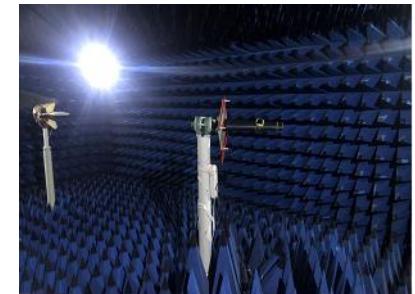


Simulation and commissioning report of Sanuo B-3326 antenna

Radio frequency: HE LEI

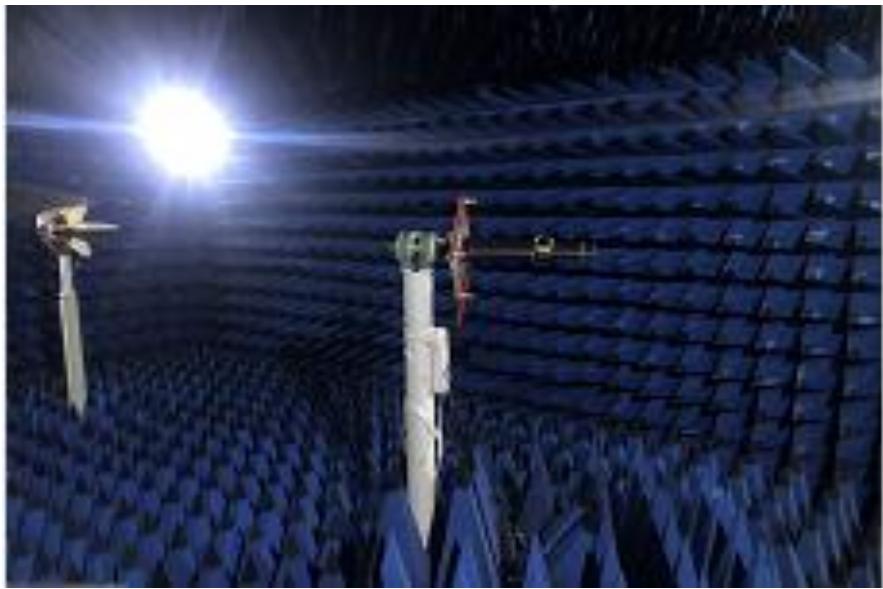
Date: 2025-3-17

Contact way: 15767667652



Project development environment

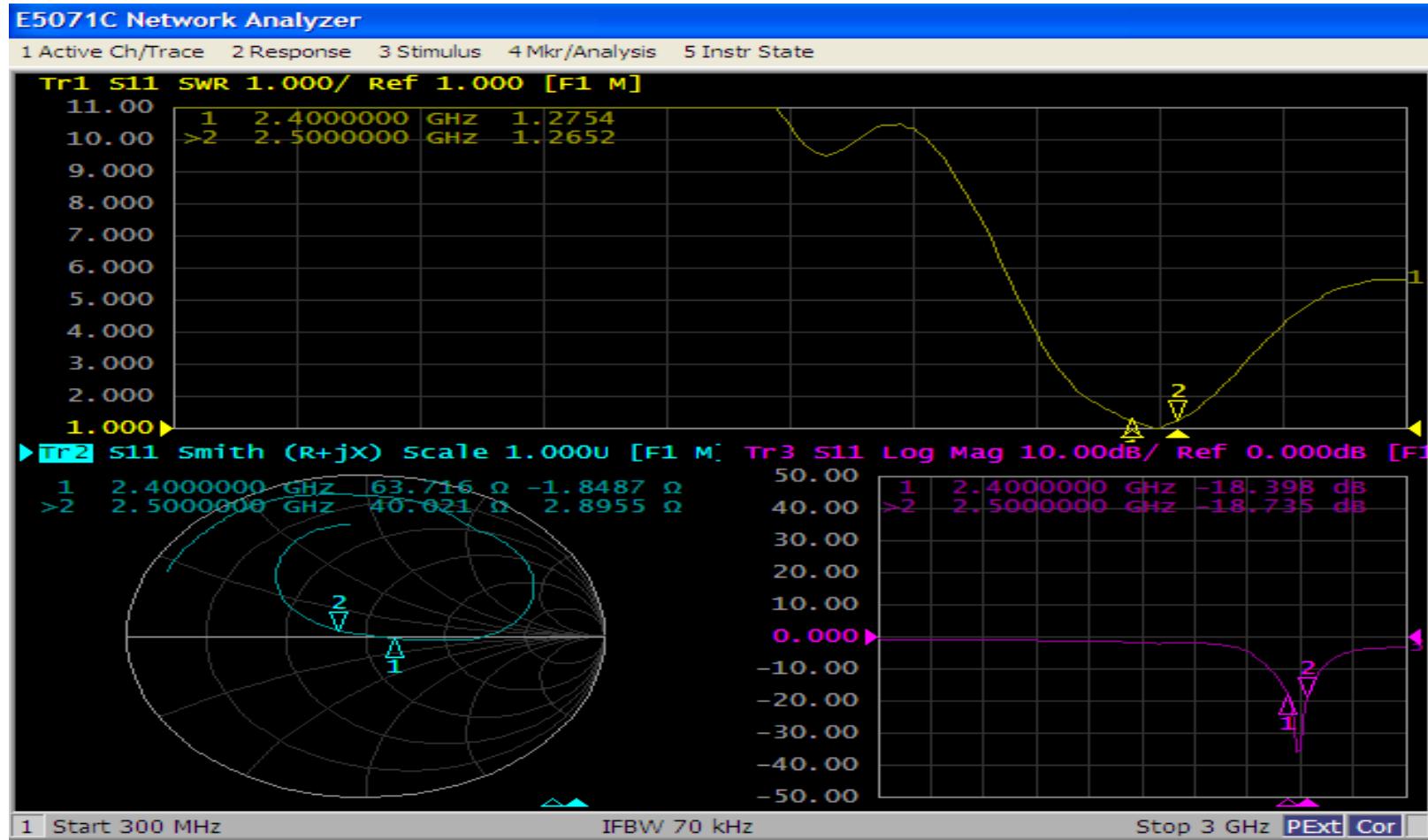
We are transitioning from the Internet era to the intelligent age, with the country building a digital society and smart cities. In the next 5-10 years, both the consumer electronics market and the IoT market will have tremendous potential for development. The wireless communications sector is highly diversified, and in the future, Yusheng will leverage its customer platform advantages in antenna core business and its overall strength to strive for providing customers with market-competitive professional-grade product solutions.



