

# Shenzhen Xiangboyi Technology Co. Ltd

# Antenna Specification

<b>Customer</b>	SHENZHEN FCAR TECHNOLOGY CO., LTD
<b>Project</b>	HD3100PRO
<b>Project NO</b>	XBY220183

**Shenzhen Xiangboyi Technology Co. Ltd**

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

Date : 2022/9/29



<b>Customer confirmation</b>			
<b>Engineer</b>	<b>PM</b>	<b>Quality</b>	<b>Approval</b>

<b>Supplier confirmation</b>			
<b>ME</b>	<b>RF</b>	<b>Examine</b>	<b>Approval</b>

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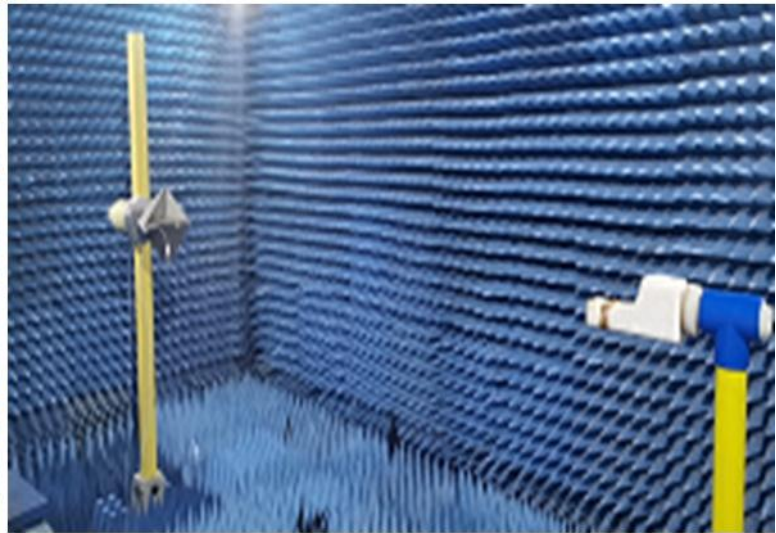
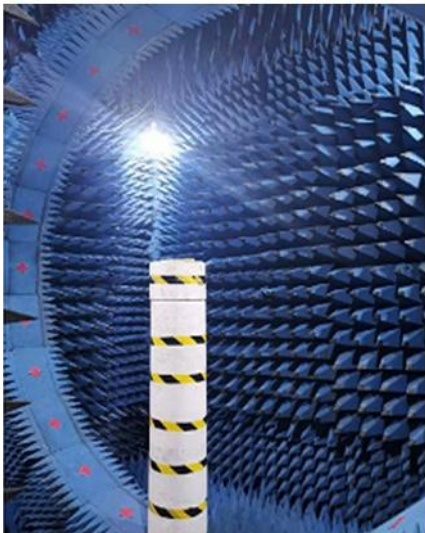
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# 1 Test System and Equipment

	Test items	equipment
1 : S parameter	<ol style="list-style-type: none"> <li>1. Return loss</li> <li>2. VSWR</li> </ol>	Network analyzer: A338/A333/HP8753D
2 : Active test	<ol style="list-style-type: none"> <li>1. Transmitting power</li> <li>2. Receiving sensitivity</li> </ol>	Comprehensive test instrument: Agilent 8960/ CMW500
3 : Radiation mode and gain	<ol style="list-style-type: none"> <li>1. Radiation mode</li> <li>2. Gain</li> </ol>	<ol style="list-style-type: none"> <li>1. Shielding room: 7x4x3 m (ETS-3D)</li> <li>2. Network analyzer: HP 8753D</li> </ol>



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## 2 Product Description

Technical requirements	Technical index	Remarks
<b>Band</b>	WIFI:2.4G	
<b>Range Of Frequency</b>	2400-2500Mhz ;	
<b>VSWR</b>	2400-2500Mhz<2.0	Center Frequency
<b>Impedance</b>	50Ω	
<b>Polarization</b>	Linear polarization	
<b>operating temperature</b>	-32℃ / +55℃	
<b>storage temperature</b>	-55℃ / +85℃	
<b>Salt Fog</b>	24h(24h alternating wet & dry)	
<b>RoHS Compliant</b>	yes	

