Antenna Approval Sheet

For
M21 Project

Customer	EKEN INNOVA TION	Project	M21
Band	WiFi 2.4GHZ		
ZC PN	T21-043		
Version	R:A	Data	2025-6-17

RF	
Checked By	
Confirmed By	
Cust Confirm	

1.Manufacturer information

Company name: Shenzhen Zhongcheng communication products Co., Ltd

Address: 5th floor, building C, Huafeng Industrial Zone, Liuxian Road, 71 District, Bao'an, Shenzhen

Tel: 0755-29995224

Fax: 0755-27863505

2. Summary of the DUT

M52 Picture

Antenna Picture

3. Electrical Specification:

Antenna types	Built-in WIFI Antenna
Frequency	2400-2500 MHZ
Impedance	50 Ω
VSWR	< 2.0
PeaK Gain	2.99dBi REF
Efficiency	>35%
Antenna Material	Copper tube+coaxial line
Connector Type	1.13 MHF-1-Plug

4. Test Condition

4.1	TEST ITEM	TESTING INSTRUMENT	REMARKS
PASSIVE TEST	1. Antenna Gain 2. S.W.R 3. Return Loss 4. Radiation Pattern	1. Network analyzer （R&S ZVL6） 2. Network analyzer （HP 8753D）	

4.2 Matching Circuit The matching circuit was Default

4.3Antenna installation diagram:

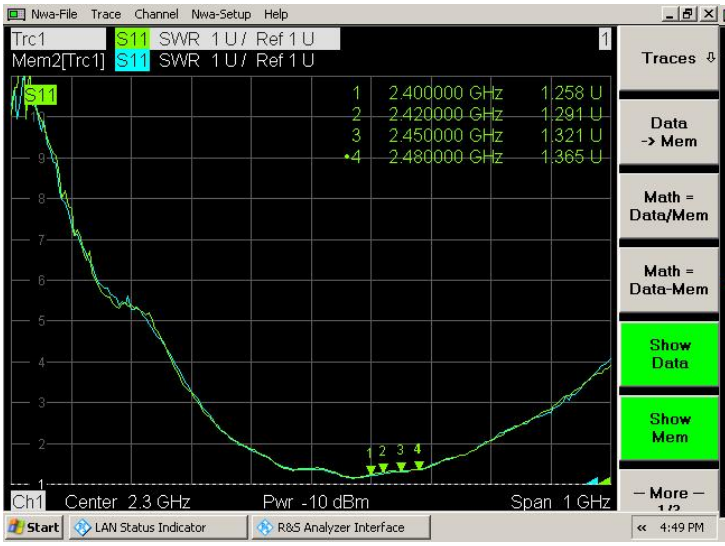
5.1 RF Performance –WIFI Antenna

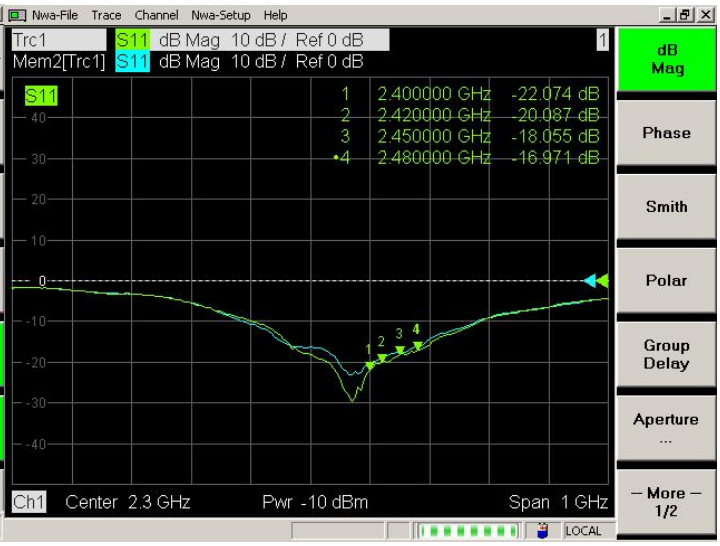
5.1 Passive parameters

Freq. (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	2.63	2.68	2.71	2.99	2.6	2.23	2.6	2.49	1.96	1.77	1.7

