

Shenzhen Xiangboyi Technology Co. Ltd

Antenna Specification

Customer	SHENZHEN FCAR TECHNOLOGY CO., LTD
Project	HD7000
Project NO	XBY250061

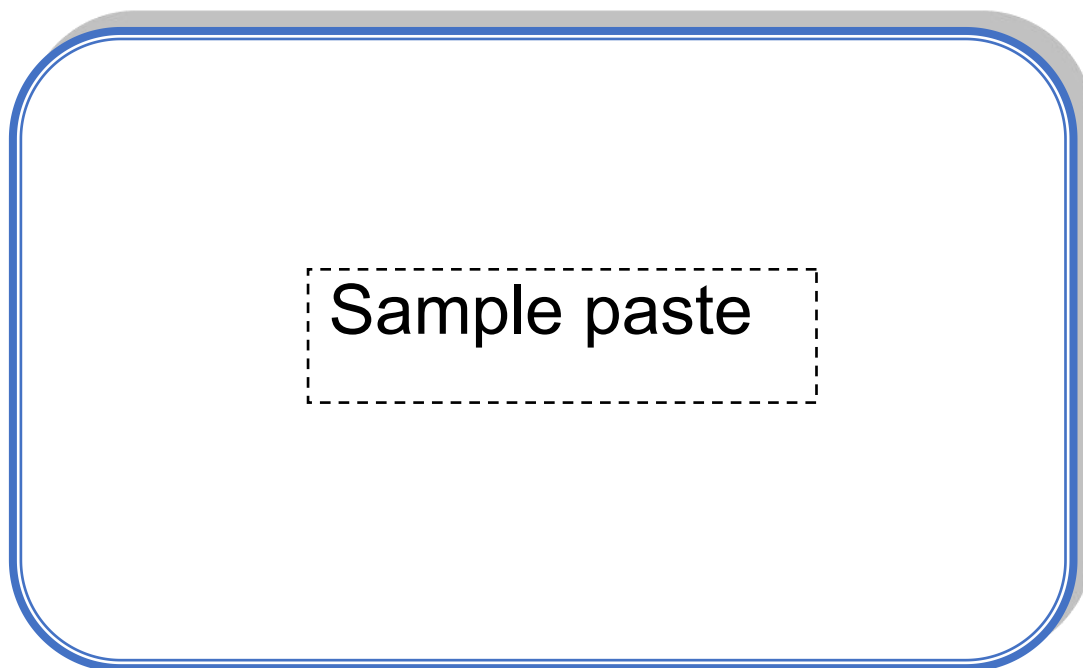
Shenzhen Xiangboyi Technology Co. Ltd

Date : 2025/4/21

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Production Base: 5 / F, building B, Huazhi chuangu, No. 7, Yuhua street, 138 Industrial Zone, Tangxia Town, Dongguan City.



Customer confirmation			
Engineer	PM	Quality	Approval

Supplier confirmation			
ME	RF	Examine	Approval

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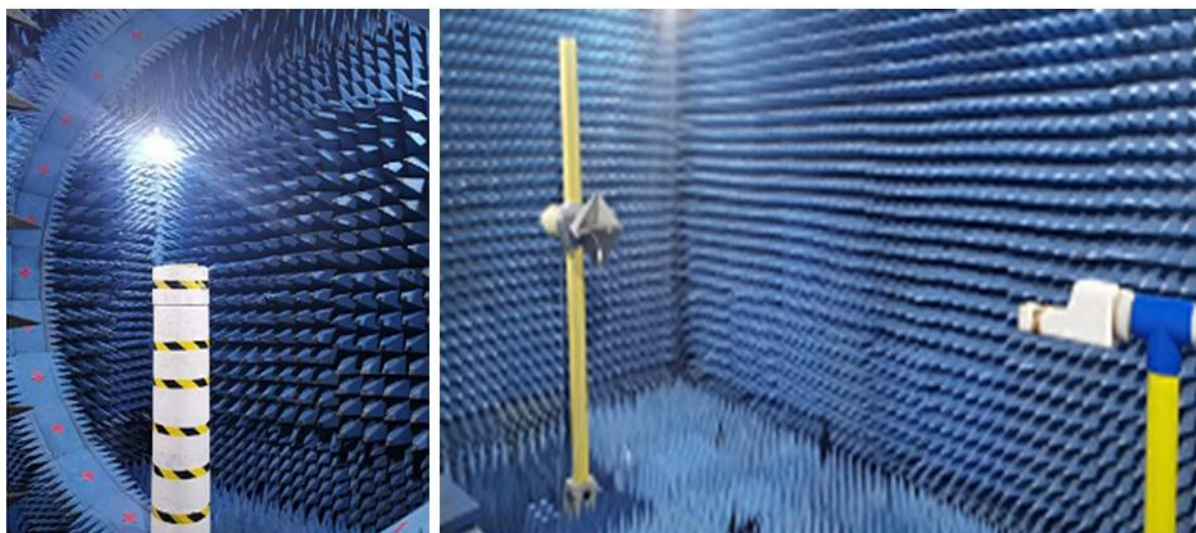
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1 Test System and Equipment

