

Sample specification

The following contents shall be filled in by the sample maker:

Supplier: All things connected Communications Xiangyang Limited Supply material/model: WWXL6013568
Name of material: Built-in antenna SEI Robotics Co., Ltd Material number: _____

Send samples to acknowledge	Check	Approval confirmation
Dai Hongbo		Tong Xiaoyan

STAMP:

Content of sample submission:

- ☐ A sample (s)
- ☐ Drawings, specifications
- ☐ Main inspection items and implementation standards of materials
- ☐ Reliability test report
- ☐ RoHS compliance test report

Note: Suppliers Please submit in the above order, if not, it can not be admitted.

The following is to be completed by SEI Robotics Co., Ltd:

Identify the person	Judgment	Notes

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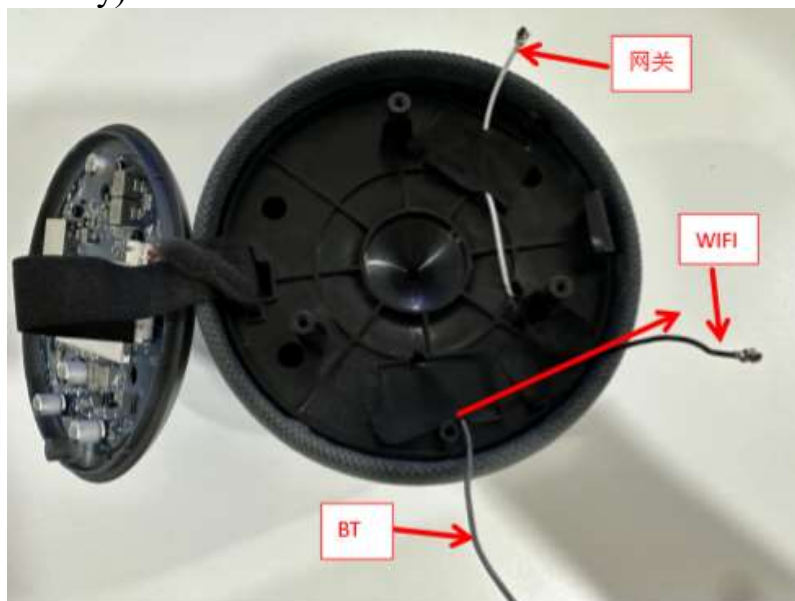
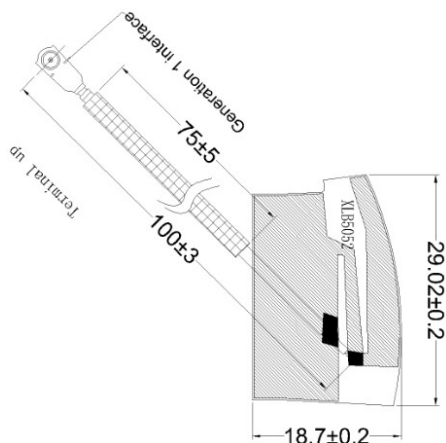
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Specification for Antenna

1.Product pictures(For reference only)



2.Test parameters

Name Built-in antenna (WWXL6013568)		ModelType	
ELECTRICAL SPECTFICATIONS		MECHANICAL SPECTFICATIONS	
FrenquencyRange 2400-2500MHz		Dimensions	29.02*18.7*0.2
Impedance	50 Ω	Connector	IPEX
VSWR	≤3.0	linelength	1.13 white 100±3mm
Gain	4.45dBi	WorkingTemperature	-45℃ - +85℃
Polarization	linear	Limit Temperature	-45℃ - +85℃
Radiation	Omnidirectional		

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3. Antenna Passive Parameters:

a. VSWR:



b. Gain and Efficiency:

Gain&Efficiency&PhaseCenter								
frequency (MHz)	gain(dBi)	efficiency (%)	frequency (MHz)	gain(dBi)	efficiency (%)	frequency (MHz)	gain(dBi)	efficiency (%)
2400	4.43	76.38						
2410	4.45	75.34						
2420	4.32	74.47						
2430	4.13	74.3						
2440	4.13	75.68						
2450	4.1	76.03						
2460	3.98	74.3						
2470	3.86	72.44						
2480	3.49	70.31						
2490	3.49	69.18						
2500	3.42	70.63						