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### 3 Device Description

#### Antenna photo



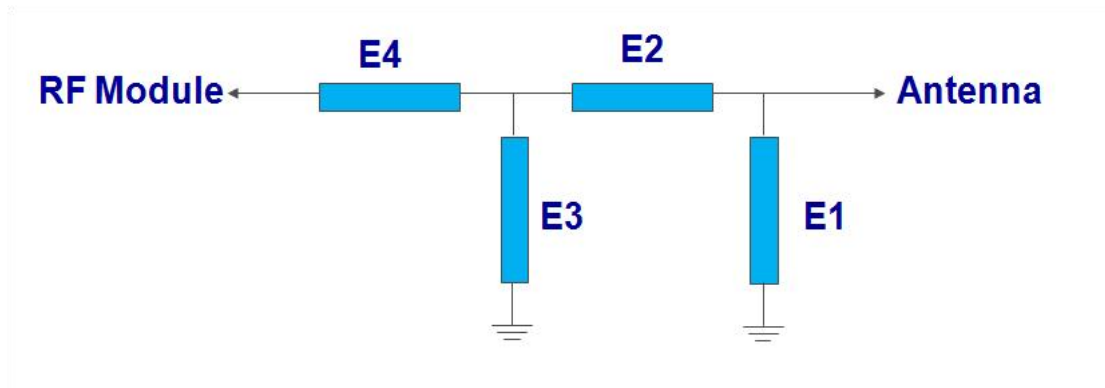
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## 4 Matching Circuits



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

Original match unchanged.

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## 5 Test Data

WIFI BAND	802.11b : 11Mbps(2.4G)			802.11g : 54Mbps(2.4G)		
Channel	CH1	CH6	CH11	CH1	CH6	CH11
TRP	13.3	14.51	13.05	10.79	10.05	10.04
TIS			-67.4			-65.43

WIFI BAND	802.11n : MCS7(2.4G)					
Channel	CH1	CH6	CH11			
TRP	12.7	12.9	12.6			
TIS			-64.41			

WIFI天线效率, 增益		
Freq (MHz)	Effi (%)	Gain (dBi)
2400	46.86	2.1
2450	47.18	1.83
2500	46.47	1.7

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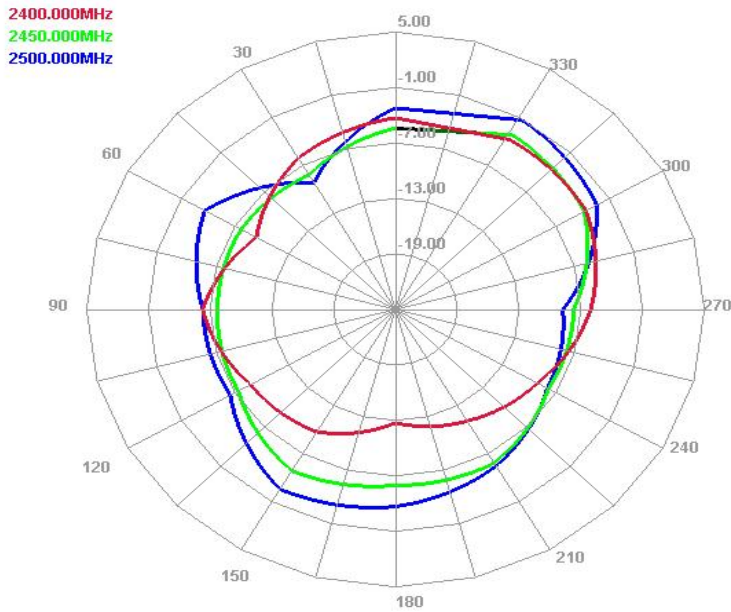
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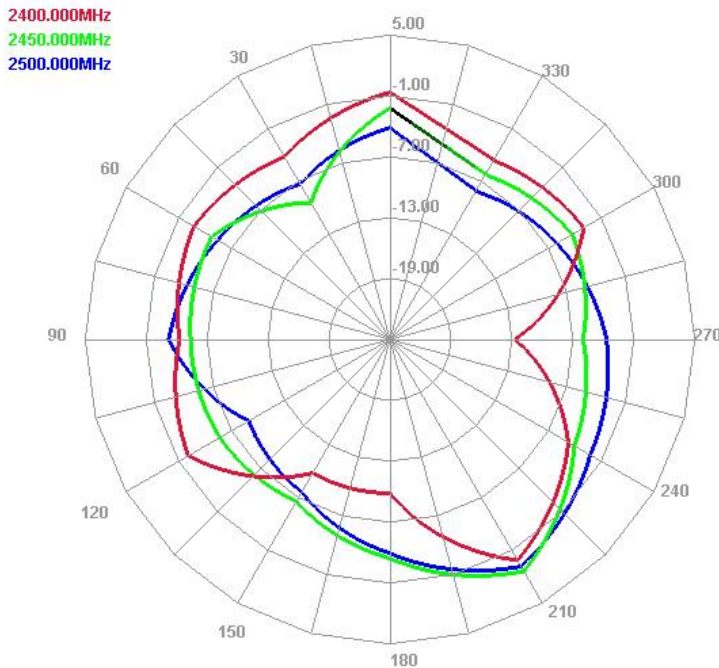


