

**Shenzhen yGalax Technologies
Limited**

Project Name: TD20-ANT

Ver: V6.0

date: 2025.01.8

Antenna specification

Project Name: TD20-ANT

Antenna type: PIFA antenna

Customer PN.: Shanghai TUGE Data Technologies Co., Ltd.

Transfer Date: 2025.01.08

Supplier Confirm	Project	Engineer	Quality
date	2025.01.8	2025.01.8	2025.01.8

Customer confirm	PM	Electron	MD	PD	QE
date					

conclusion	☐ MP ☐ Limits use () K ☐ ROHS				
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Supplier name: Shenzhen yGalax Technologies Limited**The Supplier address:** Unit F, 4/F,
BlockA, Junxiangda Plaza, Zhongshanyuan Road,
Nanshan District, Shenzhen, China

1. Specification overview

This specification describes the condition of WIFI antenna.

2. Appearance

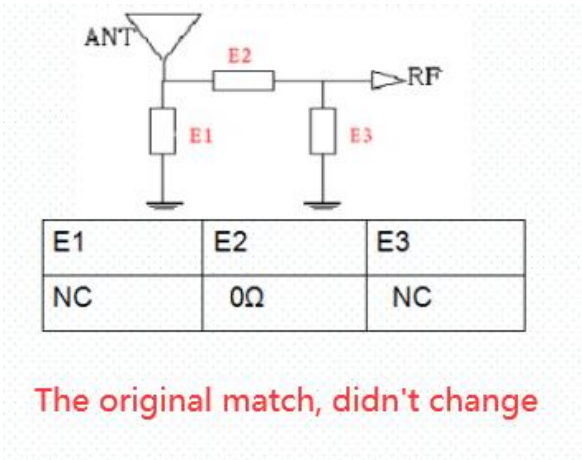


3. Electrical properties

3.1. Antenna frequency band

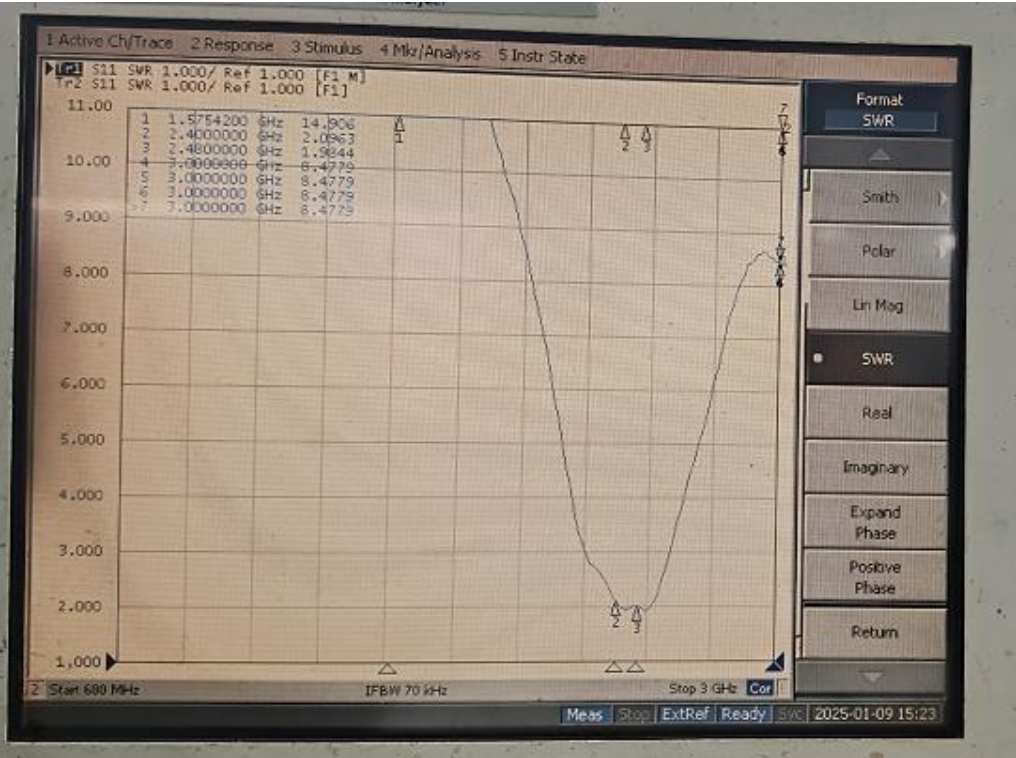
	2.4G WIFI
Emission spectrum(MHz)	2400~2500
Receiving frequency band(MHz)	2400~2500

