



Specification

Dimmer antenna

Shenzhen Topband Co.,Ltd.

The company's part number

TB-TGQ-2. 4G-60-20220908

Dated: 2022. 09. 08

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1.Both parties confirm

1.1 Customer confirms signature

Customer: Shenzhen Topband Co.,Ltd.

Customer Department/Position	Confirmation person's signature	Confirmation date
Hardware/RF		
Structure		
project manager		
Business/Purchasing		
Approve		

1.2Shuodian Technology confirms the signature

Department / Occupation	Confirmation person's signature	Confirmation date
Antenna Engineer		
structural engineer		
project manager		
QA		
Approve		



2. General matters

2.1 Scope of application

This specification is only applicable to Shenzhen Topbond Co., Ltd.
dimmer antenna

2.2 Operating temperature range

The operating temperature range of this product is $-20 \sim +65^{\circ}\text{C}$

2.3 Storage temperature range

This product is stored at $-30 \sim +75^{\circ}\text{C}$

3. Product general specifications

NO.	ITEMS	DETAILS
1	model	Light modulator
2	frequency band	2.4-2.5GHz
3	VSWR	≤ 2.0
4	Gain	3.6dBi
5	Radiation Efficiency	$\geq 50\%$
6	impedance	50Ω
7	Antenna type	Dipole
8	Antenna implementation	PCB+1.13Coaxial/Generation Terminals



9	Antenna pictures	
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4.Product Specifications

4.1 Product structure parameters

4.11Product material composition:

serial number	Material	Specification (MM)
1	PCB	39.88*8.1mm green
2	Coaxial/Terminal	Ø1.13 60MM black/generation

4.12 Appearance

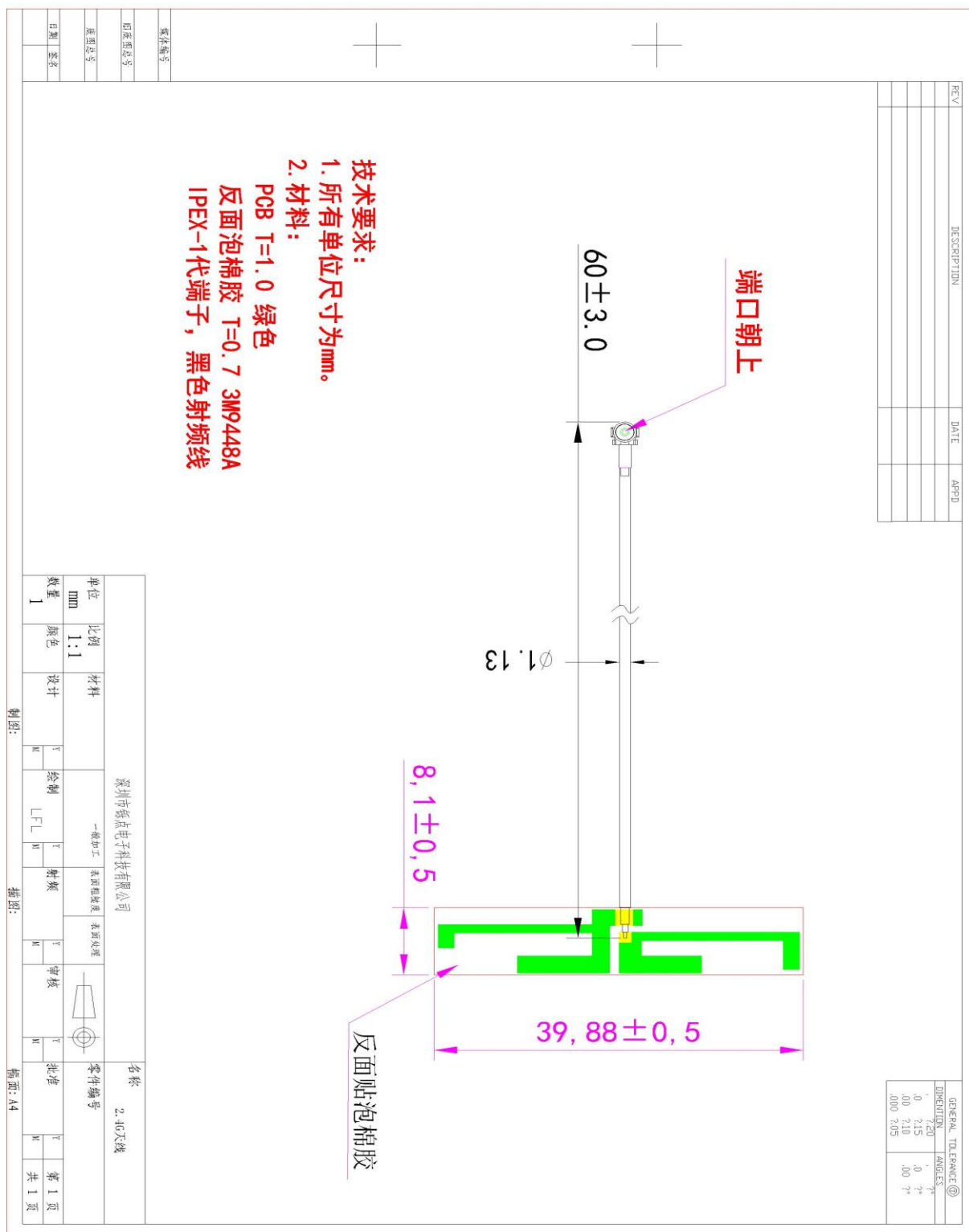
The appearance of the product is good, and there are no scars, sweat marks, protrusions and other defects that seriously affect the appearance.