# WiFi idirectional diagram; directivity diagram

## Horizontal



## E1 Face



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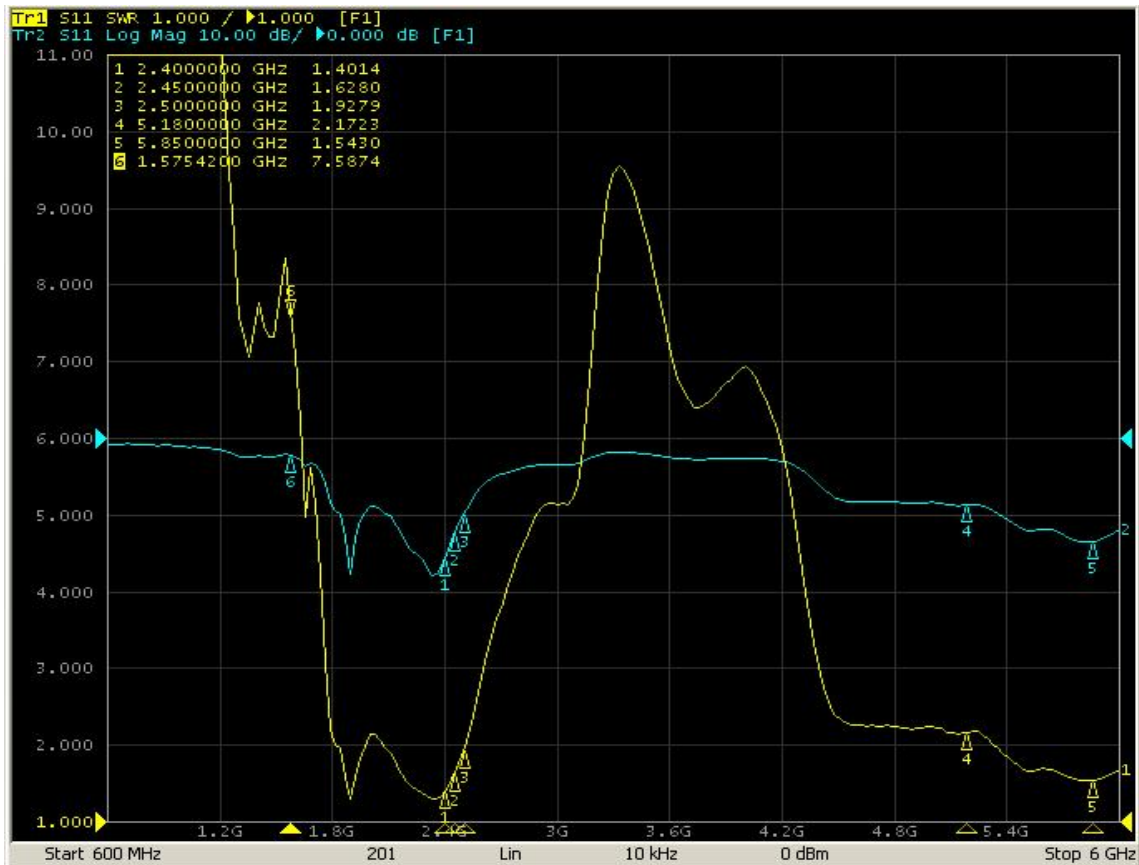
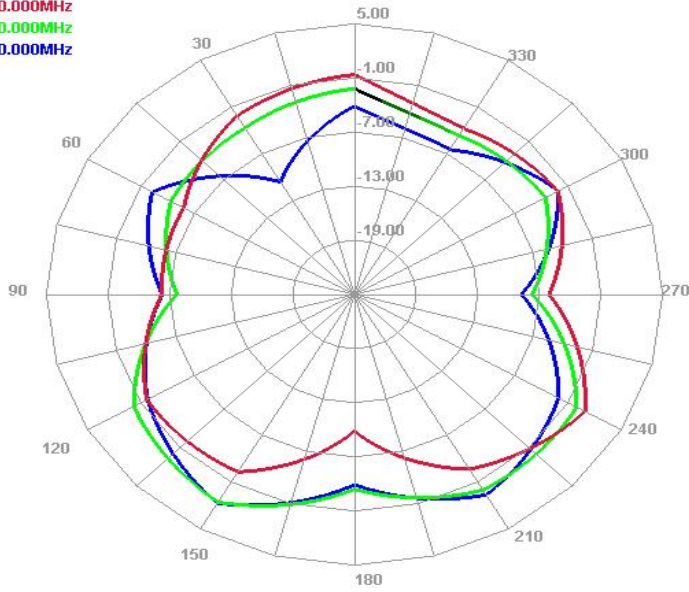
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**E2 Face**

