

BSJ

Huizhou Boshi Jie Technology Co., LTD

Material acknowledgement

customer name	Huizhou Boshi Jie Technology Co., LTD
project name	KG-04-NA
product name	
product model	
Customer material number	

Supplier information

Name of supplier:	Shenzhen Zhongtianxun Communication Technology Co., Ltd
Supplier Address:	No.34, Shilong Avenue, Shiyan Town, Baoan District, Shenzhen City (Tengda Industrial Park)
contact number:	13923409295
EMAIL:	yuexianbo@chinaztx.com

Supplier signed

RoHS item ☒ Non-RoHS material ☐

department	fabrication	engineering department	quality department	quality department
signatory	Feng-jiao zhang	Zheng-wei Chen	Zou Duan	Zhang Zhao
Signing date	2024/12/10	2024/12/10	2024/12/10	2024/12/10

Note: 1. RoHS materials and non-RoHS materials must be selected; 2. The engineering department and design department shall participate in the project and sign the material type.

Huizhou Boshi Jie Technology Co., LTD

Recognize the state	☐ admit	☐ disallow
	☐ Conditions admit that the conditions shall be met:	
	☐ Temporary limit recognition limited procurement PCS (special acquisition process is required)	

depart ment	Responsi ble for procurem ent	☐ ID Departme nt	☐ structure		☐ hardware		☐ quality	
			structur e PL	Director of structure	hardwar e PL	Director of hardware	QPM	SQE
Check items	date of deliver y	Appearan ce process	Structural dimensions and specifications		Electrical performance, specifications		Appearance, sample testing	

signatory								
date								
1. Procurement and follow-up material delivery date; 2. Signing of design appearance and process ID; 3. Signing of material structure of mold and hardware shell; 4. Signing of electronic devices, modules and battery hardware; 5. The PE Department shall cooperate with the Quality Inspection Department to be responsible for the signing of qualified appearance and sample test.								

Note: 1. Supplier signatories notes customer demand and material number, Document No. : B-QR-QC-1709 Document and send samples for recognition according to the requirements. Version: A2

- 2. The internal signers of Boshi knot should pay attention to the audit, and the materials must meet the requirements of our company.
- 3. One copy of this document shall be kept by the Purchasing Department and the Quality Department each, and the valid storage time is 2 years.

SPECIFICATION

SHEET FOR

APPROVAL(Revision

n:R:A0)

CUSTOMER (Customer name)	Huizhou Boshi Jie Technology Co., LTD
CSP / N (Client Type)	KG-04-NA
PART NAME (Product name)	4G antenna
FREQUENCY (Frequency)	B2/4/5/12/13/17/66
CUS NO. (Customer Number)	
ZTX NO. (Item Number)	1.03.03402
DATE(date)	2024/12/10

CUSTOMER			
QA CHECKED	ME CHECKED	RF CHECKED	MANAGER CHECKED

Remark (Remarks):

Sign (customer confirmation):

Shenzhen ZTX Communication Technology Co.,Ltd				
MANAGER CHECKED	MANAGER CHECKED	ME CHECKED	RF CHECKED	LISTER
		Zheng-wei Chen	Zou Yi	



Shenzhen ZTX Communication Technology Co.,Ltd

Address: No.34, Shilong Avenue, Shiyan Town,

Baoan District, Baoan District, Shenzhen

(Tengda Industrial Park) Zip code: 518000

Tel: 0755-275883 20 Fax: 0755-27588045 http:

// www.chinaztx.com



Revision history

editio n	date	state
A0	2024/12/10	editio princeps



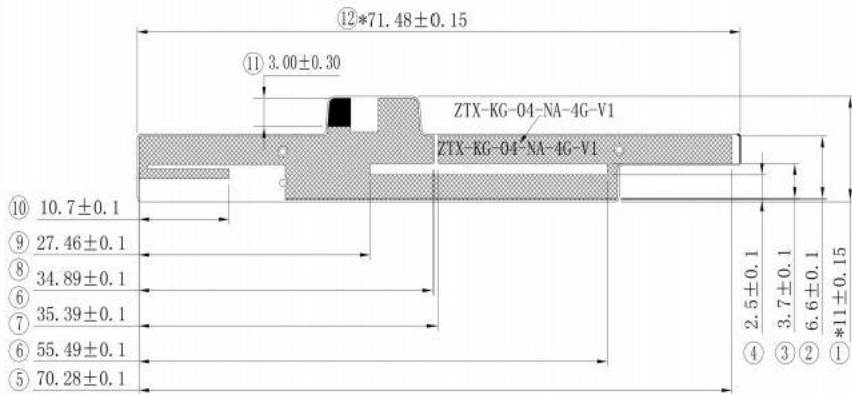
Shenzhen Zhongtianxun Communication Technology Co.,
Ltd
Shenzhen ZTX Communication Technology Co., Ltd

catalogue **Index**

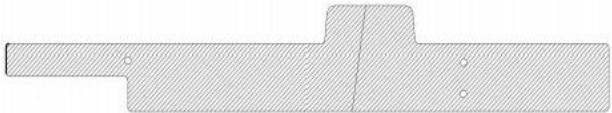
Cover cover / Cover.....	1
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1. Engineering drawings / 2D Drawing.....	4
2. Testequipment / Testequipment.....	5
3. Electrical / Mechanical properties test report / Elec trical Performance Test Report.....	6~8

1	2	3	4	5	6		7	8	
Drawing number: ZTX-QR-RD-013						Rev editi on	Description descrip tion	Designed Mappin g	Date date
Dislocated paper interrupts the line						V1	initial issue	Zheng-wei Chen	2024.12.10
Hand tear in the back glue area									

Copper foil
gilded shape



front



the back

remarks:

- The dimension marked in the figure is the key control size, all trial production or mold samples shall be measured, the size with "*" is IQC required item; the tolerance table in the drawing box;
- the line adopts the exposure development process;
- Surface treatment requirements: gold plating process more than 0.03 um;
- the shape should be smooth and smooth, and can not be cut to the internal line;

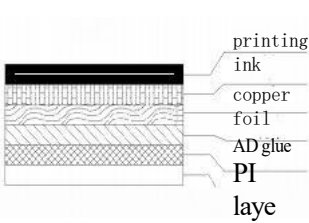
- 5, the surface of the material layout can not have stains, wrinkle, dew copper and other bad problems;
6. The gold-plated area is required to pass the salt spray test of 48 H. If the gold finger is in the OSP process, the salt spray test is not required;
- 7, the ink surface must pass the baiG test requirements;
8. All materials shall meet the requirements of RoHS 2.0;
9. Packaging method: semi-cut package shipment (sample sheet PCS shipment);
10. Without confirmation by ZTX Company, the materials cannot be changed at will;

Grade
0-10
10-20
20-40
40>

1234

General Tolerance

ZTX

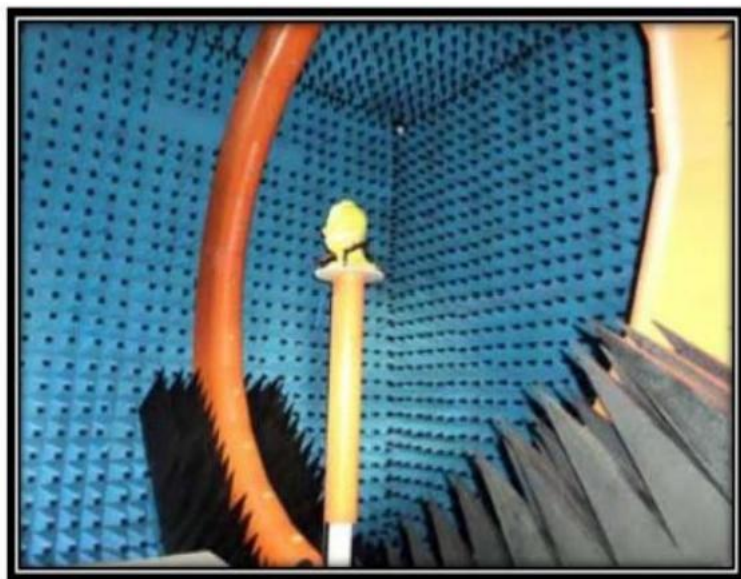


Material details:			C
order	name of	Process /	
A	Code ink	Song style / silk printed	
③	solder	T=15-20um black matte	
C	Copper	Single panel	
①	double	3M467 T=50um	