	Test items	equipment
1 : S parameter	1. Return loss 2. VSWR	Network analyzer: A338/A333/HP8753D
2 : Active test	1. TRP 2. TIS	Comprehensive test instrument: Agilent 8960/ CMW500
3 : Radiation mode and gain	1. Radiation mode 2. Gain	1. Shielding room: 7x4x3 m (ETS-3D) 2. Network analyzer: HP 8753D



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2 Product Description

Technical requirements	Technical index	Remarks
Band	WIFI:2. 4G/5G	
Range Of Frequency	2400-2500Mhz ; 5000-6000Mhz ;	
VSWR	2400-2500Mhz<2. 0 5000-6000Mhz<2. 0	Center Frequency
Impedance	50Ω	
Polarization	Linear polarization	
operating temperature	-32℃ / +75℃	
storage temperature	-55℃ / +85℃	
Salt Fog	24h(24h alternating wet & dry)	
RoHS Compliant	yes	

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3 Device Description

The whole machine photo



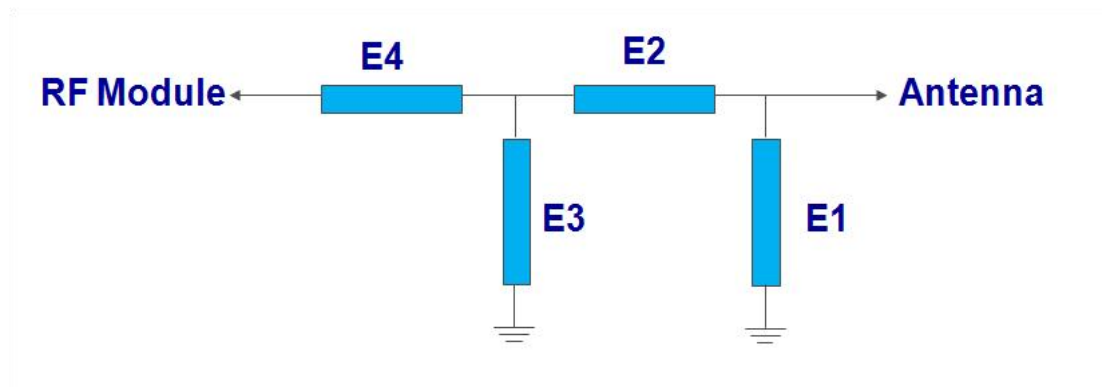
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4 Matching Circuits



Element	Value	Vender
E1(0402)	NA	
E2(0402)	0Ω	
E3(0402)	NA	
E4(0402)	0Ω	

Original match unchanged.

