



Shenzhen Qianmu Communication Technology Co., Ltd.

Antenna Test Report

Customer: GKD

Item: T76T

Date: 2025.12.17

Ver.: D

RF Engineer: ZHONG ZHUO WU



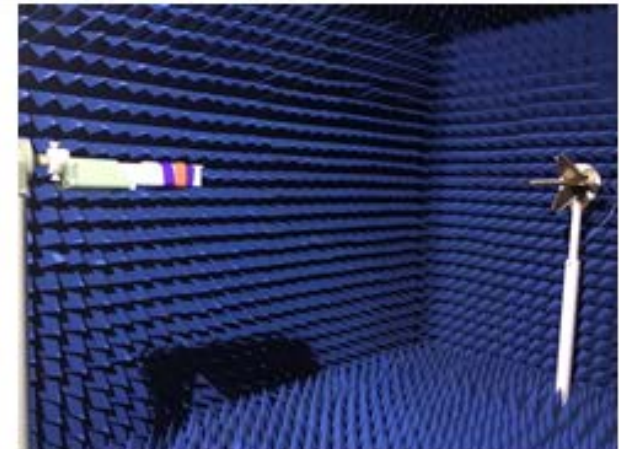
Catalog

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4. Test data in active circuit
5. Antenna installation
6. Environment Process
7. Sum up



Test environment

	Test Item	Equipment
1. S参数 (S-parameter)	1. 回波损耗 (Return Loss) 2. 电压驻波比 (VSWR)	Network Analyzer: Agilent E5071B HP 8753D
2. 有源测试 (Active Test)	1. Transmitted power (TRP) 2. Receive sensitivity (TIS) 3. Frequency error 4. LCD off、LCD on	1. Dark Room: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2. Test set: Agilent 8960 E5515B × 2 StarPoint SP6011
3. 无源测试 (Passive test)	1. Antenna Gain 2. Antenna Efficiency	1. Dark Room: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2. Network Analyzer: Agilent E5071B HP 8753D



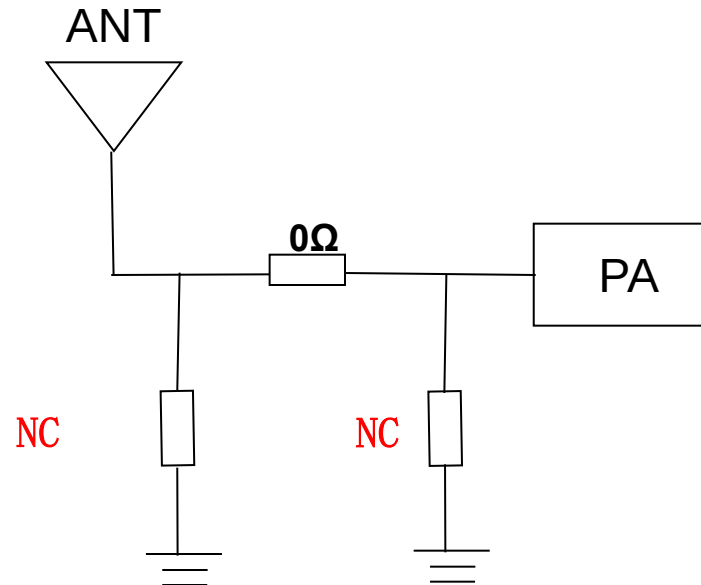


Explanation of each debugging record

Date	Ver.	<u>Explanation of debugging record</u>
2025-12-05	A	copper foil
2025-12-09	B	Sample verification
2025-12-11	C	Sample test
2025-12-17	D	Increasing gain and direction diagram



Matching Circuit-GSM Antenna





Explanation of debugging in Hanset

Type	Feature Phone						
Pattern	Mainboard						
Antenna Profile	Main Antenna	Antenna Sate		Antenna State	Antenna Form	Design Area	Match modifications
		2G	850/900/1800/1900	FPC	PF	Cover	No
		3G	W2/4/5				
		4G	FDD 2/4/5/7/12/17/28AB/6 6/71				
	other Antenna	BT					
Sample State	debugging sample			<u>Environment</u> <u>Process</u>	Several Point		



Test Date

Antenna State	FPC			Cover State	Debugging sample		
	900				850		
Channel	1	62	124		128	190	251
TRP (dBm)	25. 15	25. 21	25. 23		27.48	27.89	27.26
TIS (dBm)			-101. 93				-102.25
	1800				1900		
Channel	512	698	885		512	661	810
TRP (dBm)	25.11	25.49	25.28		25.87	25.52	25.78
TIS (dBm)			-102.60				-102.62