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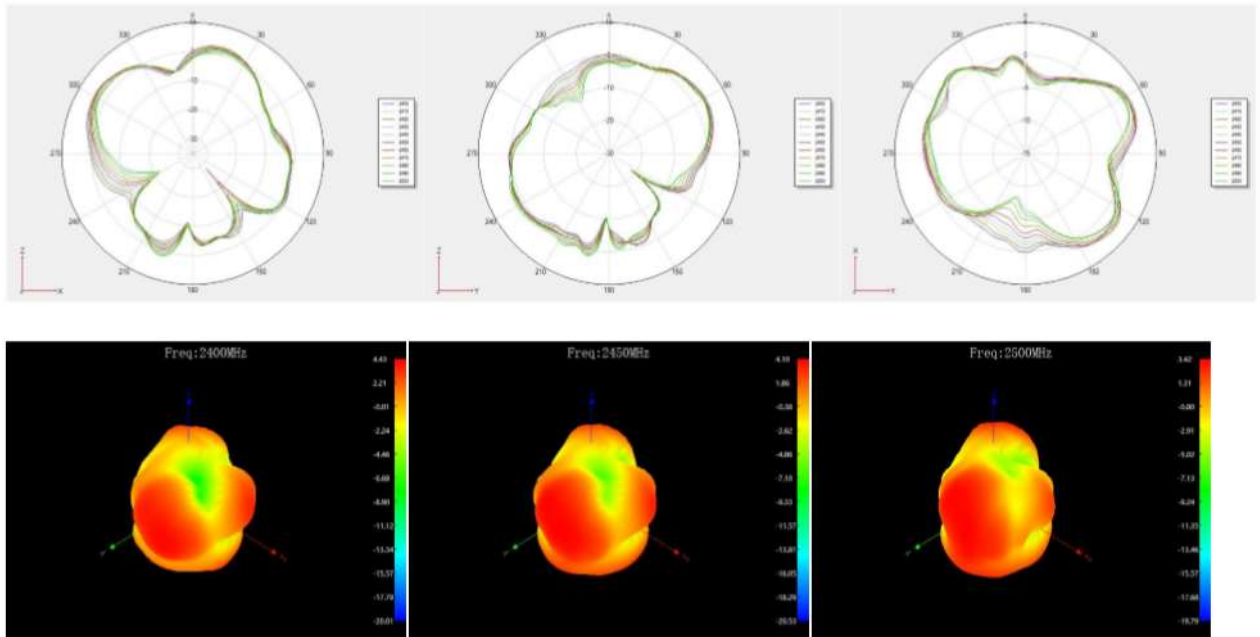
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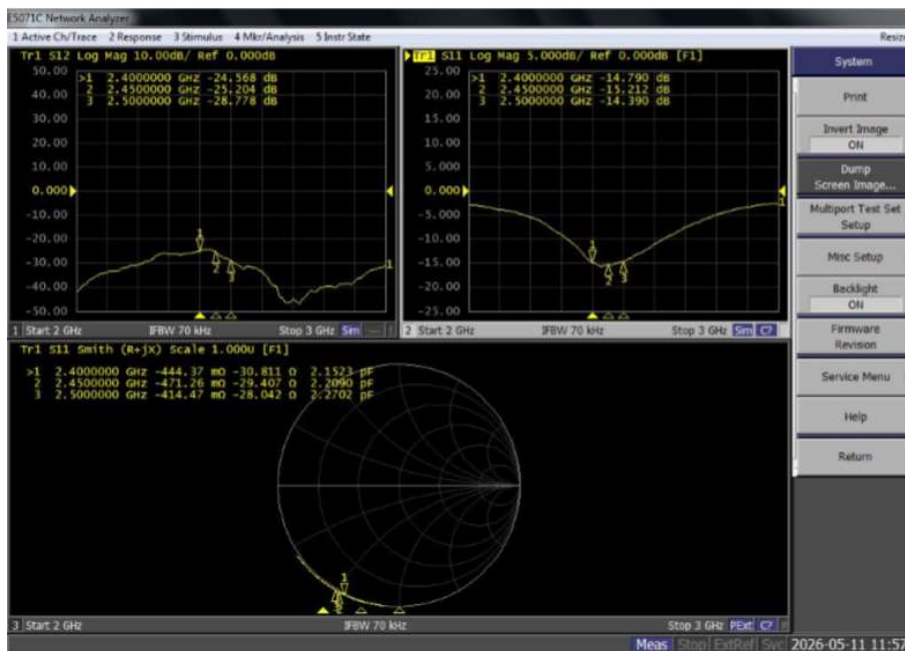
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c. 2D/3D directional