Yusheng Communications products almost cover all antenna applications for wireless terminal devices, including automotive antennas, high-precision surveying and mapping antennas, ground and satellite data navigation for drones, high-precision positioning antennas, wireless transmission for medical equipment, consumer antennas (mobile phone antennas, PADs, laptop antennas), base station/indoor distribution antennas, smart wearable antennas (smartwatches, TWS earphones), security home antennas, and various wireless data transmission and control smart device antennas.

- 1 Antenna environment overview
- 2 RF assessment and recommendations
- 3 Structural assessment and recommendations
- 4 Summary & additional note

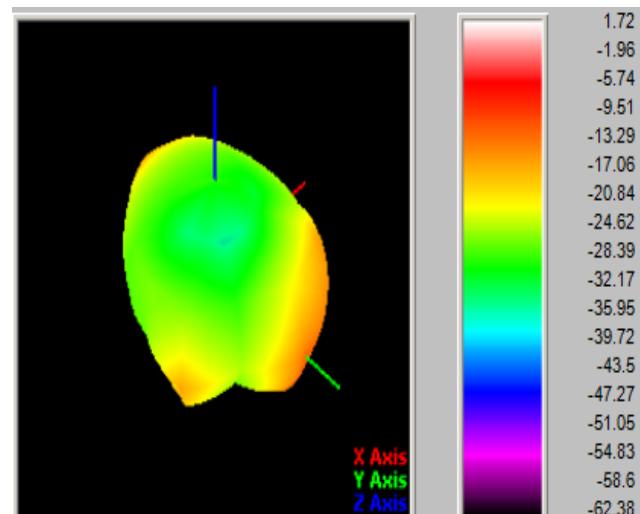
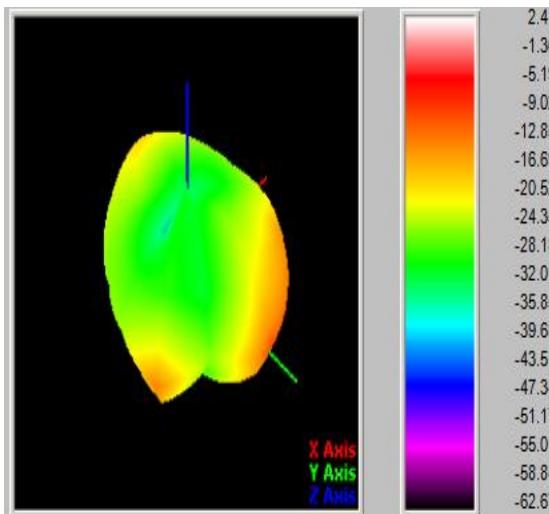
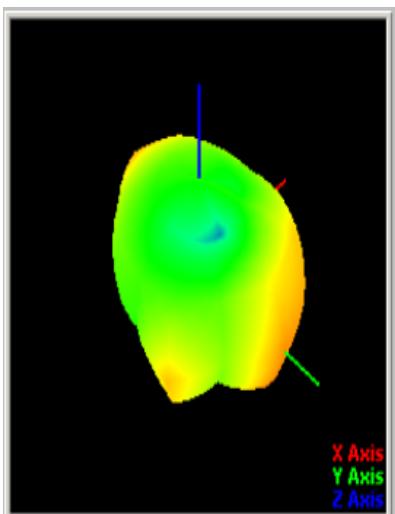
BT antenna (figure file LOGMAG+VSWR+SMITH)