Test Date

Antenna State	FPC			Cover State	Debugging sample		
	W2				W4		
Channel	9262	9400	9538		1312	1413	1513
TRP (dBm)	17. 24	17. 45	17. 00		17. 22	17. 76	17. 45
TIS (dBm)			-102. 86				-102. 95
	W5						
Channel	4132	4185	4233				
TRP (dBm)	16. 19	17. 51	17. 09				
TIS (dBm)			-102. 77				



Test Date

Antenna State	FPC			Cover State	Debugging sample		
	B2				B4		
Channel	18650	18900	19150		20000	20175	20350
TRP (dBm)	18.88	18.55	18.73		17.17	17.60	17.21
TIS (dBm)			-90.19				-90.42
	B5				B7		
Channel	20450	20525	20600		20800	21100	21400
TRP (dBm)	17.49	17.23	17.53		18.74	18.83	17.23
TIS (dBm)			-86.83				-90.29
	B12				B17		
Channel	23060	23095	23130		23780	23790	23800
TRP (dBm)	17.07	17.32	17.84		16.93	16.78	17.19
TIS (dBm)			-89.65				-89.07
	B66				B71		
Channel	132022	132322	132622		133172	133297	133422
TRP (dBm)	17.12	17.59	17.23		16.02	16.75	17.2
TIS (dBm)			-90.93				-87.19



Test Date

Antenna State	FPC			Debugging sample		
	B28AB					
Channel	27300	27370	27430	27470	27510	27610
TRP (dBm)	17.80	17.70	17.73	17.61	17.63	17.74
TIS (dBm)			-90.57			-90.58



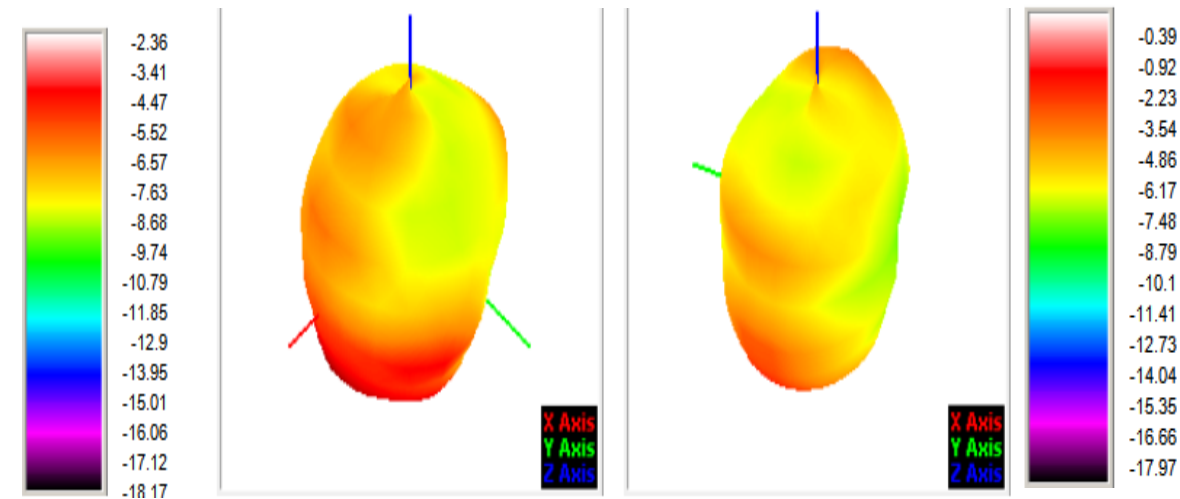
Antenna Gain:

PEAK GAIN		
2G:	Frequency range	Gaim dBi
GSM850	824~894Mhz	-0.64
GSM900	880~960Mhz	-0.11
DCS1800	1710~1880Mhz	0.94
PCS1900	1850~1990Mhz	0.41
3G:		
W2	1850~1990Mhz	0.41
W4	1710~2155Mhz	0.68
W5	824~894Mhz	-0.64
4G:		
LTE-B2	1850~1990Mhz	0.41
LTE-B4	1710~2155Mhz	0.68
LTE-B5	824~894Mhz	-0.64
LTE-B7	2500~2690Mhz	0.85
LTE-B12	698~746Mhz	-0.17
LTE-B17	704~746Mhz	-0.39
LTE-B28AB	708~798Mhz	-0.3
LTE-B71	617~697.9Mhz	-2.36
LTE-B66	1710~2170Mhz	0.62
BT	2400MHz~2500MHz	-1.1