4.13 Structural dimensions

Refer to product drawings:



Product drawings:





4.2 Product electrical performance test data

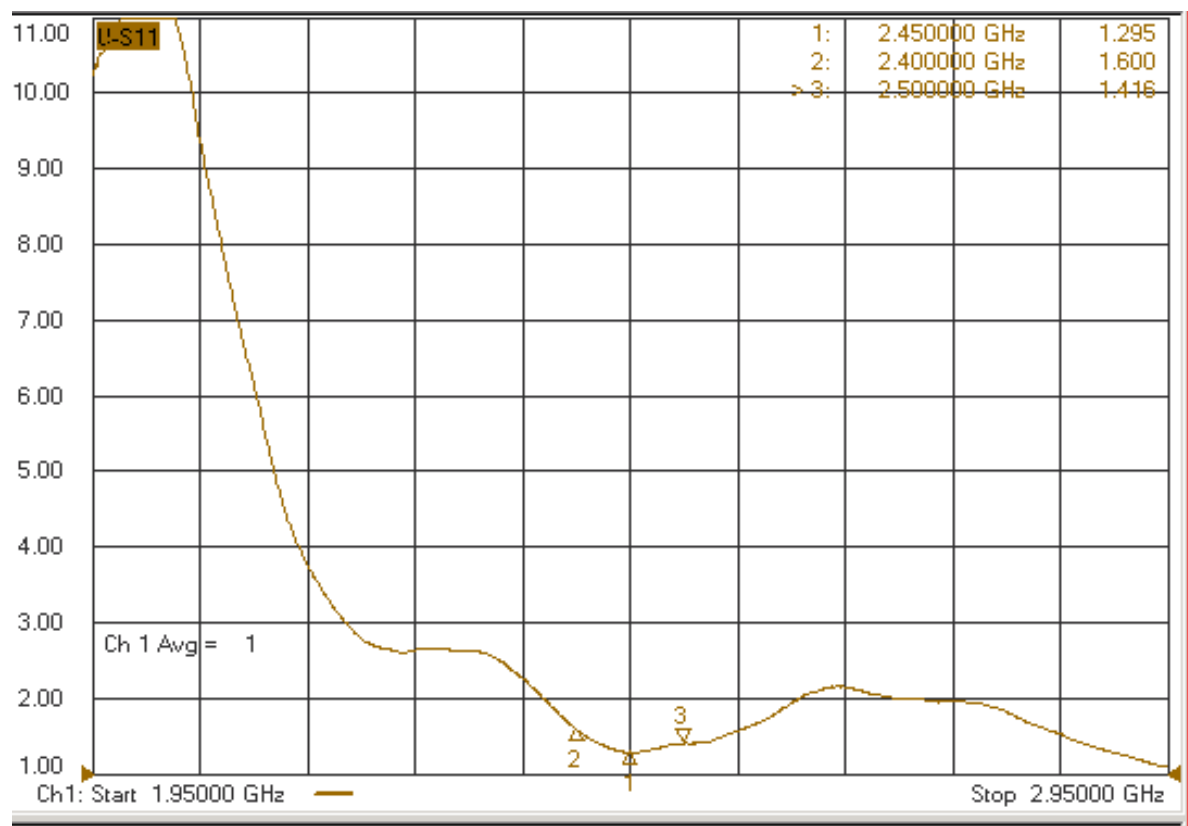
