

ANTENNA SPECIFICATION

2.4 GHz / 5.8 GHz Dual-Band Antenna

Antenna Gain: 3.02 dBi @ 2400-2500 MHz; 2.79 dBi @ 5100-5900 MHz

Manufacturer	Shenzhen Tejjate Technology Co., Ltd.
Antenna Name	2.4 GHz / 5.8 GHz Dual-Band Antenna
Antenna Model / Part No.	AN2400-0195Z-02
Connector	Reverse-Polarity SMA Male
Document Revision	A

TEST AND APPROVAL RECORD

The following signatures confirm completion of testing and technical approval.

Test Date	2026-08-12
Tested By - Name	Xing Nan
Tested By - Signature	<i>Xing Nan</i>
Approved By - Name	Lu Xiao
Approved By - Signature	<i>Lu Xiao</i>
Approval Date	2026-08-13

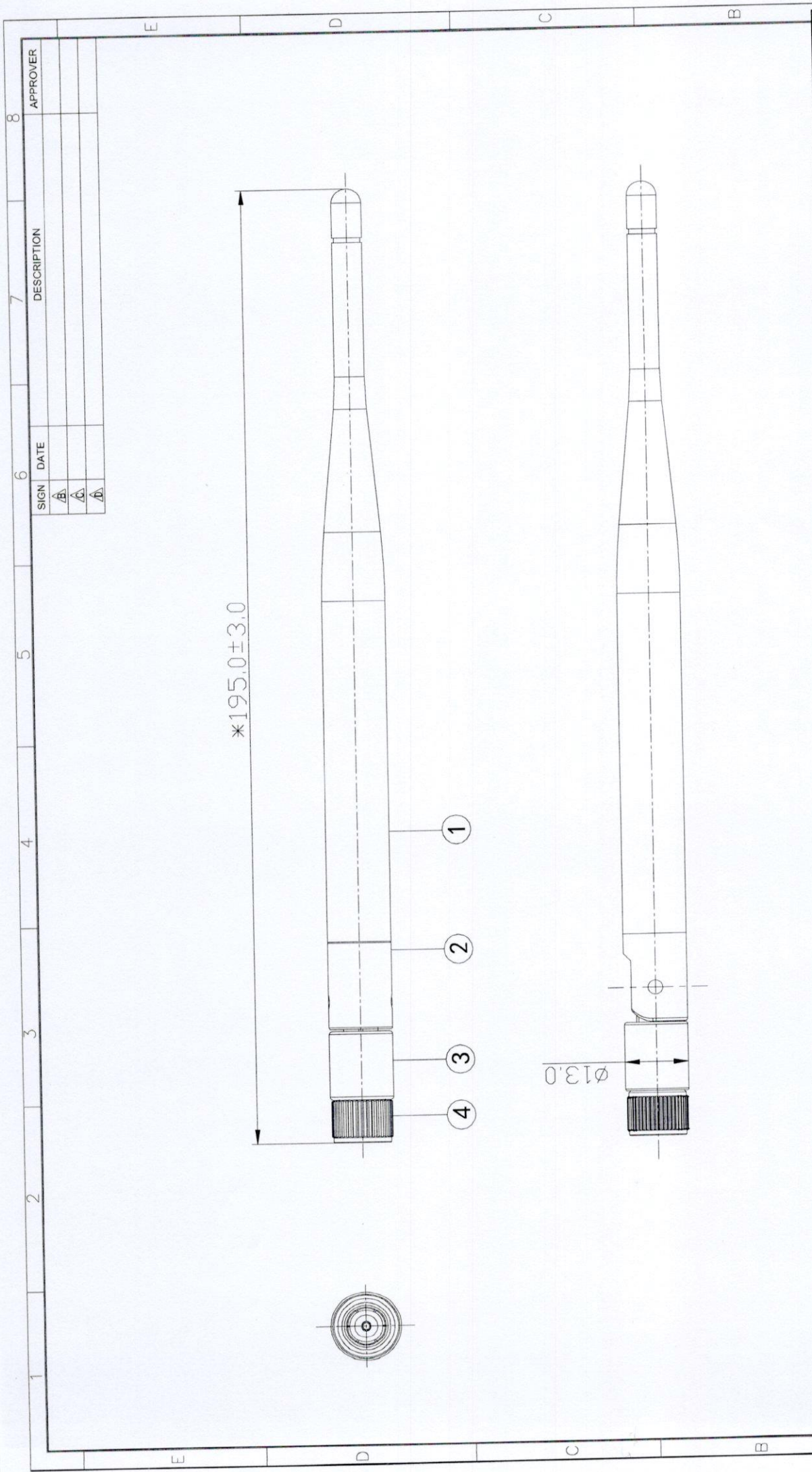
CUSTOMER SIGNATURE CONFIRMATION

Customer confirmation: ☐ Approved ☐ Approved with Comments ☐ Rejected

Customer Name / Company	Authorized Signature	Date / Company Stamp

TABLE OF CONTENTS

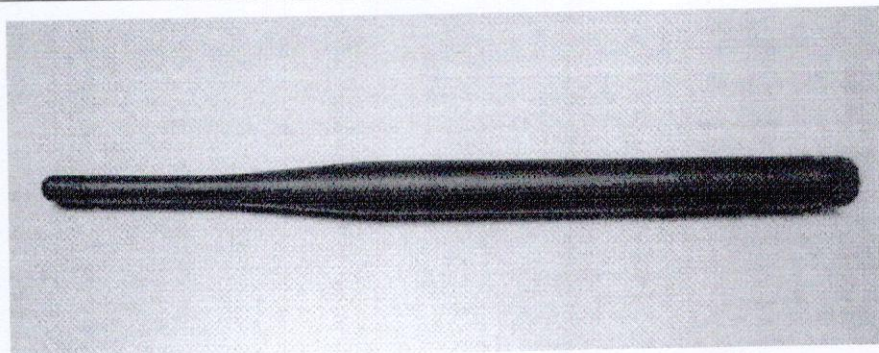
NO.	CONTENTS	PAGES	PAGE
1	Cover and Customer Approval	1	1
2	Table of Contents	1	2
3	Product Drawing	1	3