3.2. Matching circuit

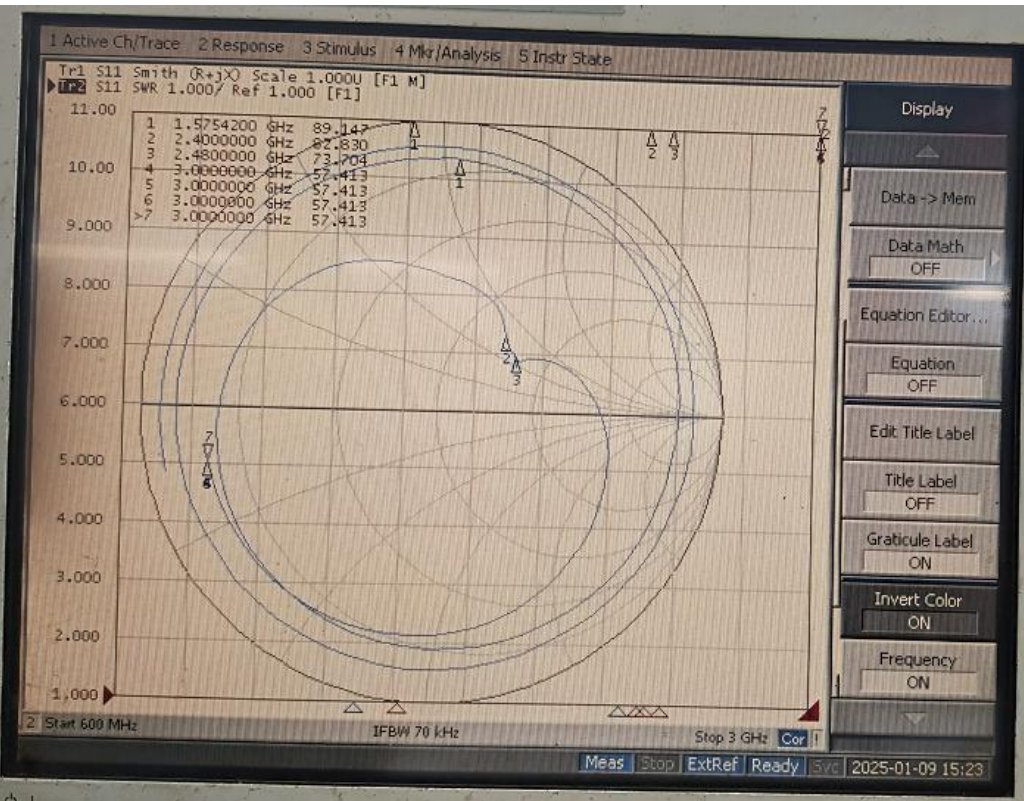


3.3 Impedance requirements
50 ohm

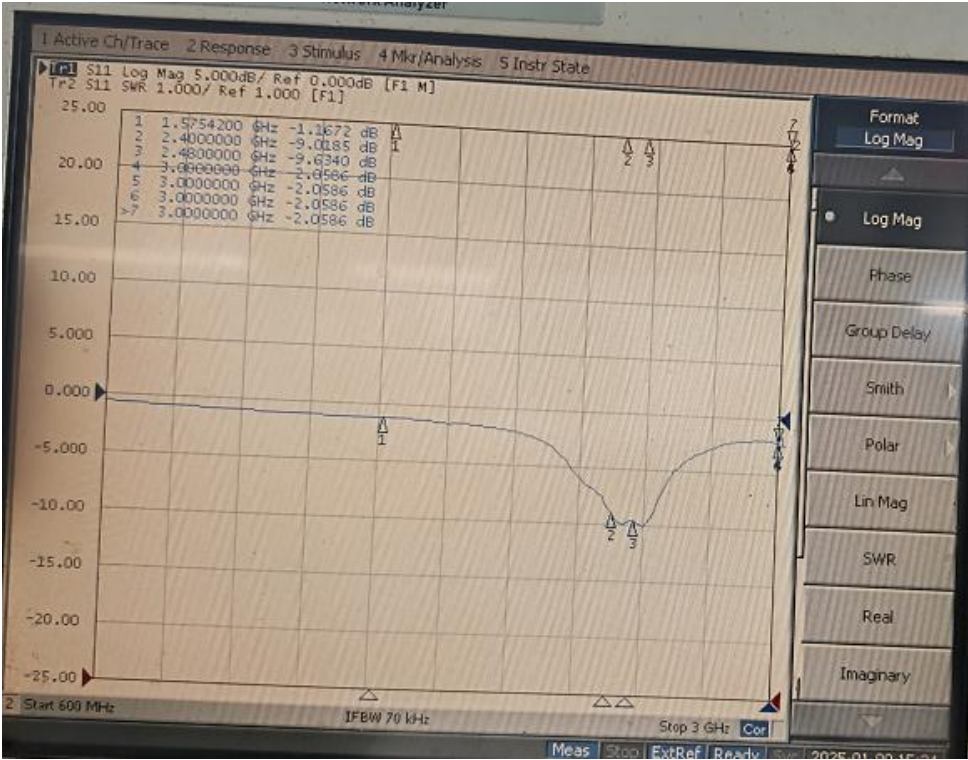
1. WIFI / Passive standing wave diagram



2.WIFI/ Passive Smith chart

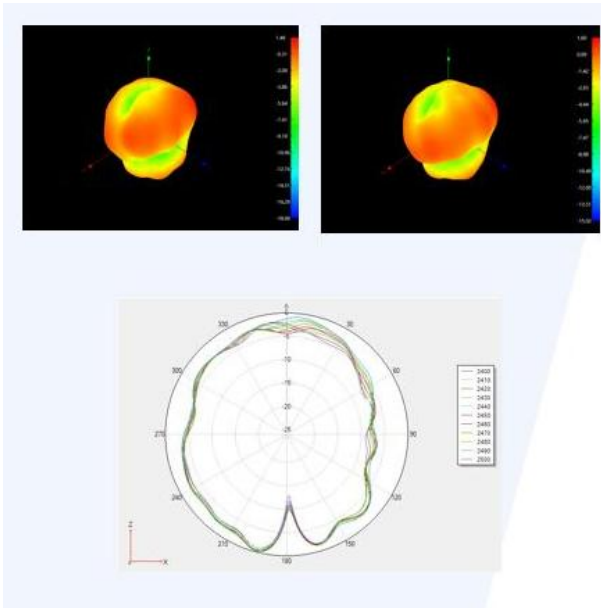


3.WIFI/ Return loss



4.WIFI/ Passive gain efficiency

Frequency	Efficiency	Gain/dBi
2400	55.76	2.83
2410	53.66	2.77
2420	55.76	2.72
2430	54.35	2.61
2440	54.58	2.49
2450	53.43	2.21
2460	52.53	2.07
2470	49.92	1.62
2480	52.98	2.05
2490	51.97	1.85
2500	50.03	1.77



A	B	C	D	E	F	G	H																																																																								
						REVISION A1 REVISION NOTE New release AUTHOR DATE 08/01/25																																																																									
Gold-plated area No back glue																																																																															
Describe: 1. Content "XXXX" indicates production date (year and week, e.g. 2101) Note: 1. MATERIAL: 18/25 (One and a half) electrolytic copper, PI base MATERIAL. The green line shows the outline of the copper layer, and the purple line shows the shape. 2. Tolerance requirements are not noted: A. copper foil to copper foil +/-0.05 B. Copper foil to shape +/-0.15 (special requirements) A. Tolerance from hole to shape +/-0.15 (+/-0.10 if special requirements) 3. Nickel plating: NI: 2-7um AU: not less than 0.025um (salt spray must be over 48h), ink: 4. This FPC adhesive is 3M 9471LSE, the adhesive should be super strong! 5. Size requirements: 5.1. ST size: The minimum measurement quantity is any 35 product sizes selected from 500 for CPK analysis; 5.2. * size is the key control size; 6. Any material modification must be approved in writing by the Yalax Engineering Department and passed all tests by the Yalax Quality Department; 