4.21 Test environment and equipment

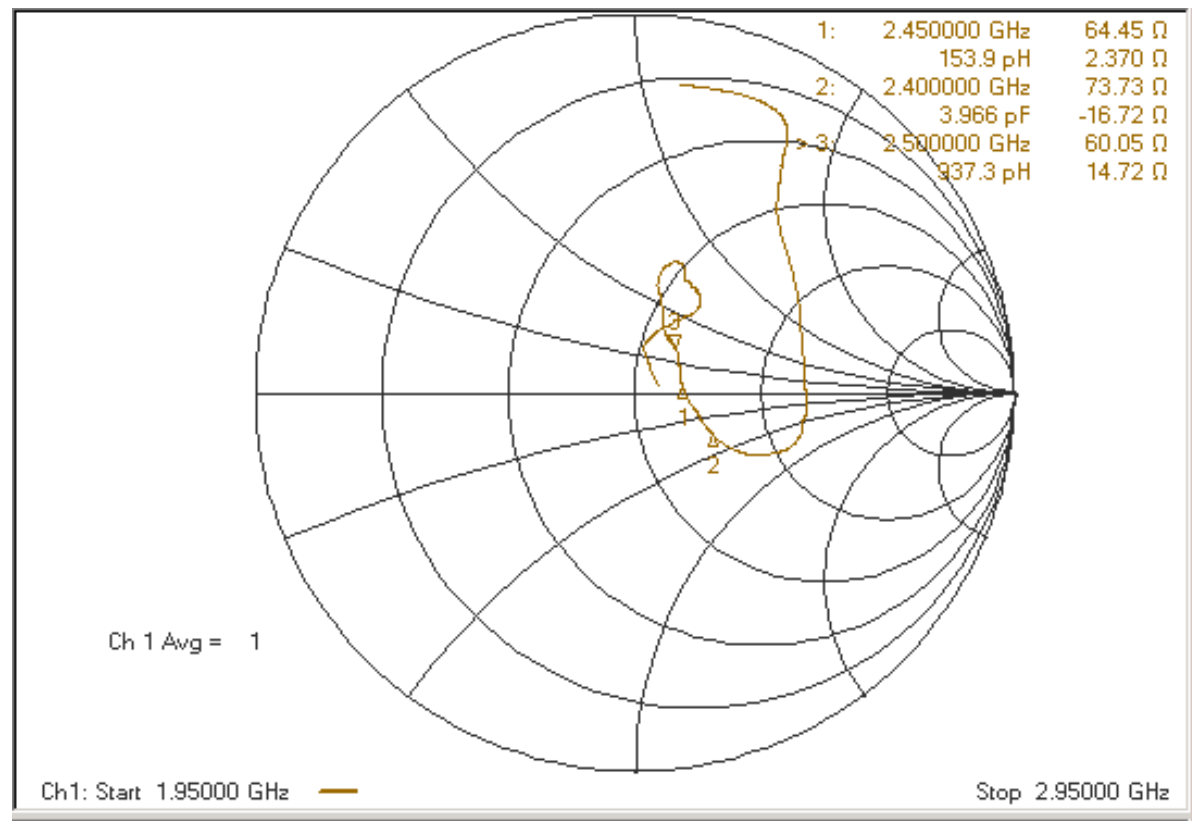
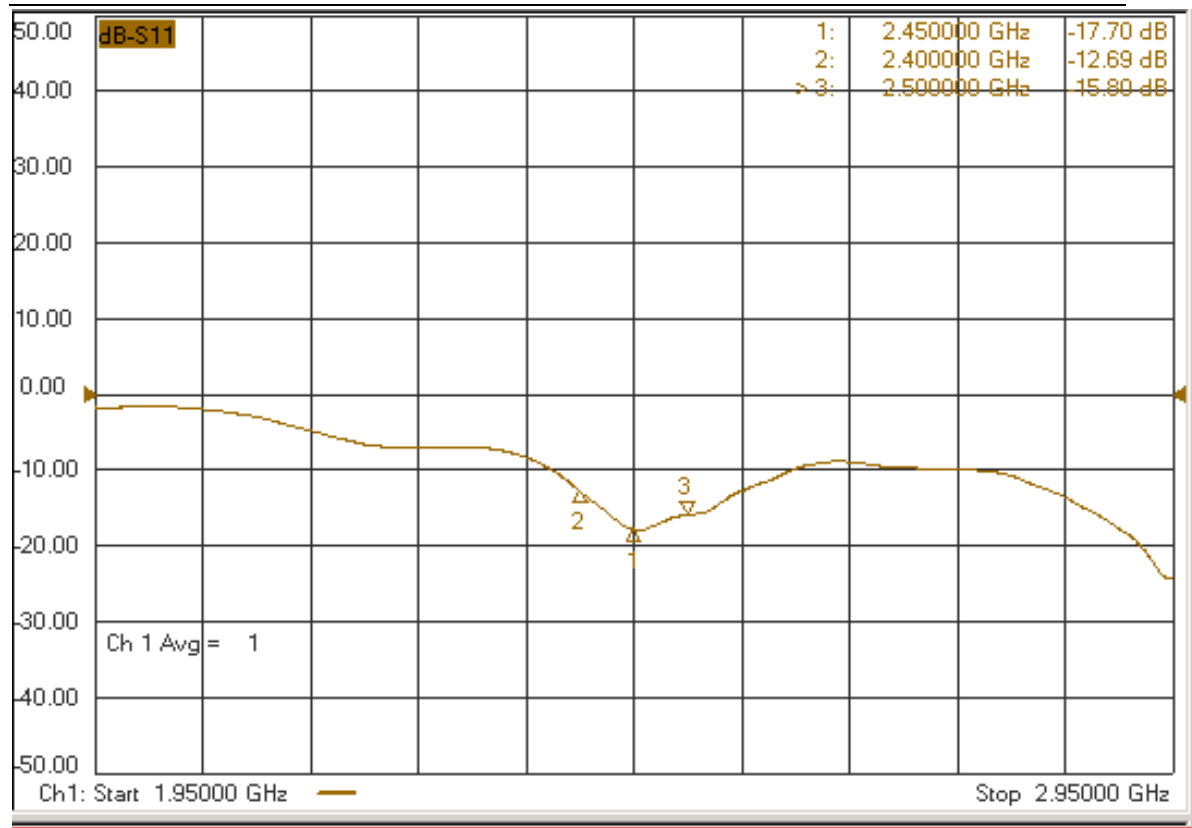
test environment:	Test Equipment:
Temperature: 10℃——+30℃	Network Analyzer
Relative humidity: ≤80% (+40℃)	Agilent E8358A
Atmospheric pressure: 750mmkg±30mmkg	ETS anechoic chamber