d. Isolation:

WIFI & BT



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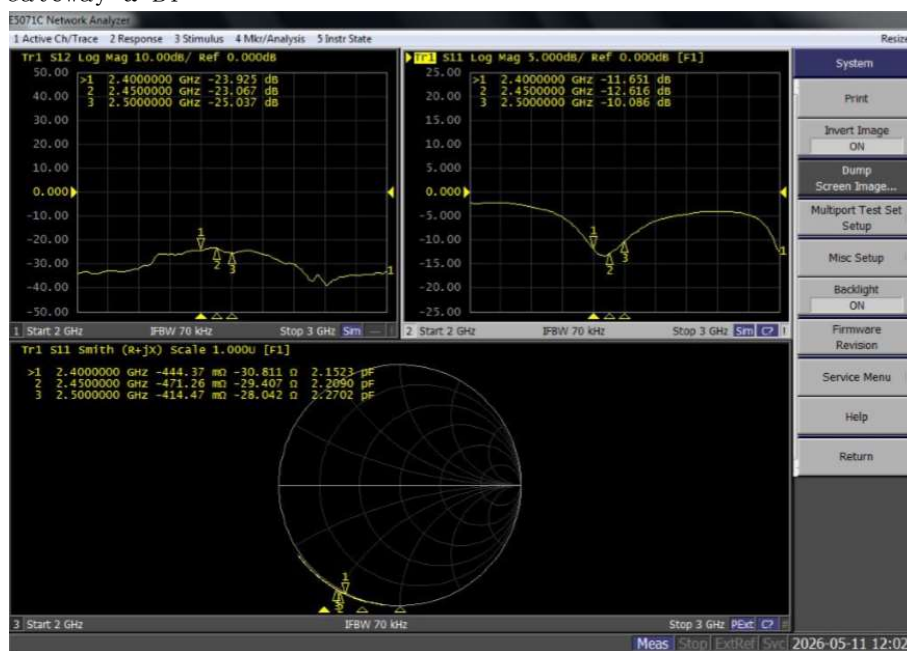
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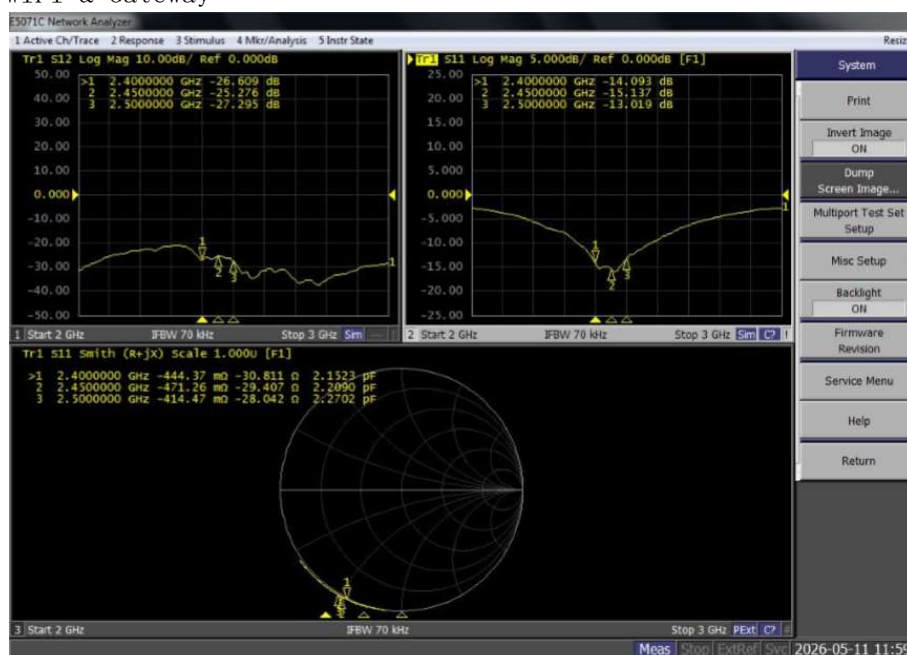
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Gateway & BT