BT-antenna efficiency and gain

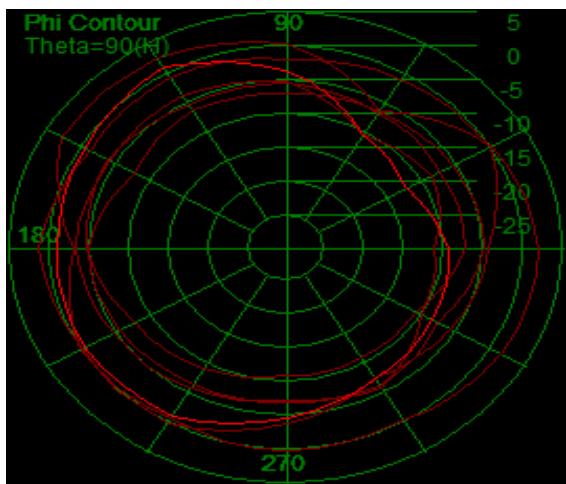
Passive Test For 2400MHz~2500MHz			
Freq	Effi	Effi	PeakGain
(MHz)	(%)	(dB)	(dBi)
2400	51.7%	-2.88	1.68
2410	52.5%	-2.84	1.81
2420	52.9%	-2.75	1.97
2430	53.8%	-2.74	2.13
2440	53.5%	-2.69	2.24
2450	54.3%	-2.61	2.41
2460	53.2%	-2.69	2.37
2470	52.6%	-2.73	2.14
2480	52.5%	-2.84	1.96
2490	51.3%	-2.85	1.81
2500	50.6%	-2.92	1.72

BT-antenna pattern

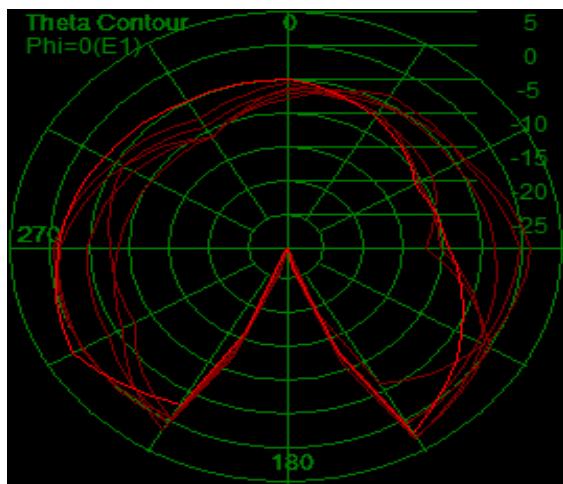


BT-antenna field pattern diagram

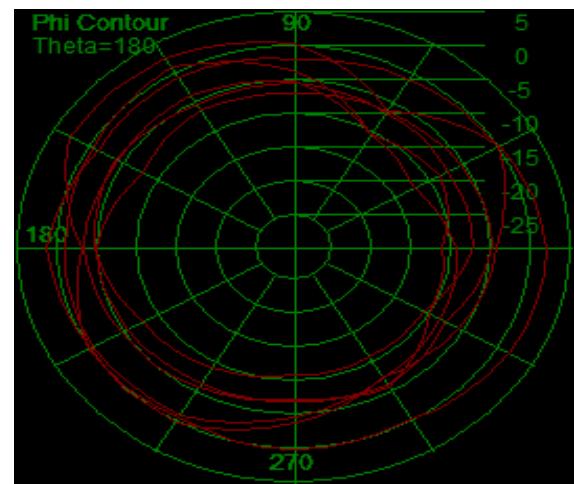
The $\theta = 90^\circ$ ($\phi = 270^\circ$ 为正前方)