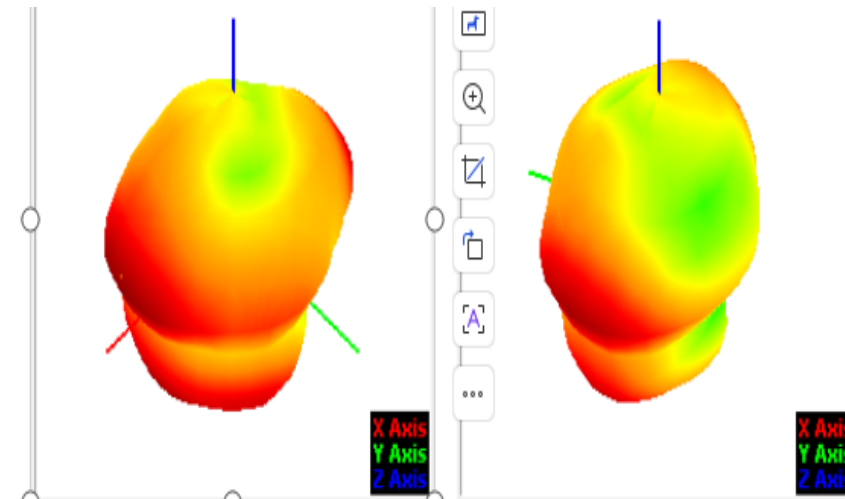


Main Antenna Direction Diagram:

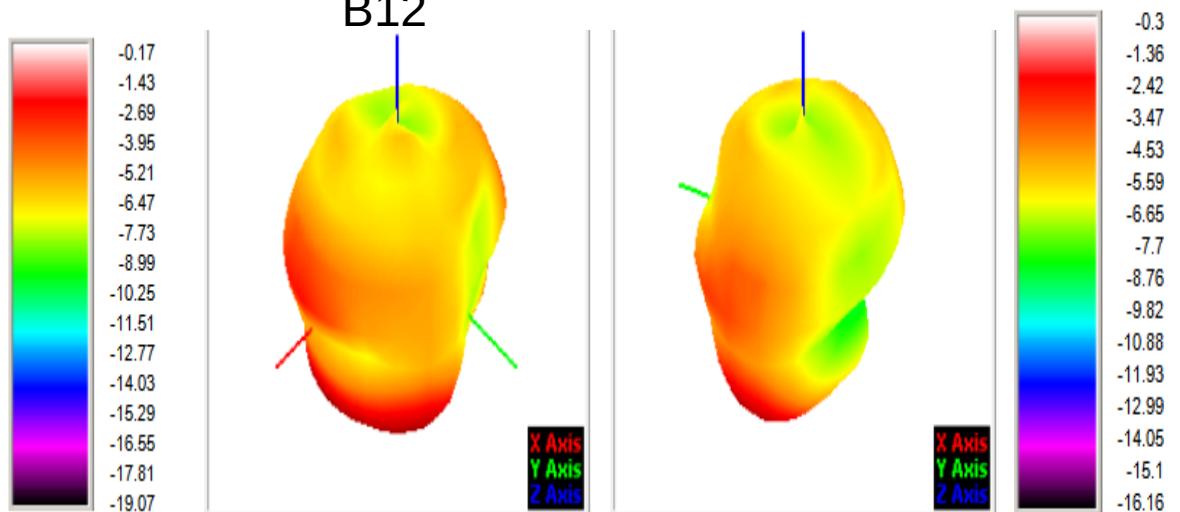
B71



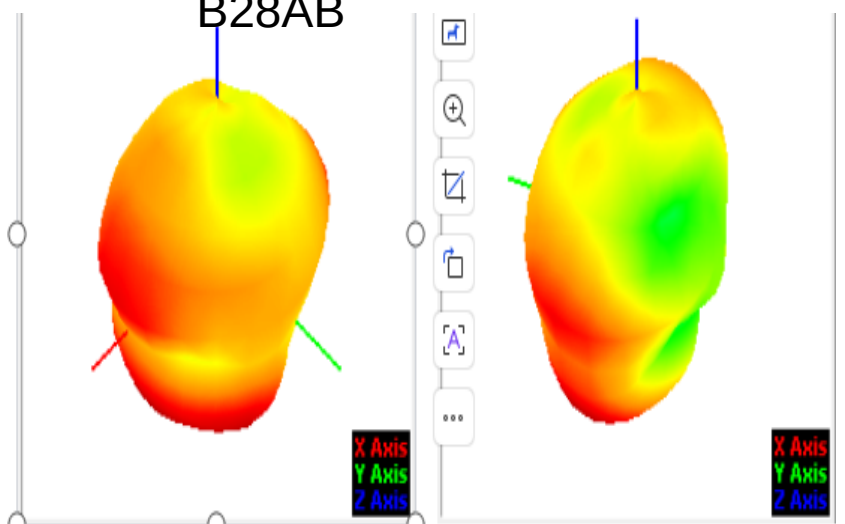
B17



B12



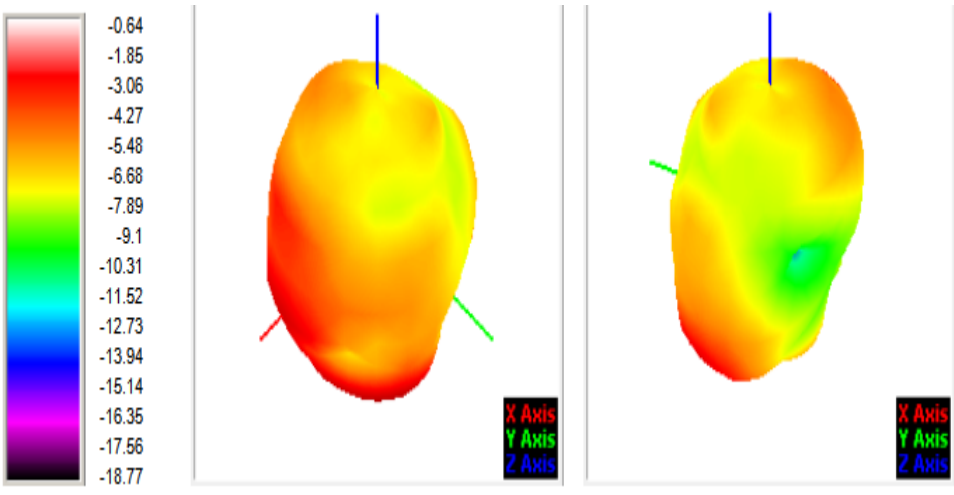
B28AB



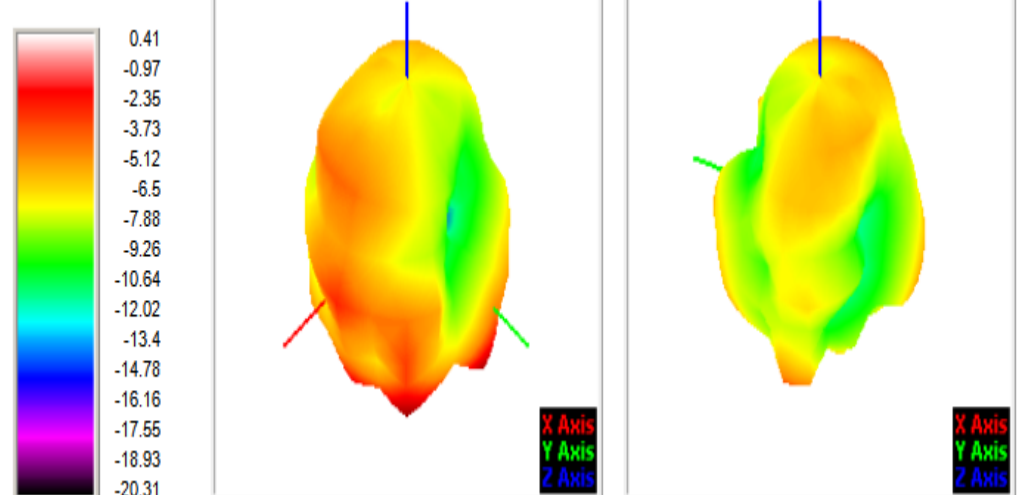


Main Antenna Direction Diagram:

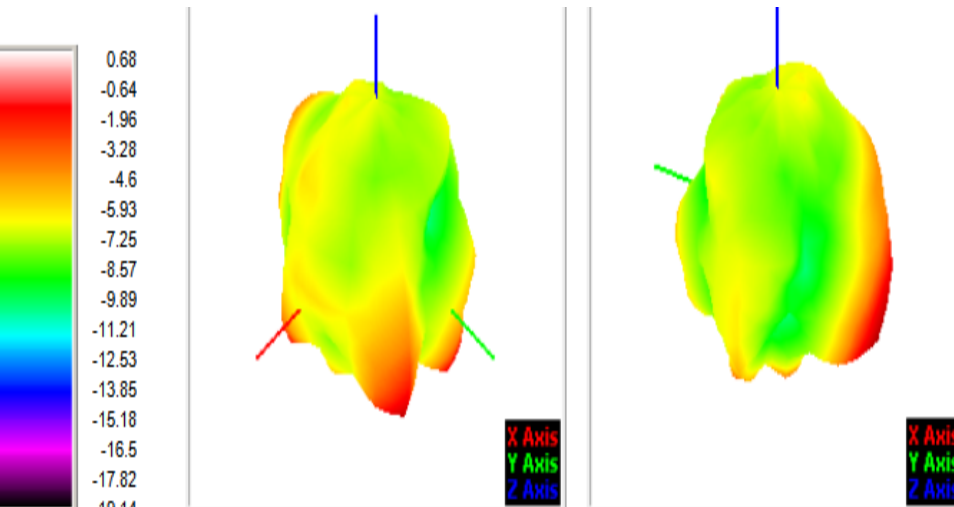
B5/GSM850/W5



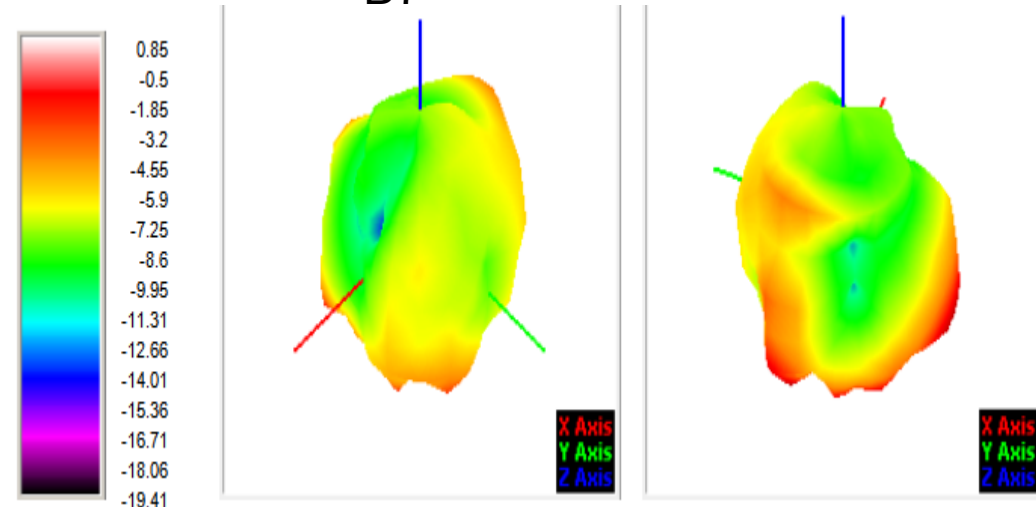
B2/PCS1900/W2



B4/W4



