

Specifications

SPECIFICATION FOR APPROVAL

Customer name CUST OMER:

Customer P/N CUS PART NO:

Product name and specification PART NAME: 915MHz RG174 line 2.5m
external suction cup antenna

Vertex material number TPT PART NO: DD6004949

Version: 1.0

Signature and seal of customer:

Date: MM/DD/YY

Procurement Department	Engineering Department	Approved

Manufacturer: XJ Metering Co., Ltd

Add: XJ Smart Power Grid Industrial Park, Xuchang, China

Product Specifications

I. Finished Product Picture (for reference only)



II. Product Test Parameters

Product Name External Suction Cup Antenna (DD6004949)	Model Type DDA-T915-2.59
Electrical Parameters	MECHANICAL SPECIFICATIONS
Frequency Range 915±15 MHz	Total height Height 239.5±5mm
Band Width 30 MHz	Connector model: Straight connector
Input impedance Impedance 50Ω	Chassis material ABS
Standing wave ratio VSWR ≤2	Chassis color Black
Gain 5dBi	Cable Length 2500mm±30mm
Polarization mode: vertical/horizontal	Working Temperature -40° C~+85° C
Radiation Omnidirectional	Limit Temperature -40° C~+85° C
Power capacity 50W	

III. Antenna Test Environment



Test system: SY-16M antenna measurement system/SY-24M antenna measurement system

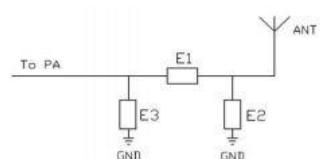
Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

Test equipment: Agilent 5071C network analyzer, Agilent 8960 comprehensive tester, CMW500 4G comprehensive tester