4.22 Product electrical performance test data:

4.22.1 S11 diagram of the product:

Marker	2400MHz	2450MHz	2500MHz
Returnloss	-12.6	-17.7	-15.8
VSWR	1.6	1.2	1.4





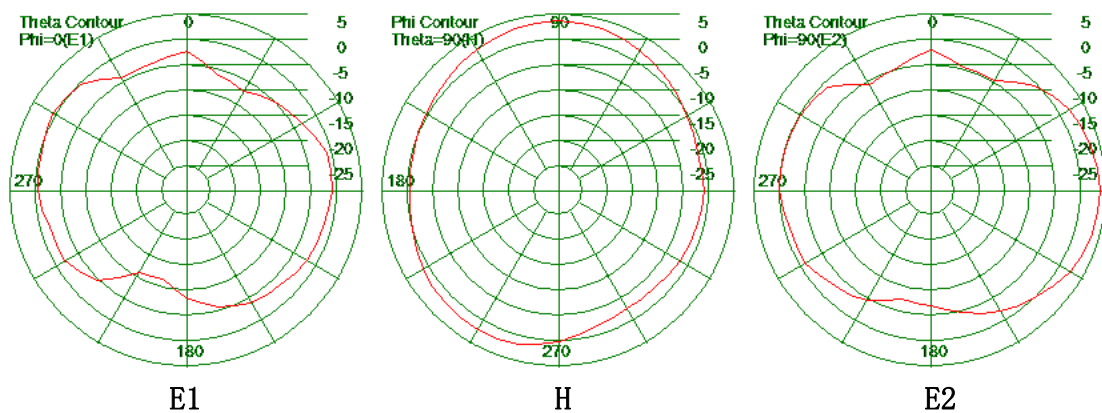
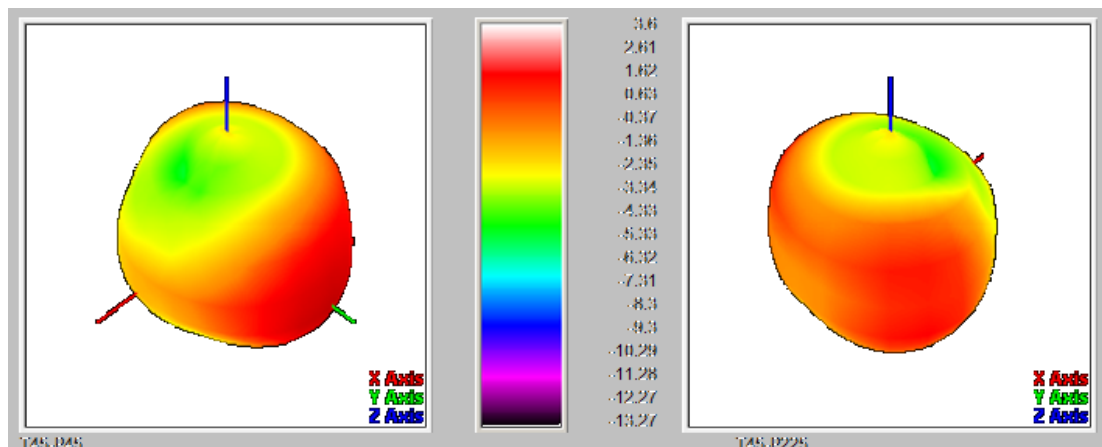


4.22.2 Antenna efficiency/gain

Freq. (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	3.42	3.37	3.35	3.43	3.59	3.60	3.54	3.36	3.40	3.31	3.15
Efficiency (%)	75.0	69.7	69.0	69.5	71.5	71.0	69.1	65.5	66.1	63.9	61.3

4.22.3 Radiation pattern

Frequency: 2450MHz





5.Product packaging

Packing:

Ziplock bag packaging, 200PCS per bag.

6. Document history

Document No.	
Release Date	2022/09/08
Author	Hungjie
Review	WH

Revised History

Date	Version	Revised Record
2022/09/08	1.00	New Project