φ1.13*76.0mm	1	
No.	Name	Material	Color	Treatment	Amount	Remark
1						

Installation Position Images



Certificate of Acceptance Sample Size Inspection Report

Project name		Macaroon		Antenna type	LoRa&BT antenna	Test date	2023.06.08		
Appearance inspection standards				1. There is no abnormality on the surface of the antenna.					
Dimensional inspection standards				2. Within the tolerance range required by the drawings					
code name	Check item	Specification	Test tool	Number of samples	Determination			Note	
1	Appearance	As above standards	Visually	3	OK				
2	Size	As shown in the following table	Cursor Caliper	3	OK				
No.	Test project	Specification	Detection tool	Test results (including 6 data recorded with the highest and lowest values)					
				1	2	3	4	5	6
1	Size	76.0±2.0	Caliper						
2		Φ4.0±0.2							
3									
4									
5									
Remark									
Approval: Yongcheng Yang		Reviewer: Jianyou Chen			Inspector: Chunling Dong				

 全球领先的天线和电子标签产品供应商			File No	MA-QCW-2404-025		File name	D10			Prepared by	Yan Zhao
			Version Book	A						Review	Maoyuan Xu
			QC drawing			Release date	2024. 04. 18		Effective date	2024. 04. 18	Page
No.	process	Process name				Process parameters / quality characteristics	Use equipment fixtures	Testing Equipment	Inspection Method	Check frequency	Usage records
1		Incoming inspection	Inspection standards / drawings	Caliper	/	Visually	AQL random inspection	IQC inspection report	IQC		
2		Picking	Production order	/	/	/	/	Picking list	warehouse keeper		
3		Unboxing (unpacking) to confirm quantity	delivery order	/	/	/	/	delivery order	operator		
4		Stick bracket	Drawings /BOM	/	/	Visually	Full	Productio	operator		

							inspection	daily report		
5		First article appearance confirmation	sealed sample	/	Visually	Visually	/	IPQC first article inspection record	IPQC	
6		First article performance testing	The product meets the requirements in the design specifications	/	Network Analyzer	test Visually	/	IPQC first article inspection record	IPQC	
7		Inspection	IPQC process inspection regulations	/	Visually	Visually	2H	IPQC process inspection records	IPQC	

8	Full appearance inspection	Technical documents / drawings / appearance judgment criteria	/	Visually	Visually	Full inspection	Production daily report	inspector	
9	test	Technical documents / drawings	/	Network Analyzer	test Visually	Full inspection	Production daily report	operator	
10	Packaging (bagging) quantity confirmation	Drawings /BOM	/	/	Visually	Full inspection	Production daily report	operator	
11	test	IPQC process inspection regulations	/	Visually	Visually	2H	IPQC process inspection records	IPQC	
1	Warehouse	Production	/	/	/	/	Product	warehouse	

2			order					storage order	keeper	
1		Inspection	Shipping			AQL random			OQC	
3		before shipment	Notice	Network Analyzer	Measurement	inspection	/			
<p>Note:</p> <p><input type="checkbox"/> Indicates operation and processing;</p> <p><input checked="" type="checkbox"/> Indicates confirmation, inspection, judgment, approval;</p> <p><input type="checkbox"/> Indicates into storage;</p> <p><input type="checkbox"/> Indicates transportation;</p>										
Mark	Modify content			Version	Date	Editor	Approval			
				A	2024.04.18	Li Ling	Xu Maoyuan			

ROHS TEST REPORT

Project material name	Material coding	Report test sample name	testing facility	Detection time	Test report number	Test conclusion	Remark
D10	M01-0601630R0A	CU	SGS	2024/01/03	CANEC23017203304	OK	
		Electroplating	SGS	2023/11/27	CANEC23014590901	OK	
Fiction: Chunling Dong		Reviewer: Jianyou Chen		Date: 2024.04.18		Stamping place:	

PRODUCT VERIFICATION

Test items	Test Instructions/Test Standards	Goal requirements	Product Validation (PV)							Remark
			Sample		Test Location			Test	Responsible	
			Quantity	Type	Client	Supplier	Third party	Result		
Appearance inspection	There should be no defects such as dents, scratches, cracks, deformations, burrs, mildew spots, etc. on the surface; the surface coating should not blister, crack, or fall off; the metal parts should not be rusted or other mechanically damaged; the pouring material should not spill out.	Appearance normal	Full inspection	Tooling parts		√		OK		
Size	According to drawing size	Within dimensional tolerance	3 pcs	Tooling parts		√		OK		
Performance check	The product meets the requirements in the design specifications	Short circuit and continuity test	Full inspection	Tooling parts		√		OK		
Resistant to salt spray	48 hours salt spray test	The surface will not rust	3pcs	/		√		OK		

		after cycle verification								
Requirements for banned and restricted substances	Tested according to RoHs requirements	Products should comply with RoHs standards	/	/		√		OK		
Packaging rules	Place according to drawing specifications	Place according to visual inspection	Full inspection	Tooling parts			√	OK		