4	Electrical Test Report	1	4
5	Passive Test Method	1	5
6	Active Test Method	1	6
7	S-Parameter Test	1	7
8	2.4 GHz Passive Test Data	1	8
9	5.8 GHz Passive Test Data	1	9
10	Gain Test	1	10



MANUFACTURER: SHENZHEN TEJIATE TECHNOLOGY CO., LTD. 6/F, Nanguang Building, Huaqiang North, Futian District, Shenzhen, China				PRODUCT: 2.4 GHz / 5.8 GHz DUAL-BAND 6 dBi ANTENNA			
PART NO.: AN2400-0195Z-02				DRAWING NO.: AN2400-0195Z-02			
APPROVED BY Jeff 2011-06-17		CHECKED BY Leon 2011-06-17		DESIGNED BY YD 2011-06-17		DOCUMENT DATA UNITS: mm SCALE: 1:1 REVISION: A	
4	SMA194-CCT5AN19	SMA Male Reverse	Cu	Electrodeposition	1		
3	AN03-T07B	Body1	PA+ABS	Black	1		
2	AN9201-07B	Body2	ABS	Black	1		
1	AN9201-04B	Body1	TPE	Black	1		
No.	Part Number	Description	Material	Finish	Q'ty		

ELECTRICAL TEST REPORT

Sample Photo



A. Electrical Characteristics

Frequency	2400-2500 MHz	4900-5900 MHz
S.W.R.	≤ 2.0 @	
Antenna Gain	3.02 dBi @ 2400-2500 MHz; 2.79 dBi @ 5100-5900 MHz	
Polarization	Linear	
Impedance	50 Ohm	