Date	Unit	Rev	Scale	Project code
Date: 2024. 12. 10	unit:mm	Version:	Proportion	Project code: ZTX4941

Dim	A	B	Designed Design: Chen				Material material:FPC		Project Name Project name: KG-04-NA		D
	±0.05	±0.10									
	±0.10	±0.15	Checked Review: Zou Yi		Process Process		Product Name Product name: 4G antenna				
	±0.15	±0.25									
	±0.20	Shi	Approval Approval: Zou		Third Angle The third		Material Code Material code: 1.03.03402				
		6		7 8							

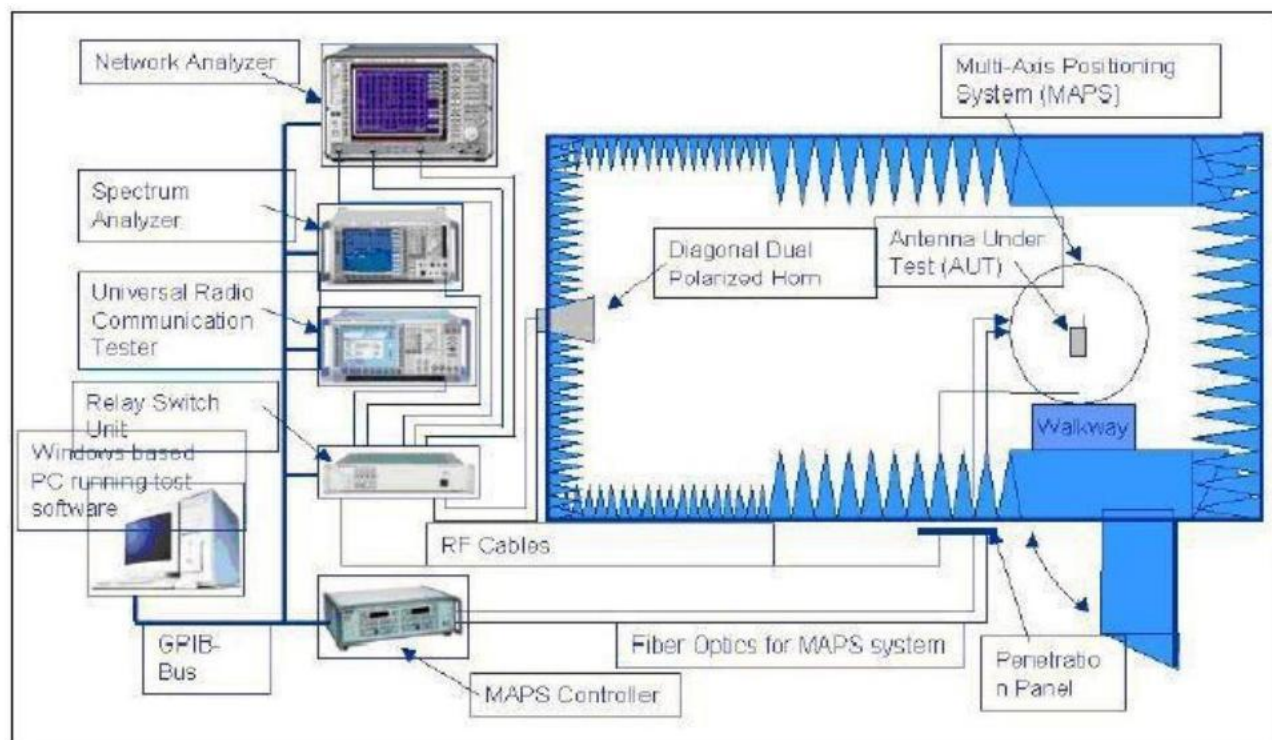
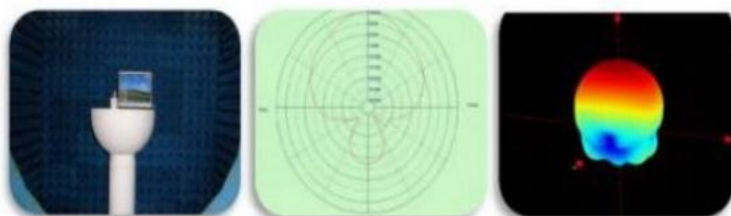
2.Test equipment