7. Products must meet ROHS/HF/REACH standards;																																																																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">ITEM</th> <th style="width: 20%;">WIFI FPC (black)</th> <th style="width: 10%;">XXX</th> <th style="width: 10%;">XXX</th> <th style="width: 10%;">P/N</th> <th style="width: 10%;">ED. PI</th> <th style="width: 10%;">1</th> <th style="width: 10%;">REMARK</th> </tr> </thead> <tbody> <tr> <td colspan="8" style="text-align: center;"> GENERAL TOLERANCE TABLE </td> </tr> <tr> <td colspan="2">LINEAR</td> <td colspan="2">ANGULAR</td> <td colspan="2">HOLE</td> <td colspan="2">PART NUMBER</td> </tr> <tr> <td colspan="2">TOLERANCE</td> <td colspan="2">DIVISION</td> <td colspan="2">TOLERANCE</td> <td colspan="2">PART NUMBER</td> </tr> <tr> <td colspan="2">±0.05</td> <td colspan="2">0°-5°</td> <td colspan="2">±0.05</td> <td colspan="2">YX0628-TD20</td> </tr> <tr> <td colspan="2">10-50</td> <td colspan="2">5-12</td> <td colspan="2">H°</td> <td colspan="2">SEE NOTE</td> </tr> <tr> <td colspan="2">50-60</td> <td colspan="2">10-12</td> <td colspan="2">±1.5°</td> <td colspan="2">SEE NOTE</td> </tr> <tr> <td colspan="2">±0.05</td> <td colspan="2">±0.05</td> <td colspan="2">±0.05</td> <td colspan="2">SEE NOTE</td> </tr> <tr> <td colspan="2">±0.2</td> <td colspan="2">±0.2</td> <td colspan="2">±0.2</td> <td colspan="2">SEE NOTE</td> </tr> </tbody> </table>								ITEM	WIFI FPC (black)	XXX	XXX	P/N	ED. PI	1	REMARK	GENERAL TOLERANCE TABLE								LINEAR		ANGULAR		HOLE		PART NUMBER		TOLERANCE		DIVISION		TOLERANCE		PART NUMBER		±0.05		0°-5°		±0.05		YX0628-TD20		10-50		5-12		H°		SEE NOTE		50-60		10-12		±1.5°		SEE NOTE		±0.05		±0.05		±0.05		SEE NOTE		±0.2		±0.2		±0.2		SEE NOTE	
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