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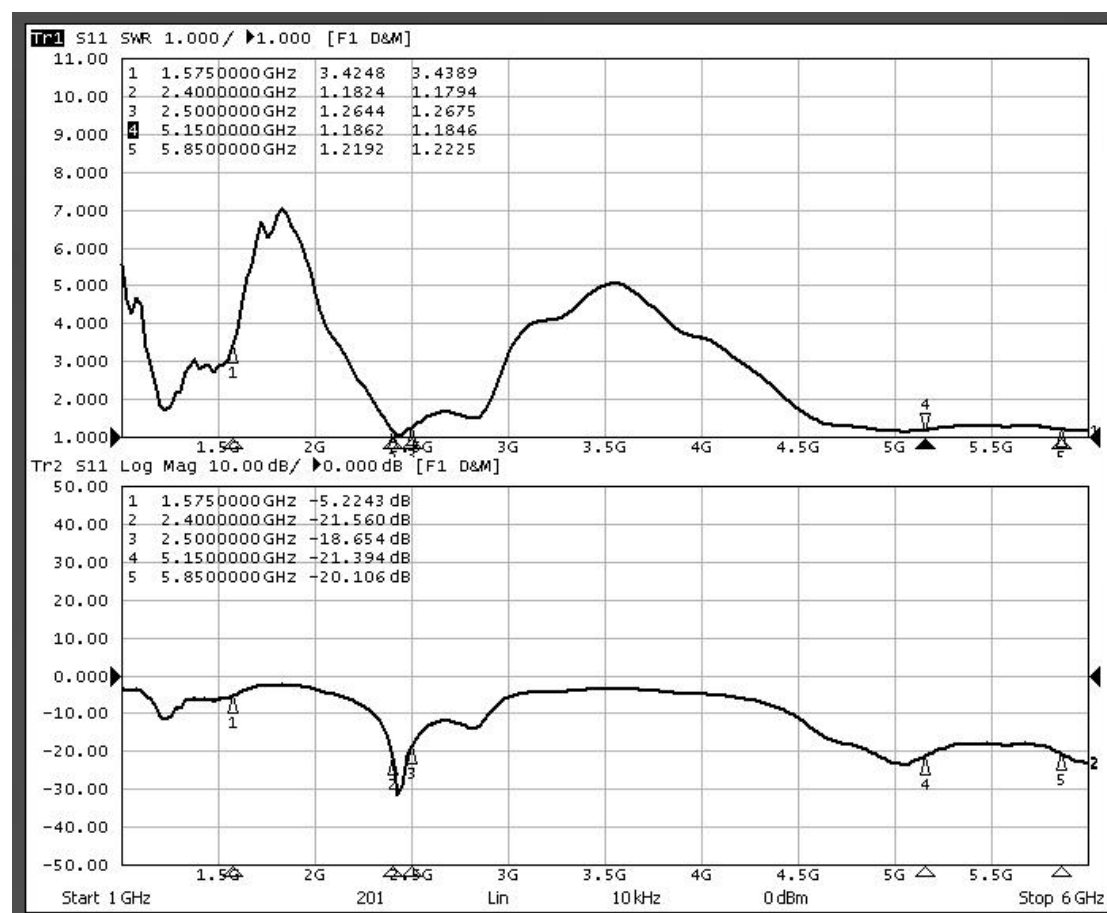
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5 Test Data

WIFI BAND	802.11b : 11Mbps(2.4G)			802.11g : 54Mbps(2.4G)		
Channel	CH1	CH7	CH13	CH1	CH7	CH13
TRP	13.2	15.24	15.67	13.27	13.35	13.41
TIS			-80.27			-69.05

WIFI BAND	802.11n : MCS7(2.4G)			802.11a : 54Mbps(5G)		
Channel	CH1	CH7	CH13	CH36	CH149	CH161
TRP	13.24	13.49	14.1	12.45	14.04	13.23
TIS			-68.93			-71.89



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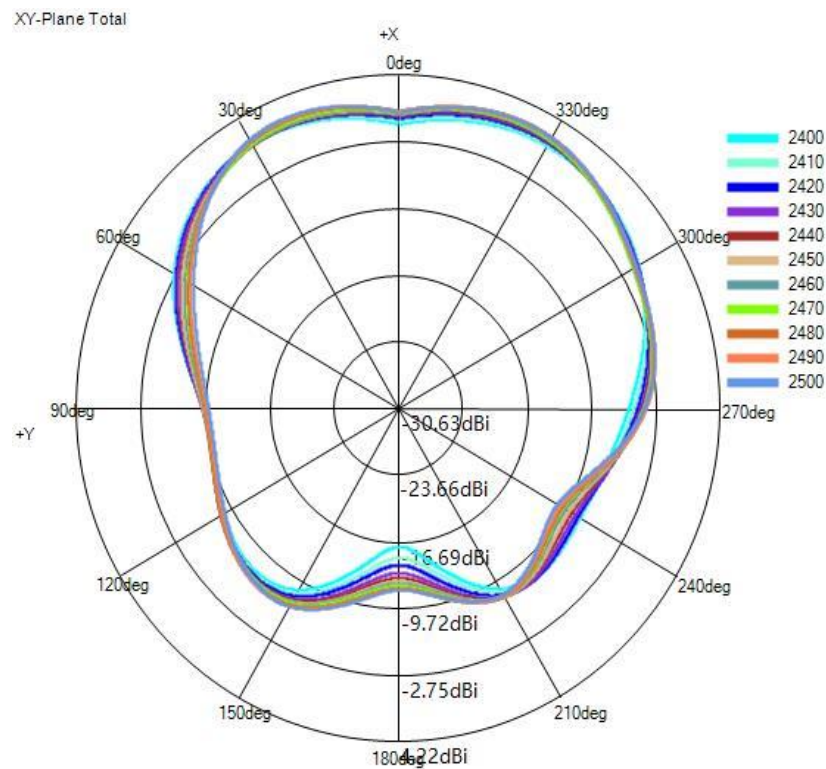
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Freq (MHz)	Gain (dBi)	Efficiency (%)
2400	1.89	57.48
2410	1.99	57.90
2420	2.03	58.81
2430	2.01	58.41
2440	1.96	57.34
2450	2.03	56.88
2460	2.02	55.62
2470	1.98	54.95
2480	2.12	55.96
2490	2.10	55.56
2500	1.99	54.55