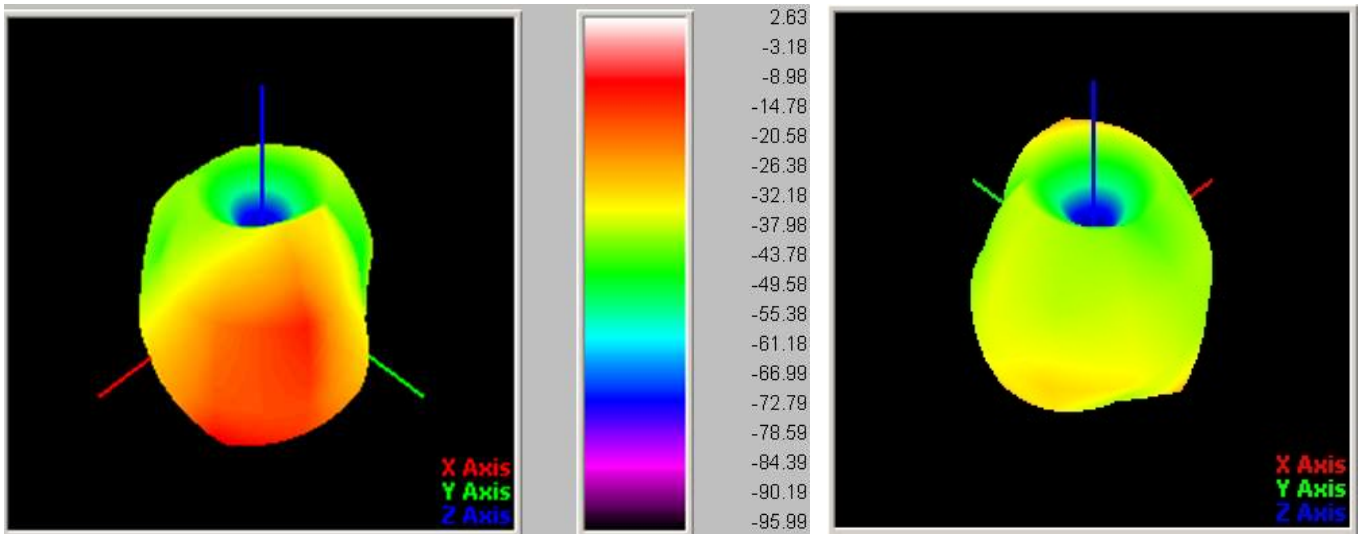
5.2 S Parameter

Frequency (MHz)	2400	2450	2480
Return Loss(dB)	-22	-18	-16.9
VSWR	1.25	1.32	1.36