Owned 6 microwave dark room, equipped 2 sets world leading France Satimo SG24 OTA certification test systems (one in SHENZHEN, another one in Shanghai), ETS OTA Standard test system, Blue test reverberation test system which is High repeatability, high accuracy and high resolution. It can quickly provide accurate test reports, fully meet the CTIA standards.

Testing range:

Support active, passive testing of GSM/CDMA WCDMA/TD-SCDMA/LTE WIFI/WLAN/WiMax/BT/GPS/MIMO/UWB within 0.4-6G.

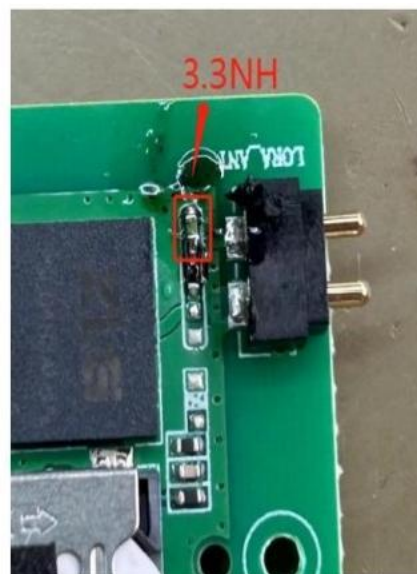


3.TestResults Surmmary

3-1 matching circuit



The main set antenna is first 8.2 NH inductance and then 1 PF capacitor



And 3.3 NH inductance (original motherboard unchanged)

3-2 Passive Test

Frequency	Efficiency	Efficiency. dB	Gain . dB
900	42%	-3.73	1.16
905	46%	-3.39	1.80
910	46%	-3.35	1.53
915	48%	-3.17	2.09
920	49%	-3.09	2.00
925	48%	-3.21	1.92
930	48%	-3.21	1.70
935	43%	-3.69	0.95