Freq (MHz)	Gain (dBi)	Efficiency (%)
5000	1.70	56.31
5100	1.82	64.04
5200	2.46	66.94
5300	1.87	58.36
5400	2.79	66.95
5500	2.67	64.03
5600	3.23	73.68
5700	2.82	63.56
5800	2.77	60.04
5900	2.88	57.27
6000	3.03	57.86

WiF directivity diagram



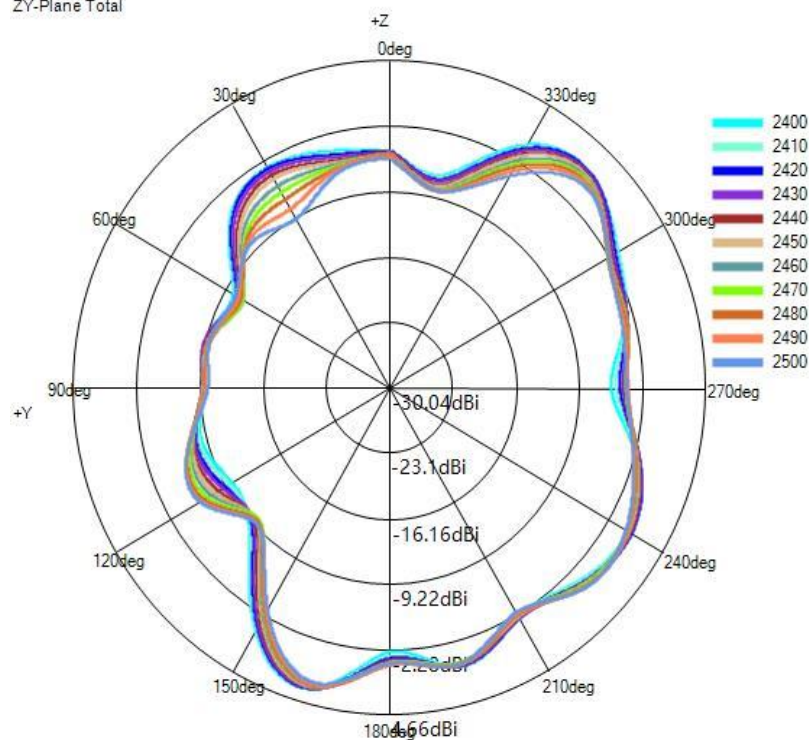
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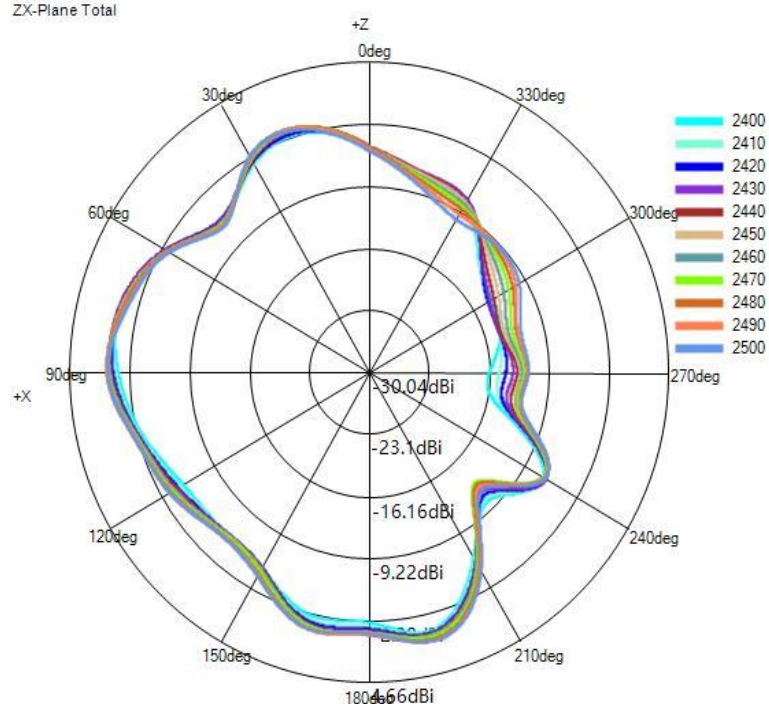
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ZY-Plane Total