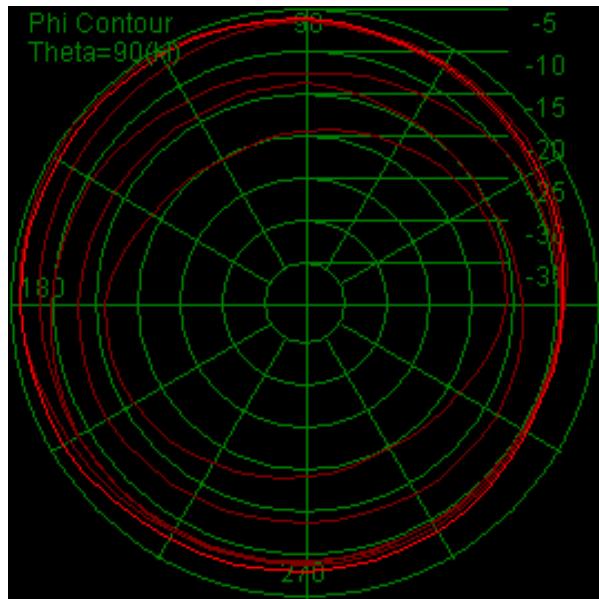
phi=90°



phi=180°

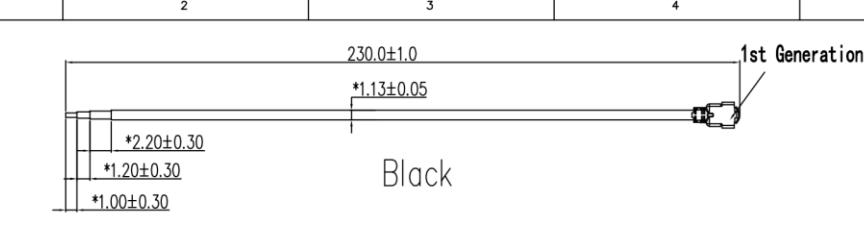
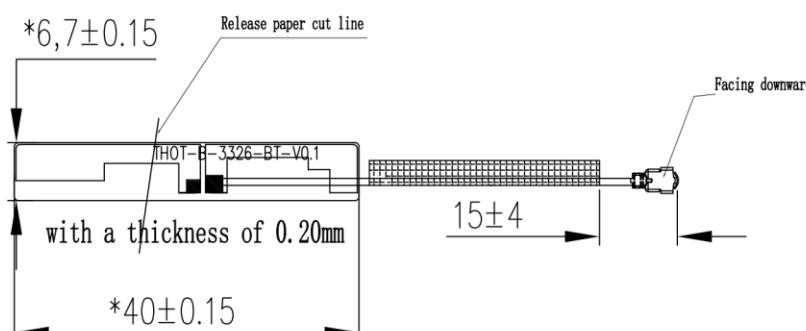
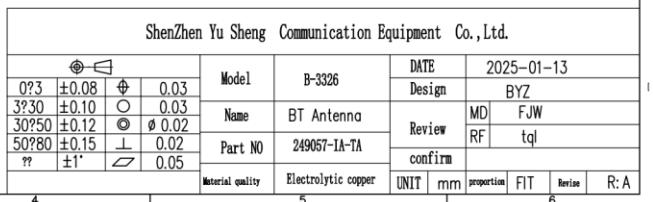