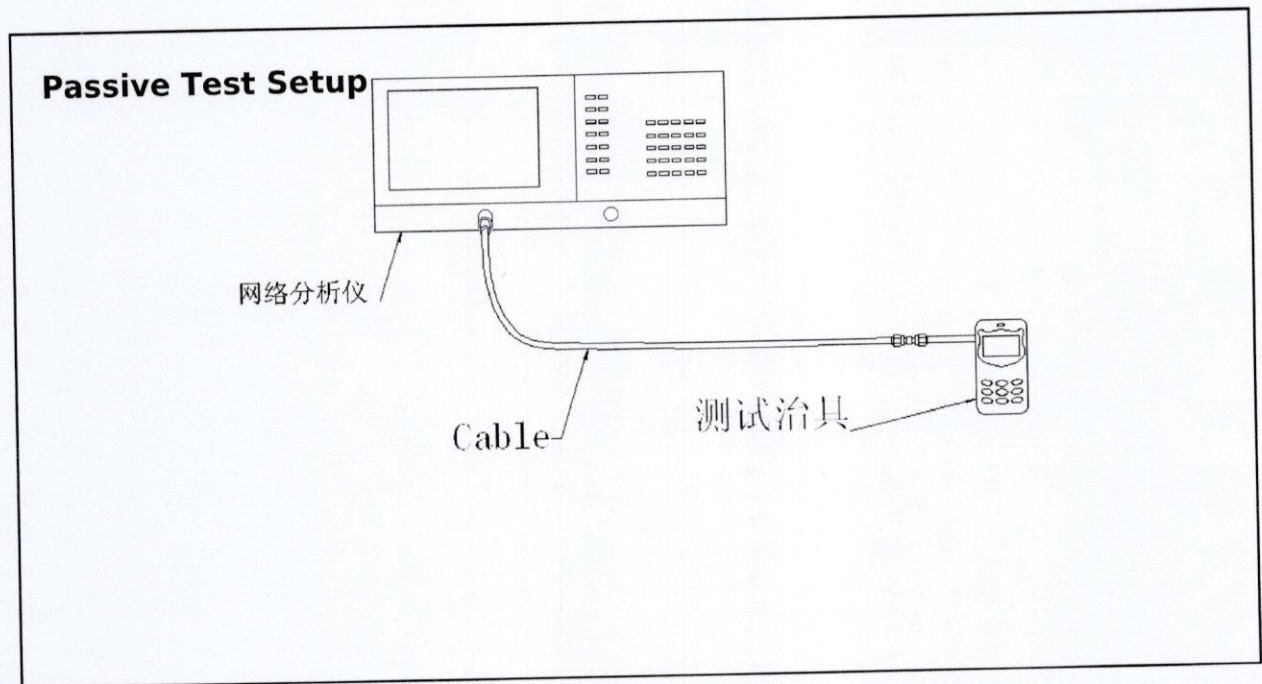
B. Material & Mechanical Characteristics

Material of Radiator	CU
Material of Plastic	Body: TPE Hinge: PA+ABS Holder: PA + ABS
Cable Type	RG-178
Connector Type	Reverse-Polarity SMA Male
Connector Pull Test	≥ 5 kg
Connector Torque Test	200-500 g.cm

C. Environmental

Operating Temperature	-40 deg C to +65 deg C
Storage Temperature	-40 deg C to +80 deg C

PASSIVE TEST METHOD



S11 Test Method

Test equipment: Agilent E5071C vector network analyzer (30 kHz to 8.5 GHz).

Calibration Date: 2026-08-01

Calibration Validity Period: 2026-08-01 to 2027-07-31

Connect a 50-ohm coaxial cable to the analyzer test port.

Calibrate the cable and fixture with the appropriate calibration kit.

Connect the antenna sample through the SMA interface, then record return loss and VSWR at the specified frequency points.