ZX-Plane Total



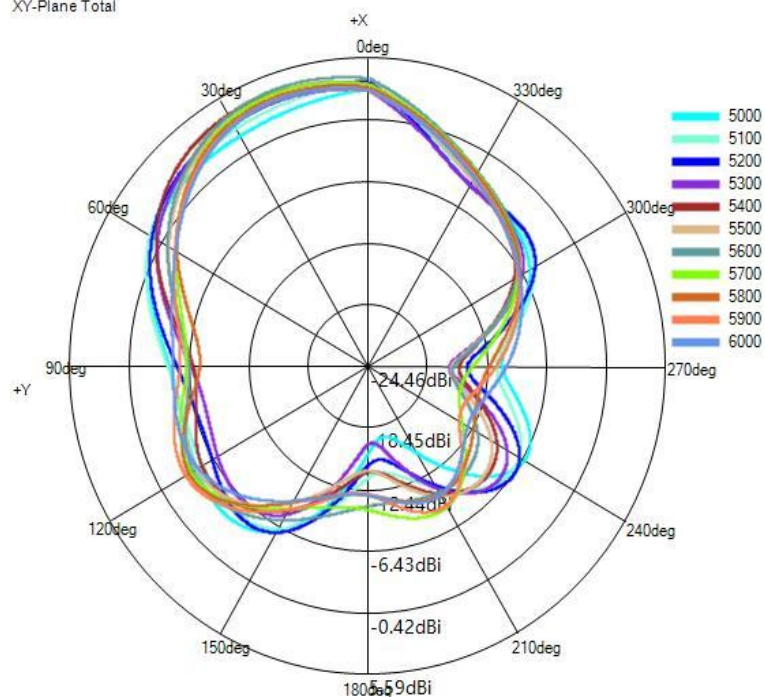
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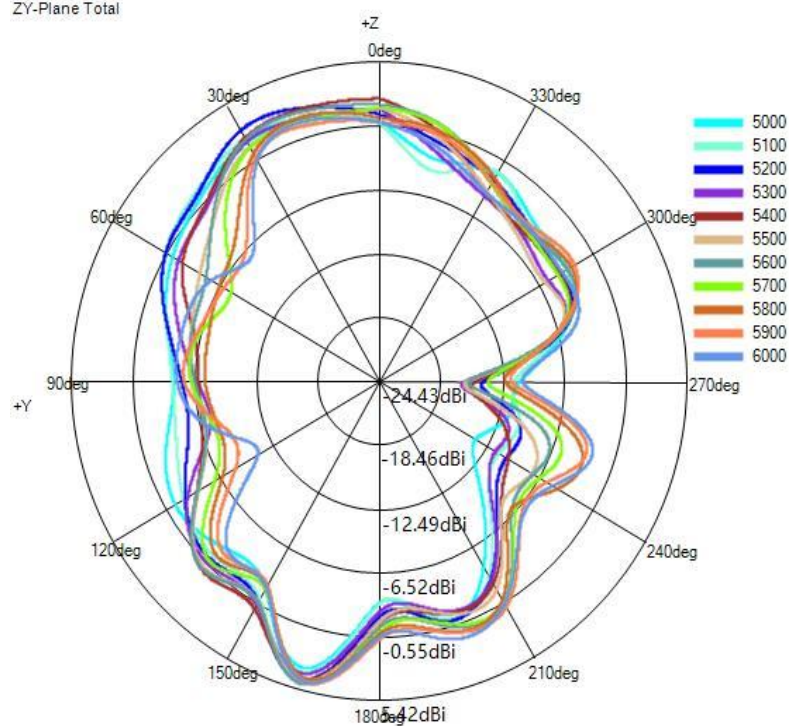
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XY-Plane Total