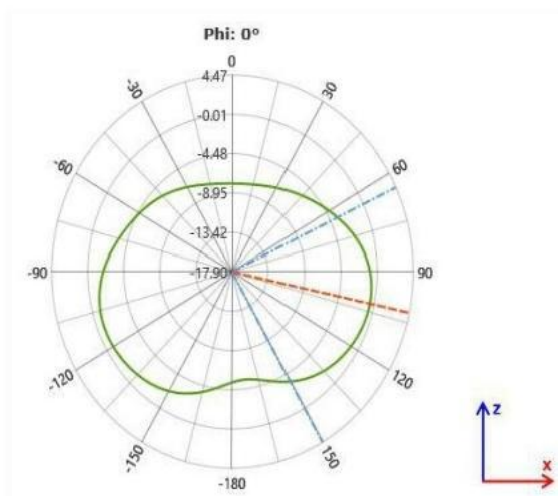


3-3 Actie Test

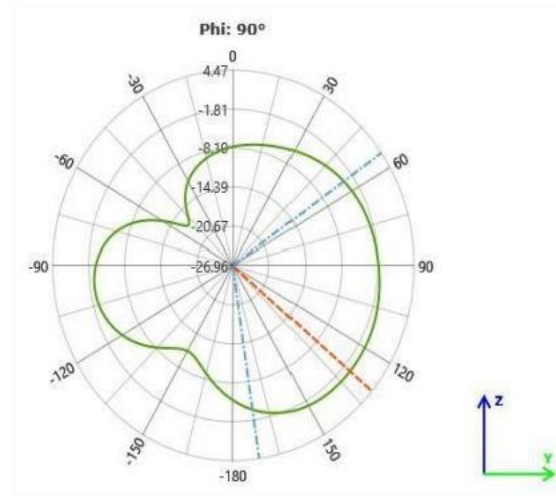
	TRP	TIS		TRP	TIS
B12	17.19		B4	19.62	
	17.48			20.16	
	17.65	-86.88		19.47	-92.49
B13	17.15		B5	17.32	
	17.35			17.03	
	17.62	-86.55		16.82	-85.52
B17	17.26		B66	20.1	
	17.27			20.43	
	17.46	-86.32		20.38	-92.7
B2	19.66				
	19.64				
	19.32	-92.22			

3-42D/3D Radiation Pattern Results

915MHz

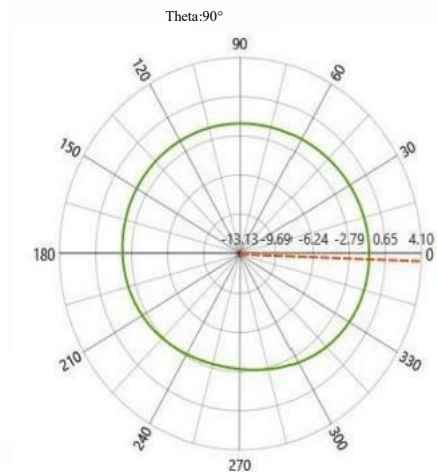


915MHz

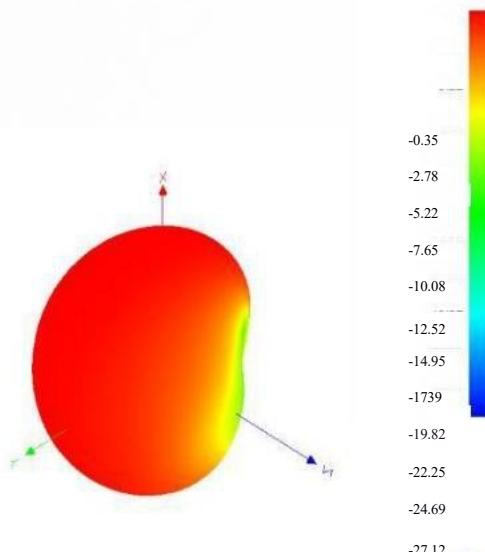




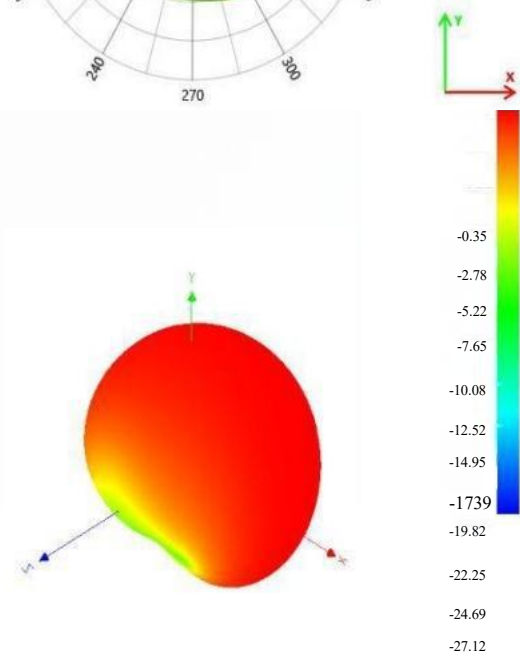
915MHz



Freq:915MHz(AxisX)



Freq:915MHz(AxisY)



Freq:915MHz (AxisZ)