WIFI & Gateway



4 . Product characteristics

- Selection of high-quality FPC and radio frequency cable, self-attenuation;
- Stable performance, long service life;
- Standing wave in frequency band is good.

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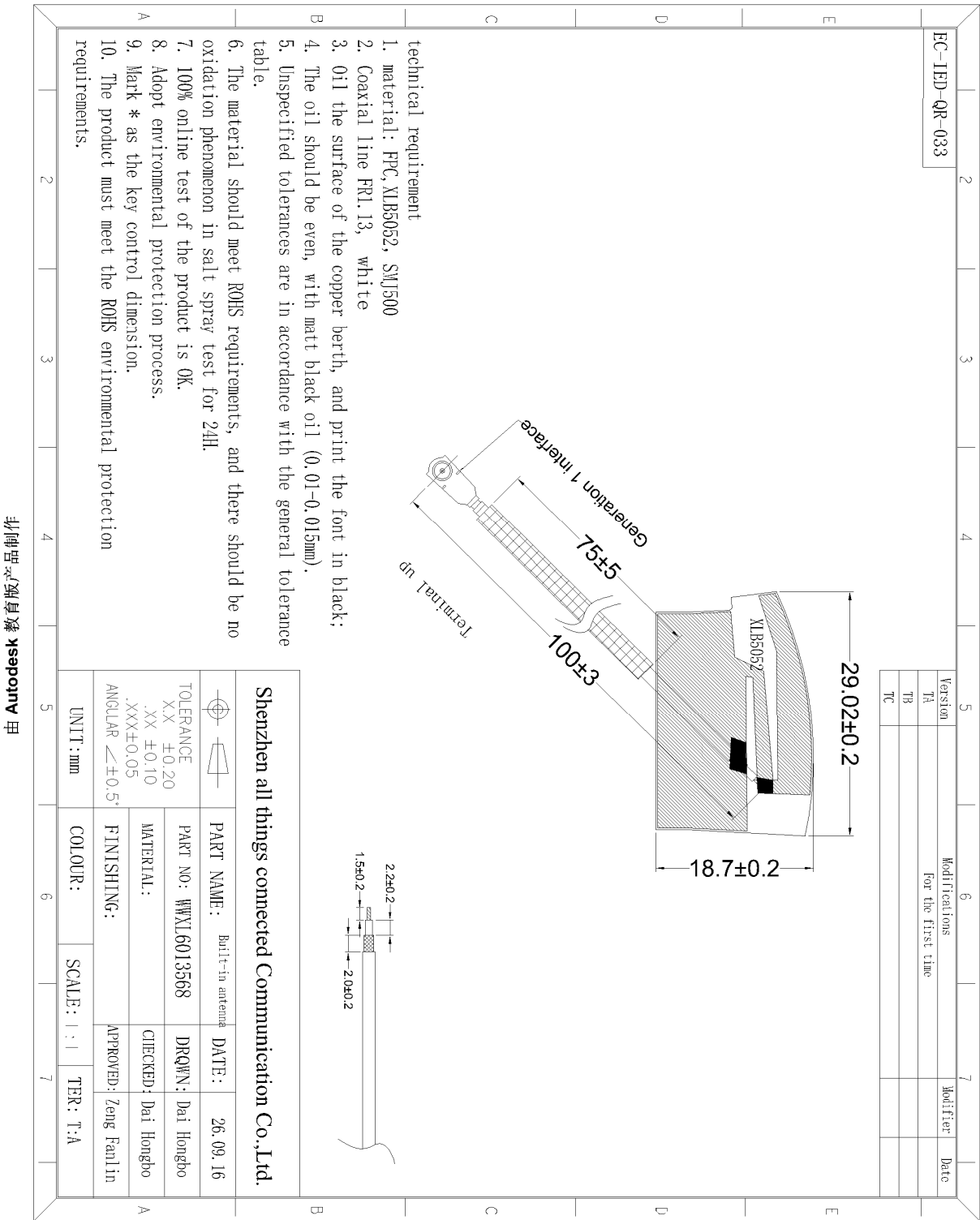
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5、Drawing