ZY-Plane Total

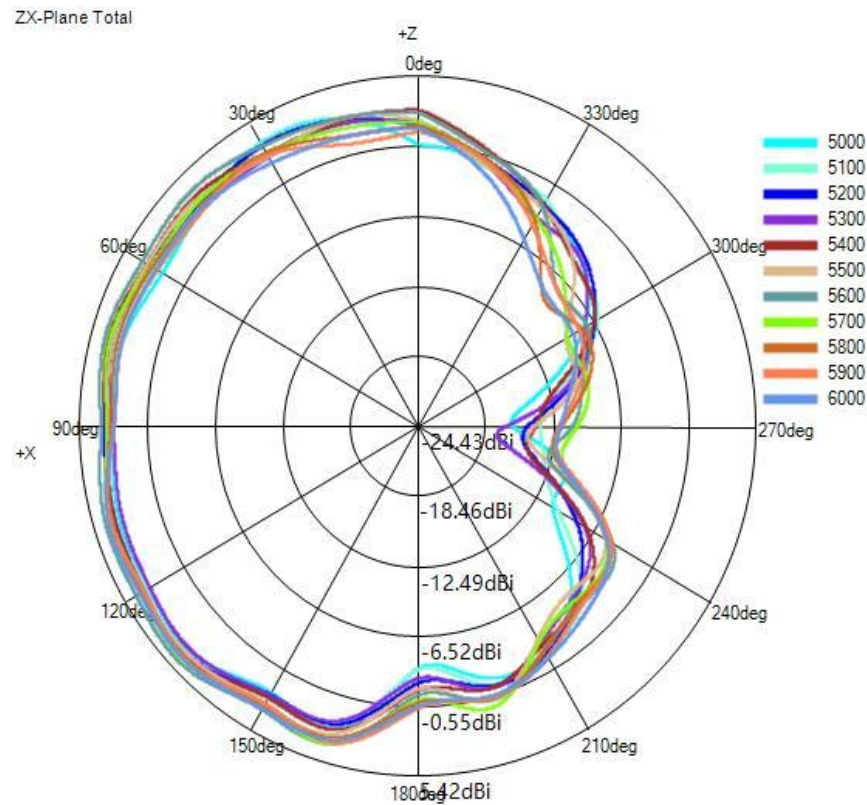


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Note: This antenna is only applicable to the motherboard version of the commissioning prototype. With changes or RF materials, peripheral components around the antenna, it must be tested and verified by our company.