ACTIVE TEST METHOD

3D test system: shielded anechoic chamber

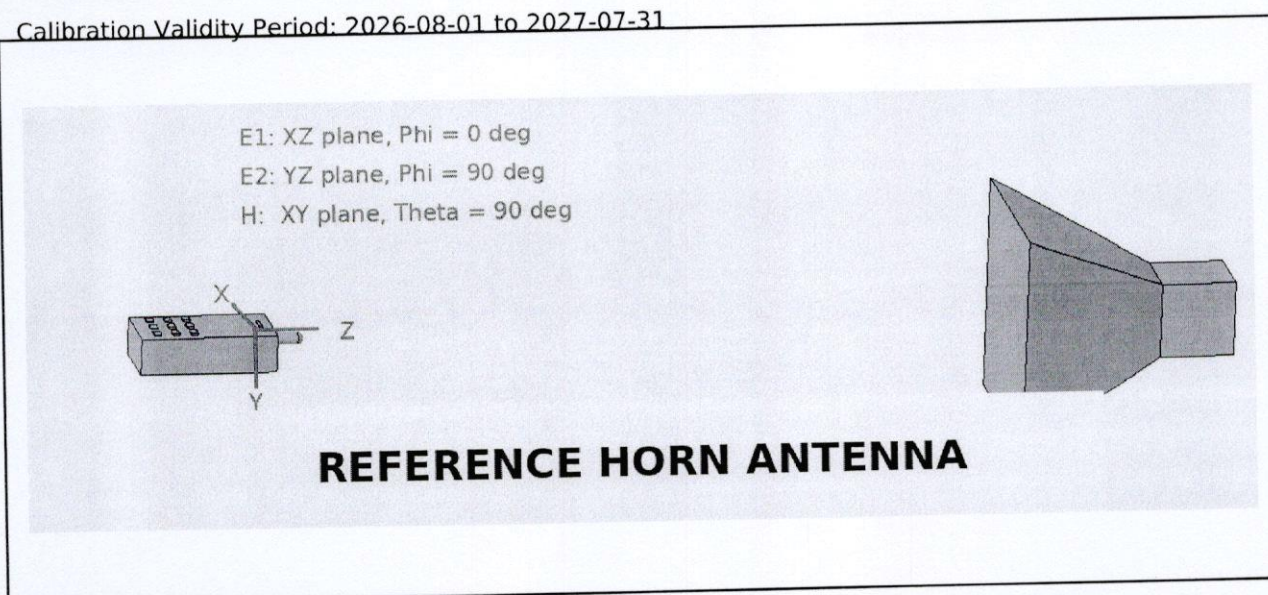
Test environment: temperature 22 deg C +/- 3 deg C; humidity 50% +/- 15%

Passive test equipment: Agilent E5071C vector network analyzer

Active test equipment: 8960 / CMW500 wireless communication tester

Calibration Date: 2026-08-01

Calibration Validity Period: 2026-08-01 to 2027-07-31



Test planes and reference horn antenna setup

TOTAL ISOTROPIC SENSITIVITY (TIS)

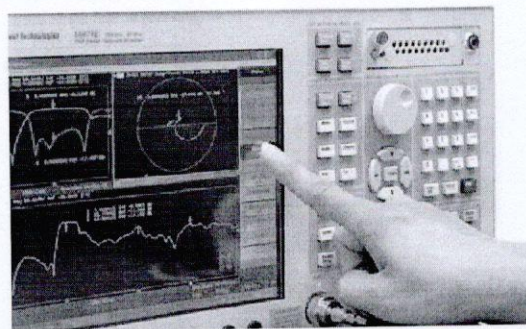
$$TIRS \equiv \frac{2NM}{\pi \sum_{i=1}^{N-1} \sum_{j=0}^{M-1} \left[\frac{1}{EIS_{\theta}(\theta_i, \phi_j)} + \frac{1}{EIS_{\phi}(\theta_i, \phi_j)} \right] \sin(\theta_i)}$$

TOTAL RADIATED POWER (TRP)