IV. Antenna Matching and Environmental Treatment

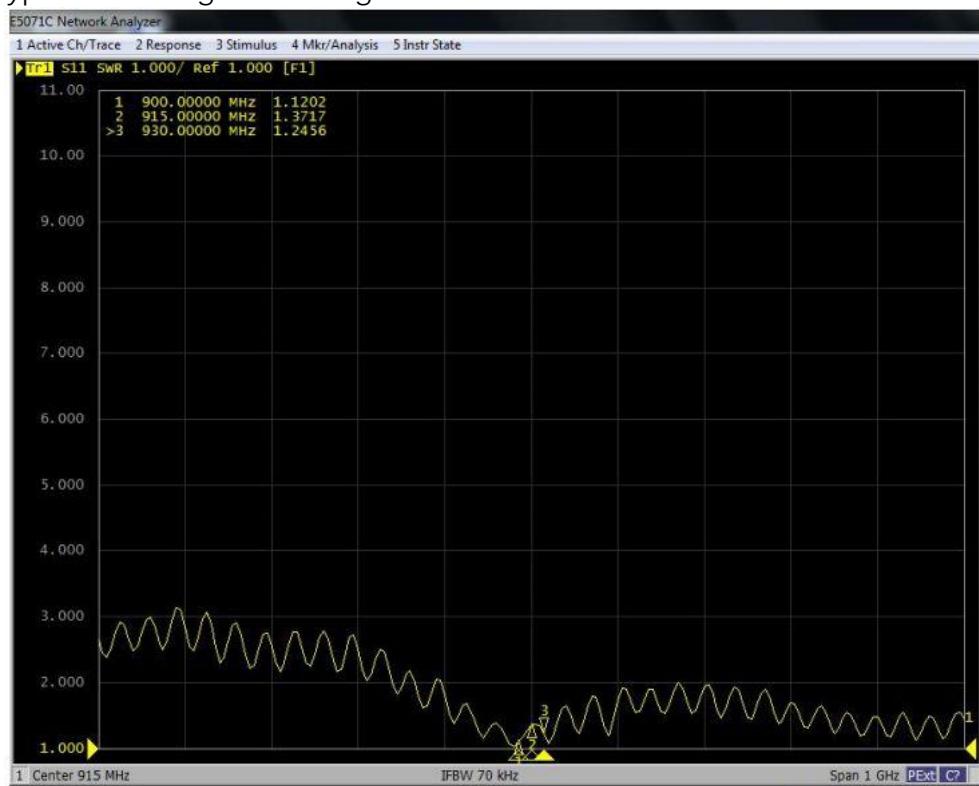
No environmental treatment

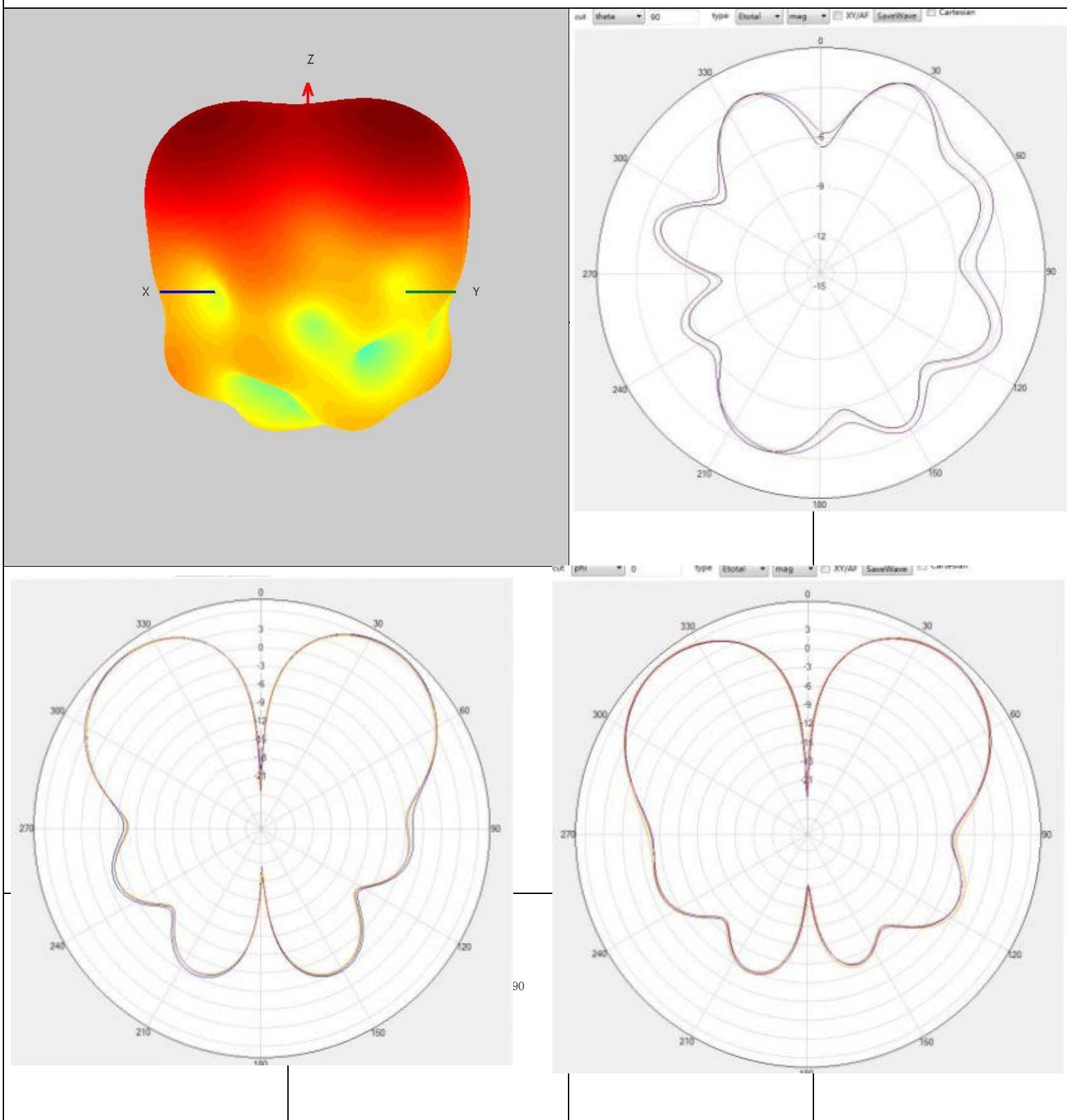
Matching structure



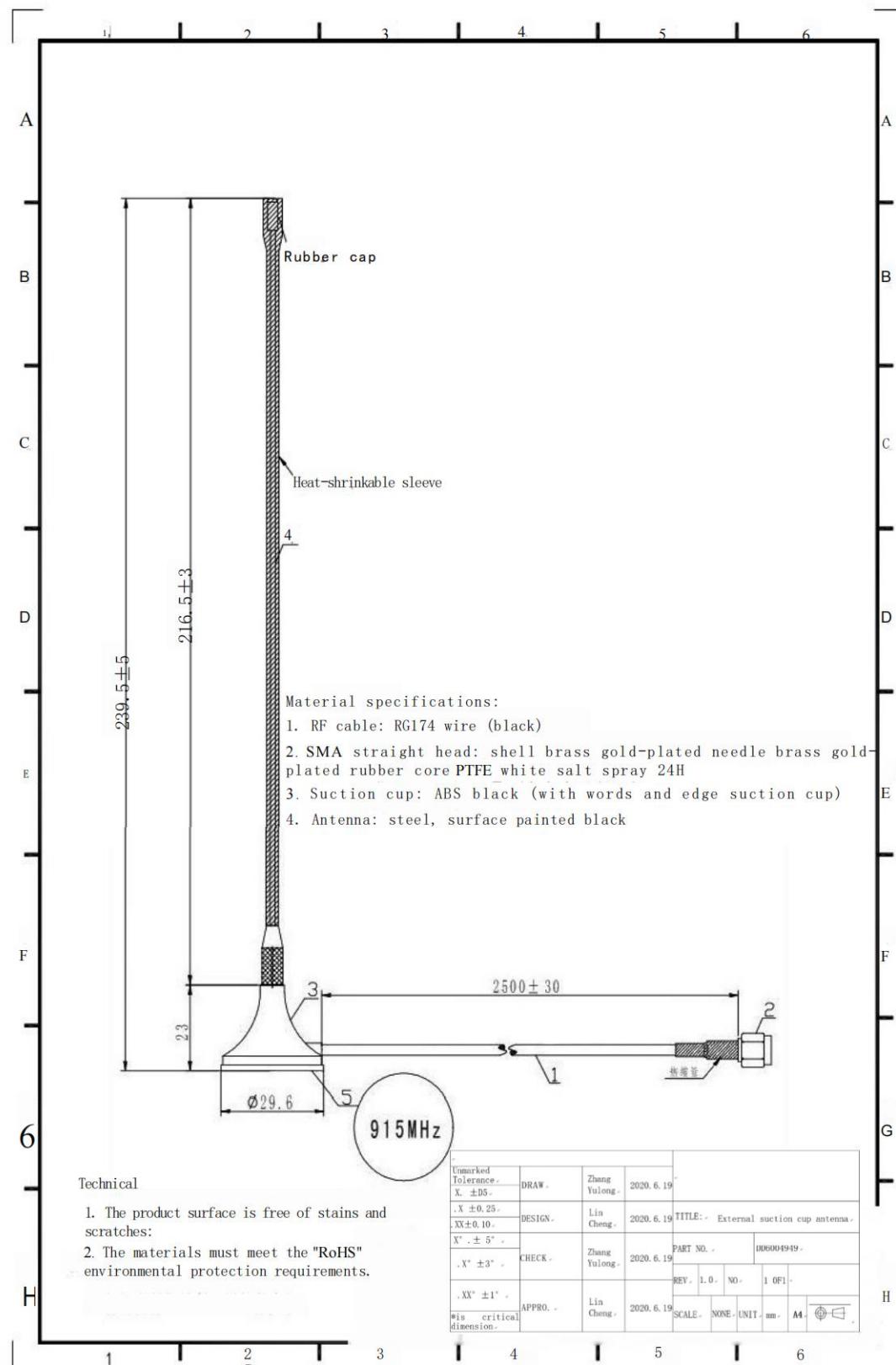
Matching description	MINA ANT
E1	0Ω
E2	NA
E3	NA

V. Typical Standing Wave Diagram





VII. Product Structure Diagram



VIII. Environmental Reliability Test Report

1. Environmental test

High and Low Temperature Constant Humidity Test Report						
Test Project	High temperature, low temperature and constant humidity test					
Test sample Plate name	DD6004949 external suction cup antenna		Test date	2019.6.15		
Experiment/Testing Equipment	Constant temperature and humidity test chamber Network analyzer			Number of tests	5 PCS	
Inspection Standard	1. The metal surface coating shall be free of peeling off, cracks, wrinkles and other defects; non-metallic parts shall not have discoloration, cracking, deformation, Debonding and other defects. 2. The electrical test meets the design requirements; the voltage standing wave ratio test is qualified.					
Test Name	Test Items	Requirements	Tested by Law	Actual measurement Test data	Results	
					Samples	Judgement
High temperature Test	Temperature (° C) Temperature stabilization time of test sample (h) Test duration (h) Recovery time (h)	+85±3 1 2 1	According to GB2423. 1-89 No. 9 Chapter Specified Method Progress Row	+83 1. 2 2. 3 1	1	Qualified
					2	Qualified
					3	Qualified
					4	Qualified
					5	Qualified