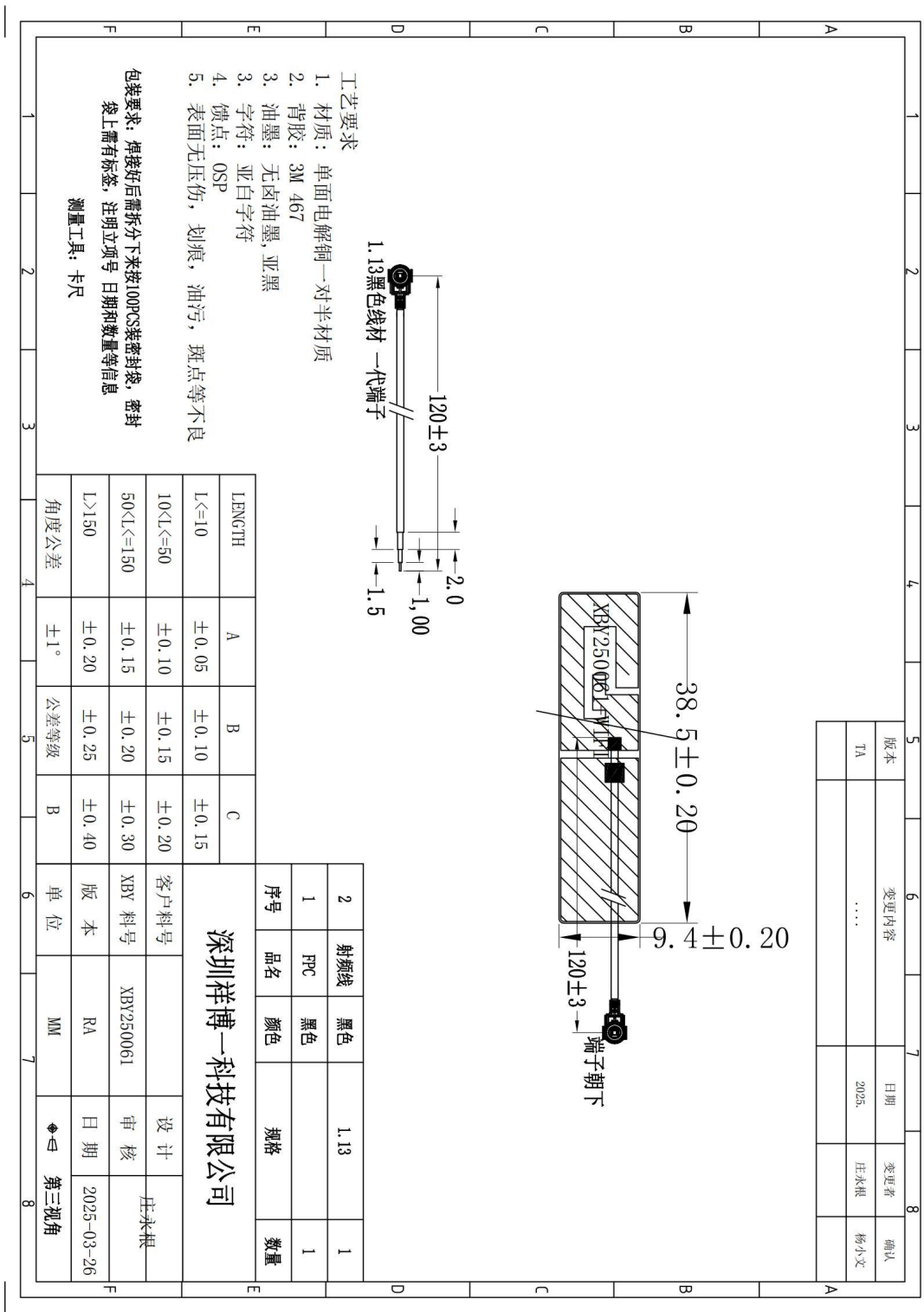
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6 Engineering Drawing



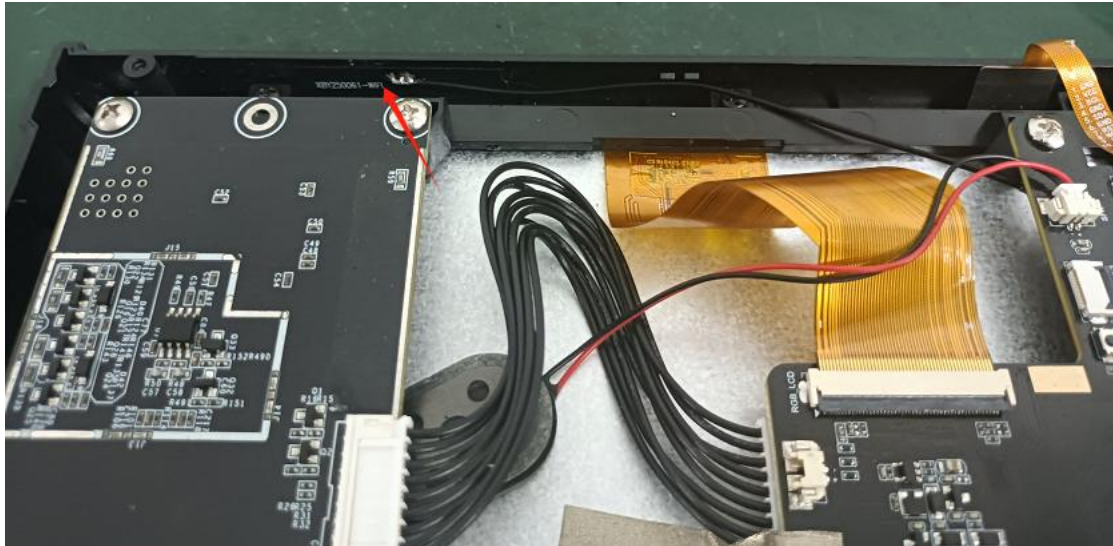
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7. Physical Assembly Picture



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