2400.000MHz  
 2450.000MHz  
 2500.000MHz



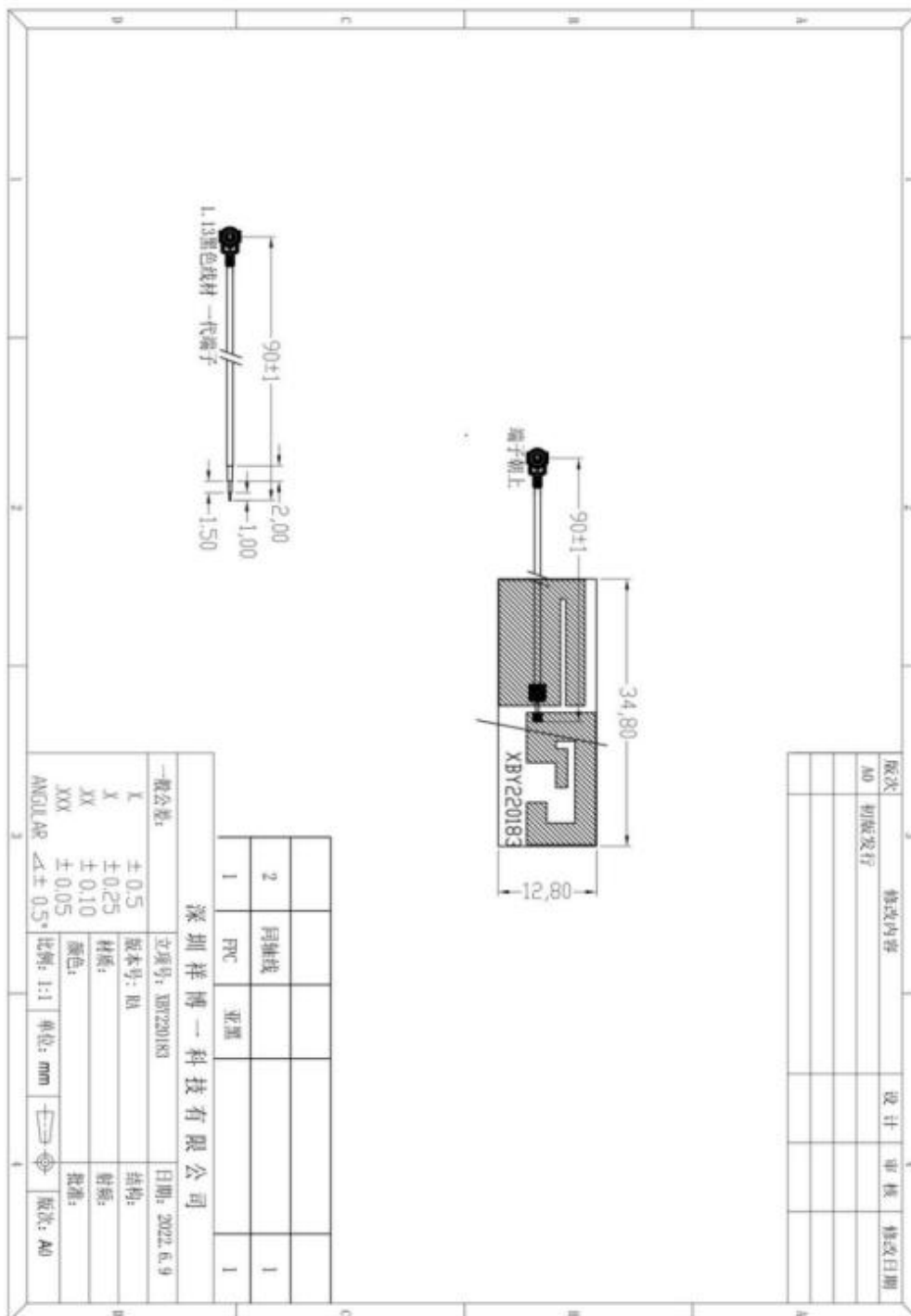
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# 6 Engineering Drawing



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## 7. Physical Assembly Picture



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