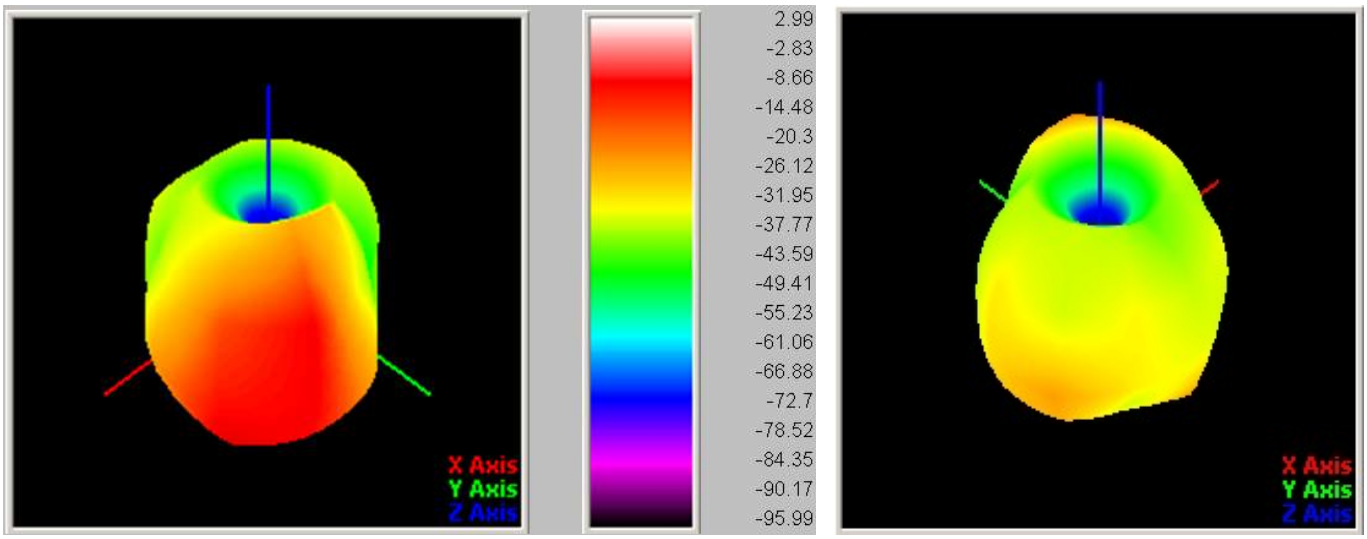




5.3 Antenna 3D Radiation Pattern (Unit:dbi)



Freq2400.00MHZ



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