B7

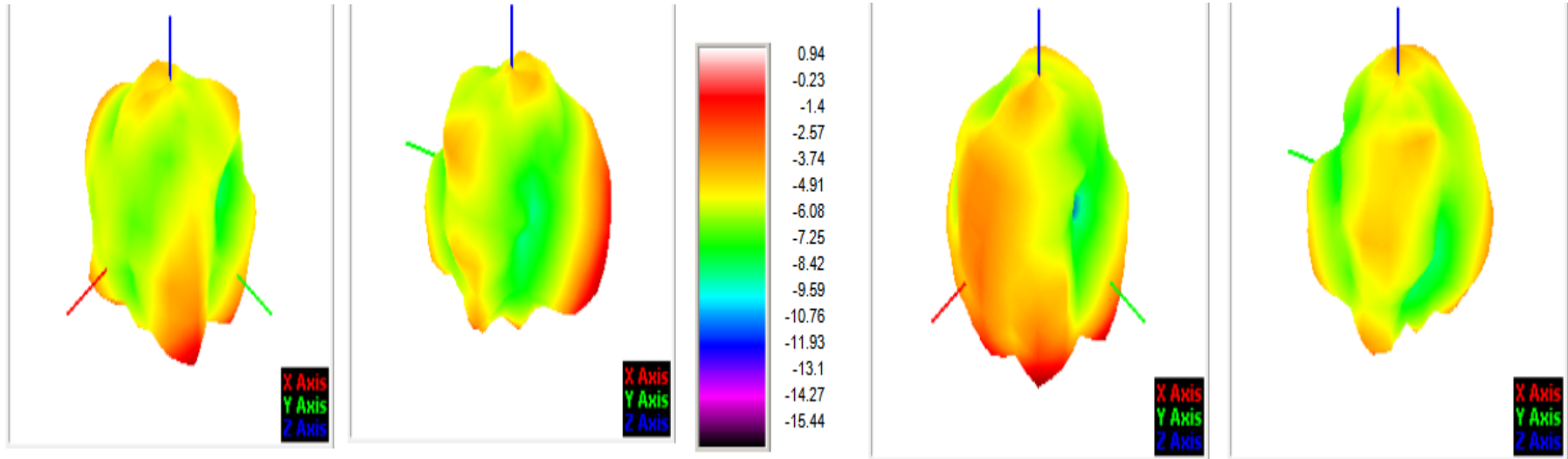




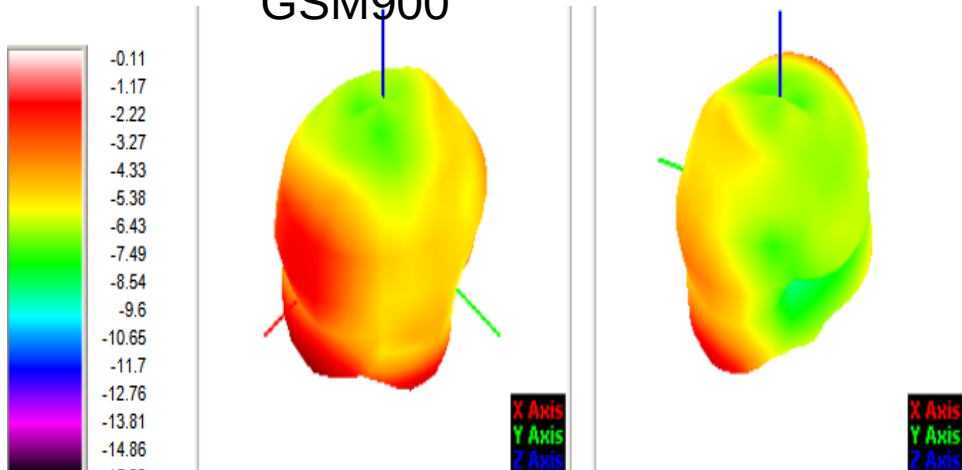
Main Antenna Direction Diagram:

B66

GSM1800

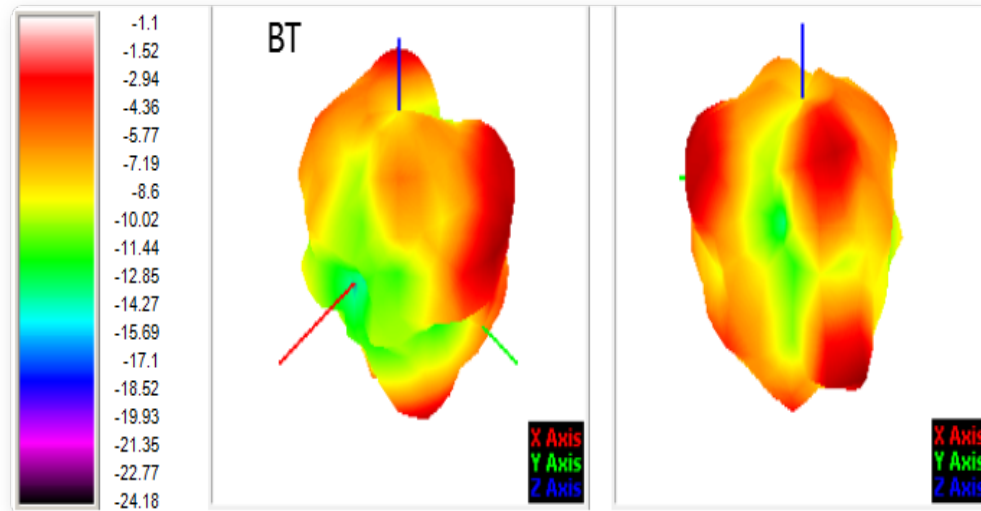


GSM900



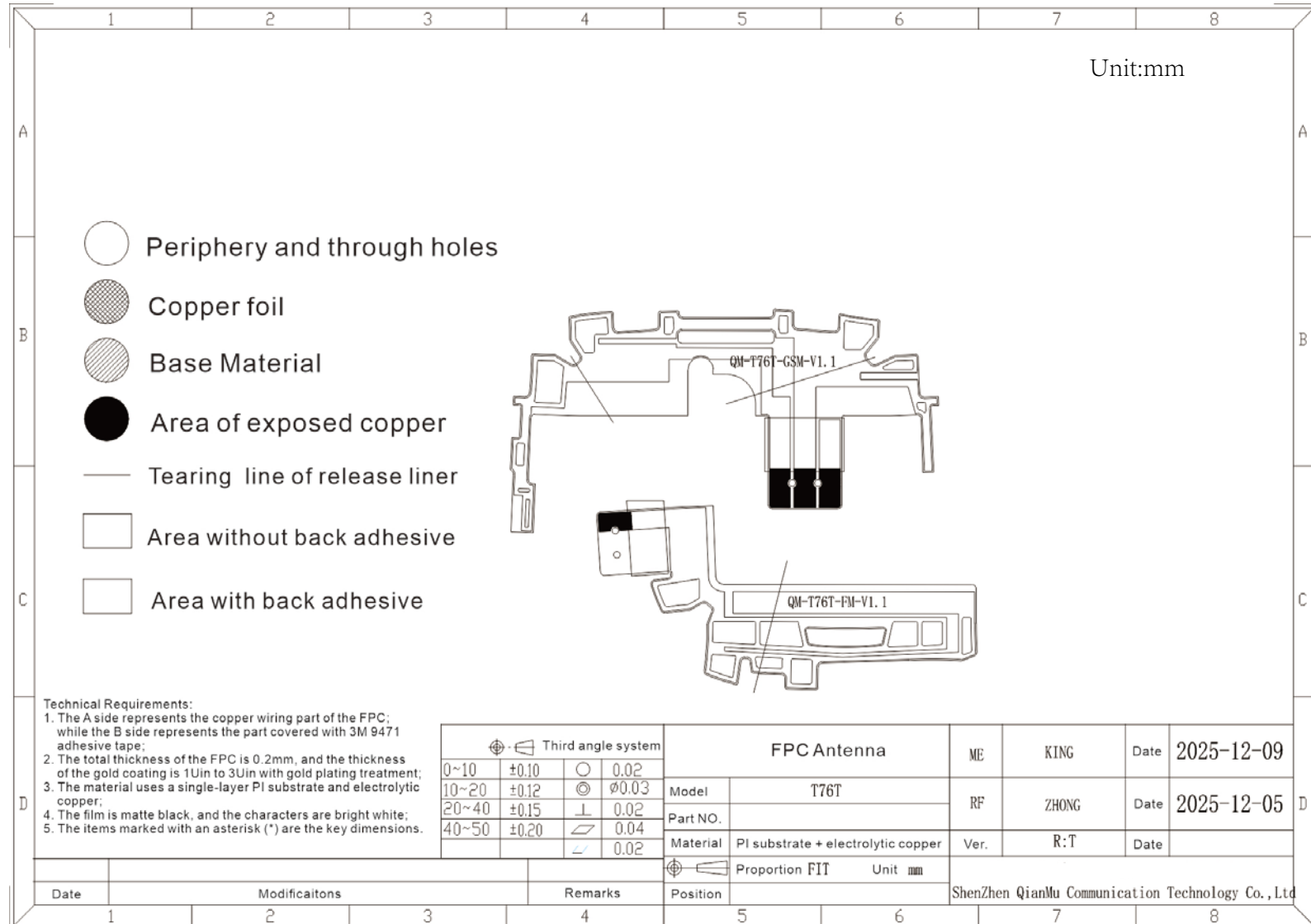


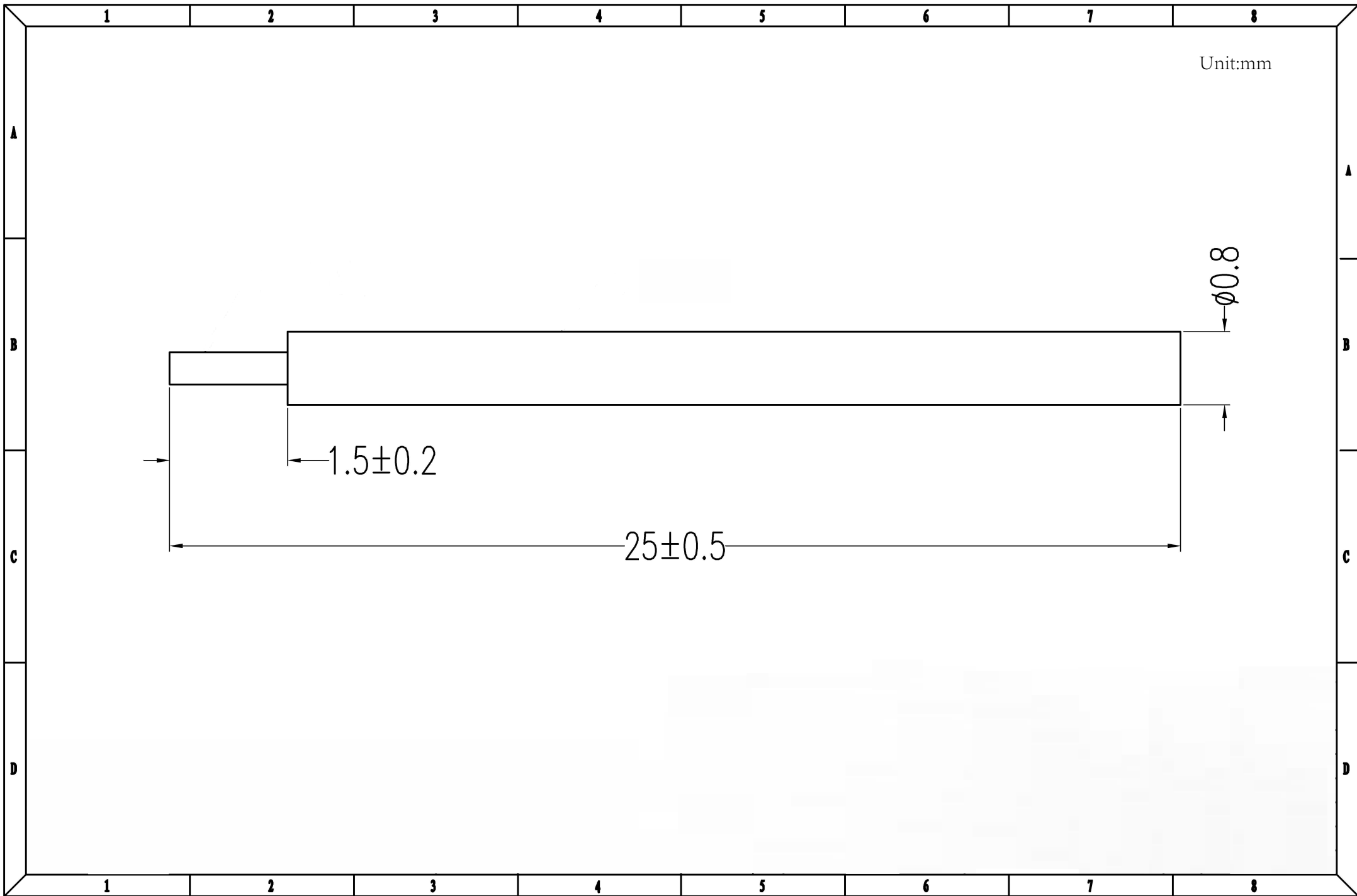
BT Antenna Direction Diagram:





Engineering Drawing







Instructional Note

Please provide the text that needs to be translated.

1. This data only pertains to the data generated when providing prototypes to customers, and does not represent the final production state of the customers.
2. Please have the customers carefully confirm the instructions on circuit modifications and environmental handling in our report.
3. Before mass production, please cooperate in providing trial production prototypes for our second verification. If there are any changes in materials, software updates, or environmental handling, please inform us in advance.
4. If the customers need third-party re-testing or send the prototypes to the customers for testing, please verify them at our company first before sending the prototypes. To prevent differences between the machine and the Debugging sample.
5. We do not accept machine data other than our debugging data and other darkroom test data. However, we can refer to it. Excluding the certification darkroom, if there are any data differences, all will be based on the Debugging sample to find the cause.