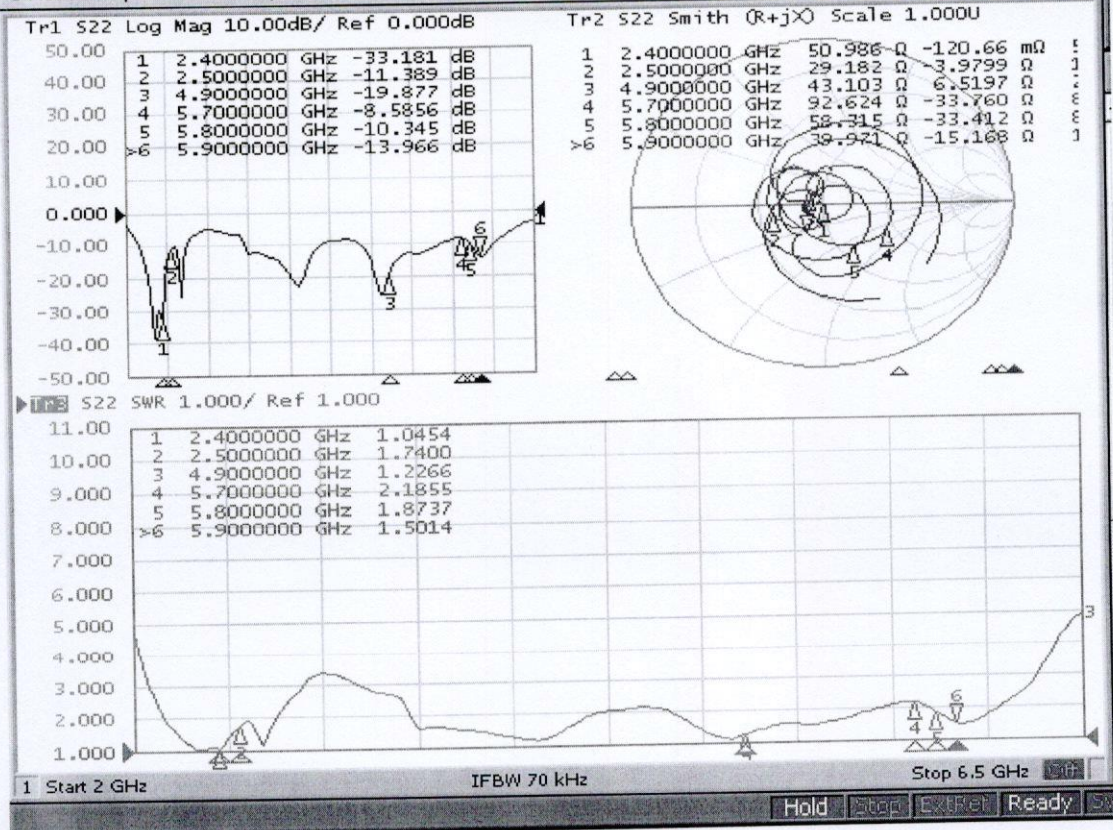
$$TIRP \equiv \frac{\pi}{2NM} \sum_{i=1}^{N-1} \sum_{j=0}^{M-1} [Eirp_{\theta}(\theta_i, \phi_j) + Eirp_{\phi}(\theta_i, \phi_j)] \sin(\theta_i)$$

S-PARAMETER TEST

Agilent E5071C



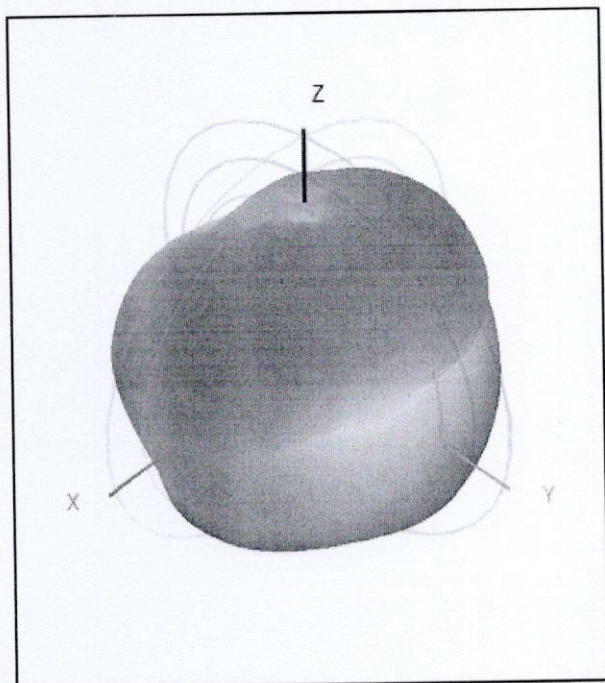
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State