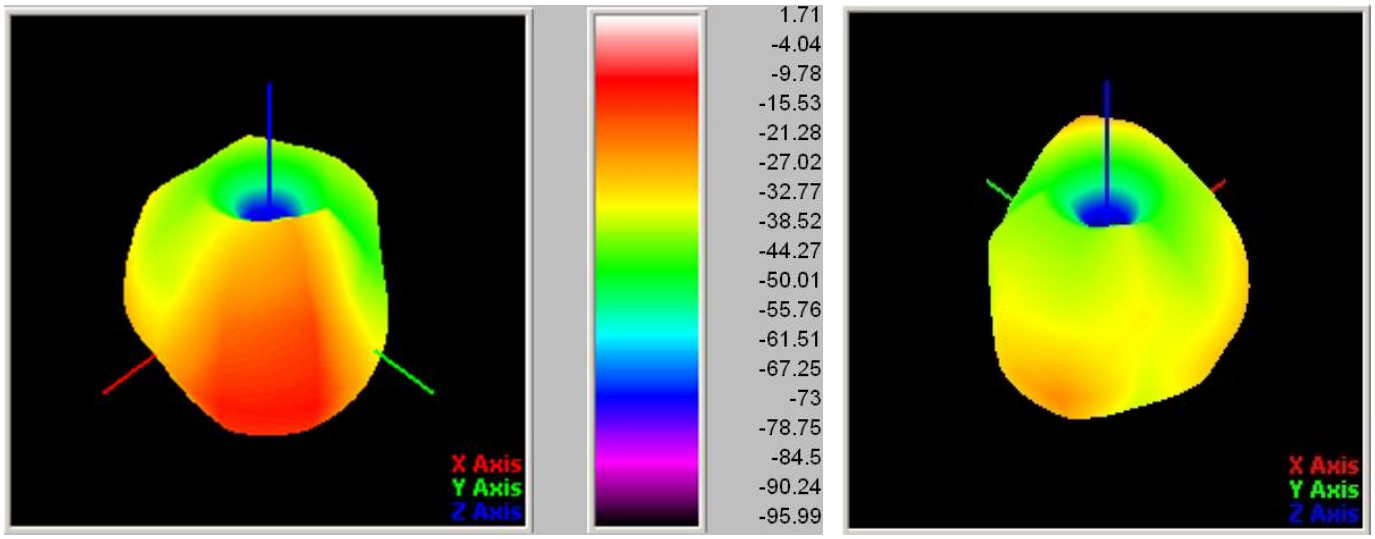
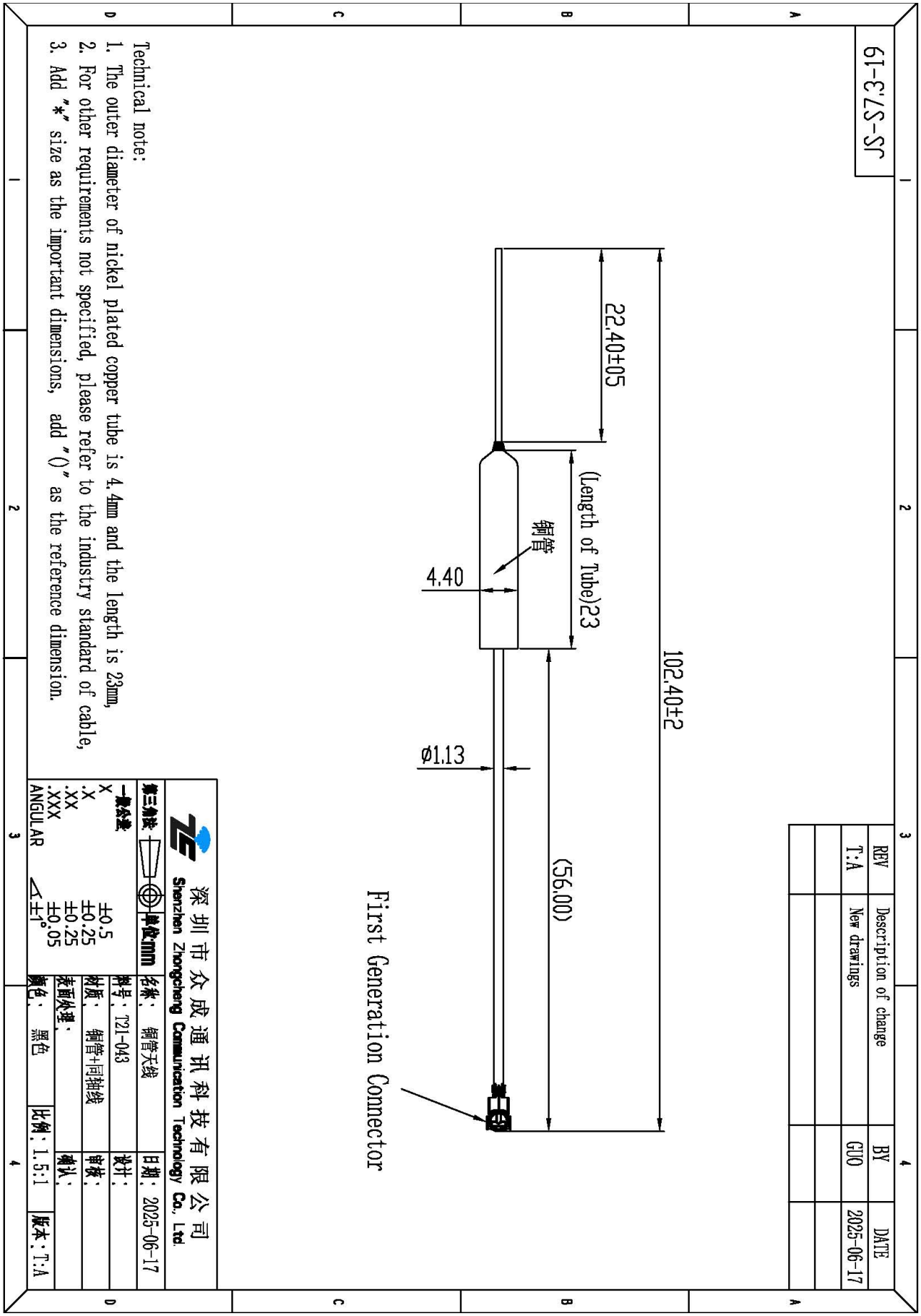


Freq2500.00MHZ

6. ME Drawing for the antenna