Antenna passive parameter- BT-antenna pattern



MIN= -6.15dbi

Antenna file

1	2	3	4	5	6																																													
A					DATE	Modify the content	Version	Revise																																										
B																																																		
C	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="width: 10%;">skills requirement:</td> </tr> <tr> <td style="width: 5%;">1. PCB substrate specifications:</td> <td>PI substrate: 1.0mil</td> </tr> <tr> <td>Electrolytic copper:</td> <td>0.5oz (E)</td> </tr> <tr> <td>Double-sided tape:</td> <td>3M-9471LS</td> </tr> <tr> <td colspan="2">2. Electroplating specifications: OSP anti-tarnish treatment;</td> </tr> <tr> <td>Surface ink color:</td> <td>Matt black</td> </tr> <tr> <td>Printing font color:</td> <td>Glossy Black</td> </tr> <tr> <td>Printing font height:</td> <td>According to drawings</td> </tr> <tr> <td colspan="2">4. Reliability requirements:</td> </tr> <tr> <td colspan="2">1. Reliability test: salt spray test/rubber friction test/alcohol resistance test/100 grid test.</td> </tr> <tr> <td colspan="2">2. The front ink, the surface of the ink is required to be folded in half without cracking, scratching, etc.</td> </tr> <tr> <td colspan="2">5. Tolerance requirements:</td> </tr> <tr> <td colspan="2">1. Shape tolerance ±0.15;</td> </tr> <tr> <td colspan="2">2. Copper foil circuit tolerance ±0.05;</td> </tr> <tr> <td colspan="2">3. The position of the copper foil to the shape is ±0.15;</td> </tr> <tr> <td colspan="2">4. Hole-to-hole position tolerance ±0.10; hole-to-shape position tolerance ±0.15;</td> </tr> <tr> <td colspan="2">5. The size tolerance of gold finger is ±0.20.</td> </tr> <tr> <td colspan="2">6. For other unmarked dimensions, refer to 2D drawings.</td> </tr> <tr> <td colspan="2">6. Key control size: The dimensions marked with numbers are regarded as important dimensions, and the others refer to 2D drawings</td> </tr> <tr> <td colspan="2">7. Environmental requirements: Parts meet IEC62311-1/IEC62311-2 environmental protection requirements</td> </tr> <tr> <td colspan="2">8. Packaging requirements: Single PCS shipment</td> </tr> </table>				skills requirement:		1. PCB substrate specifications:	PI substrate: 1.0mil	Electrolytic copper:	0.5oz (E)	Double-sided tape:	3M-9471LS	2. Electroplating specifications: OSP anti-tarnish treatment;		Surface ink color:	Matt black	Printing font color:	Glossy Black	Printing font height:	According to drawings	4. Reliability requirements:		1. Reliability test: salt spray test/rubber friction test/alcohol resistance test/100 grid test.		2. The front ink, the surface of the ink is required to be folded in half without cracking, scratching, etc.		5. Tolerance requirements:		1. Shape tolerance ±0.15;		2. Copper foil circuit tolerance ±0.05;		3. The position of the copper foil to the shape is ±0.15;		4. Hole-to-hole position tolerance ±0.10; hole-to-shape position tolerance ±0.15;		5. The size tolerance of gold finger is ±0.20.		6. For other unmarked dimensions, refer to 2D drawings.		6. Key control size: The dimensions marked with numbers are regarded as important dimensions, and the others refer to 2D drawings		7. Environmental requirements: Parts meet IEC62311-1/IEC62311-2 environmental protection requirements		8. Packaging requirements: Single PCS shipment					
skills requirement:																																																		
1. PCB substrate specifications:	PI substrate: 1.0mil																																																	
Electrolytic copper:	0.5oz (E)																																																	
Double-sided tape:	3M-9471LS																																																	
2. Electroplating specifications: OSP anti-tarnish treatment;																																																		
Surface ink color:	Matt black																																																	
Printing font color:	Glossy Black																																																	
Printing font height:	According to drawings																																																	
4. Reliability requirements:																																																		
1. Reliability test: salt spray test/rubber friction test/alcohol resistance test/100 grid test.																																																		
2. The front ink, the surface of the ink is required to be folded in half without cracking, scratching, etc.																																																		
5. Tolerance requirements:																																																		
1. Shape tolerance ±0.15;																																																		
2. Copper foil circuit tolerance ±0.05;																																																		
3. The position of the copper foil to the shape is ±0.15;																																																		
4. Hole-to-hole position tolerance ±0.10; hole-to-shape position tolerance ±0.15;																																																		
5. The size tolerance of gold finger is ±0.20.																																																		
6. For other unmarked dimensions, refer to 2D drawings.																																																		
6. Key control size: The dimensions marked with numbers are regarded as important dimensions, and the others refer to 2D drawings																																																		
7. Environmental requirements: Parts meet IEC62311-1/IEC62311-2 environmental protection requirements																																																		
8. Packaging requirements: Single PCS shipment																																																		
D																																																		
1	2	3	4	5	6																																													

Thank you!



**Address: Building 2, 4th floor, Taiyun Valley, South
Guangming Avenue, Guangming New District,
Shenzhen**

Tel: 0755-23984257

Fax: 0755-86090455