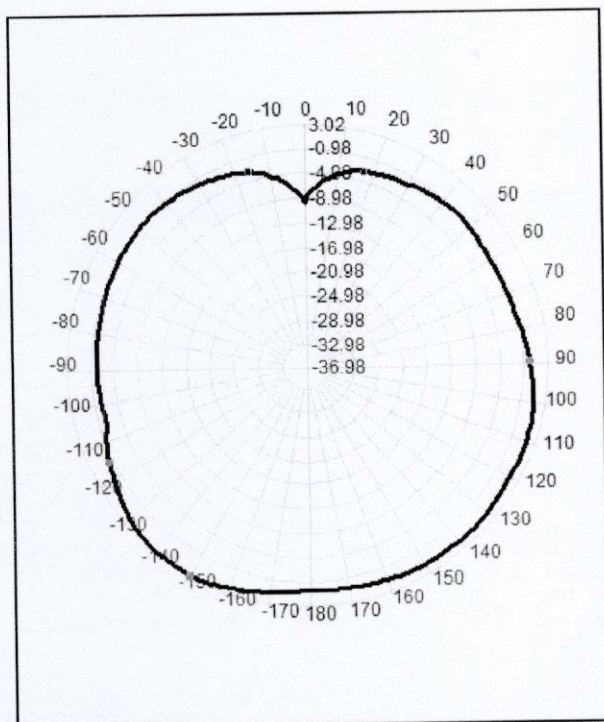
2.4 GHz PASSIVE ANTENNA TEST DATA

WIFI 2.4 GHz Peak Gain: 3.02 dBi

Test Data



3D Radiation Pattern



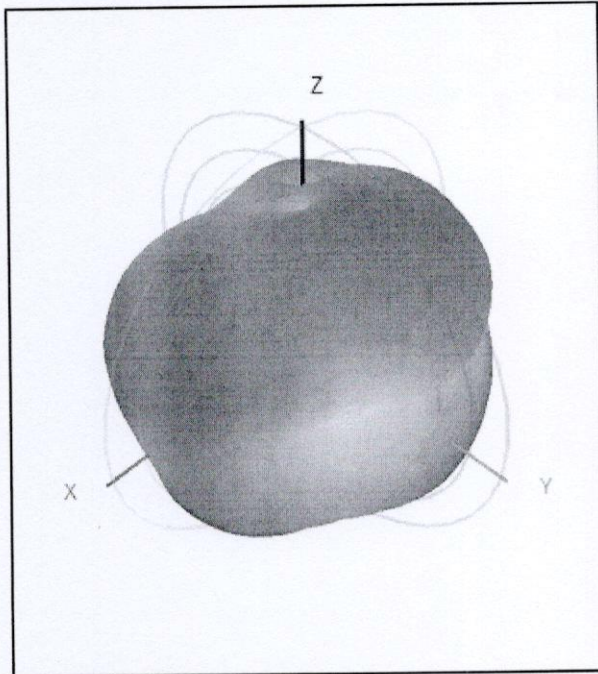
2D Radiation Pattern

Freq(MHz)	Efficiency (%)	Gain (dBi)
2400	65.65	2.30
2410	66.96	2.74
2420	67.54	2.88
2430	68.26	2.98
2440	64.25	3.02
2450	66.16	2.52
2460	63.30	2.67
2470	64.25	2.91
2480	65.16	2.46
2490	66.30	2.60
2500	64.15	2.71

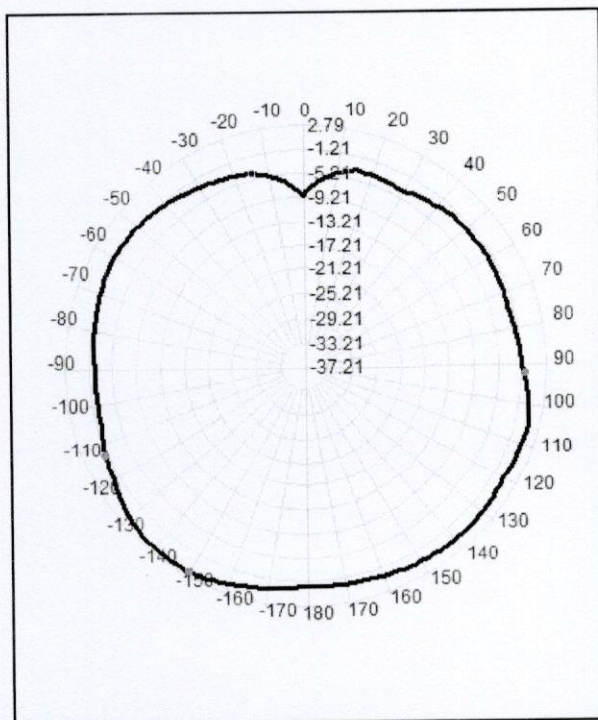
5.8 GHz PASSIVE ANTENNA TEST DATA

WIFI 5.8 GHz Peak Gain: 2.79 dBi

Test Data



3D Radiation Pattern



2D Radiation Pattern

Freq(MHz)	Efficiency (%)	Gain (dBi)
5100	62.15	2.42
5200	63.30	2.25
5300	64.11	2.79
5400	62.14	2.36
5500	60.59	2.41
5600	61.06	2.60
5700	63.05	2.51
5800	62.44	2.33
5900	63.14	2.16

RF GAIN TEST

*Antenna
Radiation
Pattern
VS
Gain*