Low temperature Test	Temperature (° C) Temperature stabilization time of test sample (h) Test duration (h) Recovery time (h)	-45±3 1 2 1	According to GB2423. 1-89 No. 8 Chapter Specified Method Progress Row	-47 1. 2 2. 4 1. 1	1	Qualified
					2	Qualified
					3	Qualified
					4	Qualified
					5	Qualified
	Temperature (° C)	+40±2	According to GB2423.	+42	1	Qualified
					2	Qualified

Thermal test	Relative humidity (%)	90–95 21	3–93 5	No. 92 Chapter 22	3	Qualified
	Test duration (h)	1	Specified	1.1	4	Qualified
	Recovery time (h)		Method Progress Row		5	Qualified

2. Salt spray test

Salt spray test report						
Test Items	Salt spray test					
Name of test sample plate	DD6004949 external suction cup antenna		Test date	2019.6.15		
Equipment name	Salt spray corrosion test chamber		Number of tests	5 PCS		
Test method	Put the test sample into the prepared salt solution test chamber and salt spray corrosion chamber for continuous spray test					
Concentration of salt solution	52g/L	PH value of salt solution: 6.5-7.2		Test period: 24h		
Actual test data	55g/L	PH value of salt solution: 6.8		Test period: 26h		
Test standard	<p>The test is carried out in accordance with GB/T10125 "Artificial atmosphere corrosion test, salt spray test"; the results are as follows</p> <p>GB/T6461-2002 "Metallic and other inorganic coatings on metal substrates after corrosion testing specimens and test</p> <p>The rating of the parts.</p>					
Test results						
No.	Corrosion resistance grade	Actual test data	Evaluation 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			