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6、Reliability testing

a、Environmental experiment

High and low temperature and humidity test report						
test project	High temperature, low temperature and constant humidity test					
name	Built-in antenna (WWXL6013568)		date	2026.09.16		
device	Constant temperature and humidity test box network analyzer		Quantity	5PCS		
Inspectin standards	1. There are no defects such as peeling off, cracks, wrinkles, etc. on the metal surface; non-metal parts must not have defects such as discoloration, cracking, deformation, degumming. 2. The electrical test meets the design requirements; the voltage standing wave ratio test is satisfactory.					
Test name	Pilot projects	request	experiment method	Actual test data	result	
					sample	Assessm ent result
High temperature test	Temperature (°C) Test sample temperature stabilization time (H) Test duration (h) Recovery time (h)	+85±3 1 2 1	9 according to GB2423. 1-89 Method	+87 1.2 2.3 1	1	qualified
					2	qualified
					3	qualified
					4	qualified
					5	qualified
Low temperature test	Temperature (°C) Test sample temperature stabilization time (h) Test duration (h) Recovery time (h)	-45±3 1 2 1	8th in accordanc e with GB2423. 1-89 Method	-46 1.2 2.4 1.1	1	qualified
					2	qualified
					3	qualified
					4	qualified
					5	qualified
Constant Damp Heat Test	Temper ature (°C) Relative humidity (%)	+40±2 90-95 21 1	According to GB2423. 3-93 Section 5 Method	+42 92 22 1.1	1	qualified
					2	qualified
					3	qualified
					4	qualified

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	Test duration (h) Recovery time (h)				5	qualified
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b. Salt spray test

Salt fog test report				
Test item	Salt spray test			
Name	Built-in antenna (WWXL6013568)		date of observation	2026.09.16
Device name	Salt spray corrosion test box		Test quantity	5 PCS
Test method	The test samples were put into the modulated salt solution test chamber and salt spray corrosion chamber for continuous spray test			
Salt solution concentration	52g/L	PH Value of Salt Solution: 6.5-7.2		Test cycle: 24h
Actual test data	55g/L	PH Value of Salt Solution: 6.8		Test cycle: 26h
Test standard	Tests were carried out according to GB/T10125 "Artificial Atmosphere Corrosion Test and Salt Spray Test"; Results According to GB/T6461-2002 "Metal and other inorganic coatings on metal substrates after corrosion test are samples and specimens"			
Test result				
NO	Corrosion resistance grade	Actual test data	Assessment result	Remarks
1	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
2	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
3	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
4	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
5	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	

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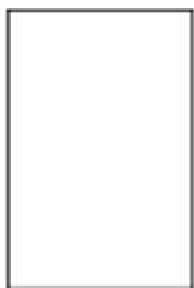
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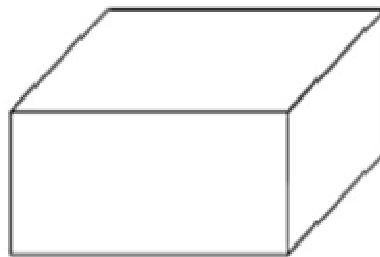
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7. Packing instructions



100PCS/Pouch



30Pouch/1Caron