

IA.0447.LM.0SE

Antenna Specification

1. Application:

This application shall apply for antenna unit which shall be used such as automotive, conventional communications, smart home, etc..

1. Electrical Specification:

Those specifications were specially defined for customer's model, and all characteristics were measured under the model's handset testing jig .

2-1. Frequency Band:

Frequency Band	MHz
900MHZ	900-920


2-2. Impedance

50 ohm nominal

2-3. VSWR

2-3-1.Measurement frequency points and VSWR value

Frequency Band(MHz)	900	910	920
2-3-3. Typical Value:	1.31	1.66	1.93

UNLESS OTHER SPECIFIED TOLERANCES ON: X=± X.X=± X.XX=± ANGLES=± HOLEDIA=±		 JIA DE WIRELESS TECHNOLOGY (SZ)CO.,LIMITED
SCALE:	UNIT: mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF KINGRF TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DRAWN BY: LU	CHECKED BY: YS	
DESIGNED BY:JIN TIAN	APPROVED BY: YS	
TITLE: IA.0447.LM.0SE Antenna Specification		SPEC REV. P0

<p>2-3-4 Measuring Method</p>	<ol style="list-style-type: none"> 1. A 50 Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR. 2. Keeping this jig away from metal at least 20 cm
<p>2-3-5 Picture</p>	

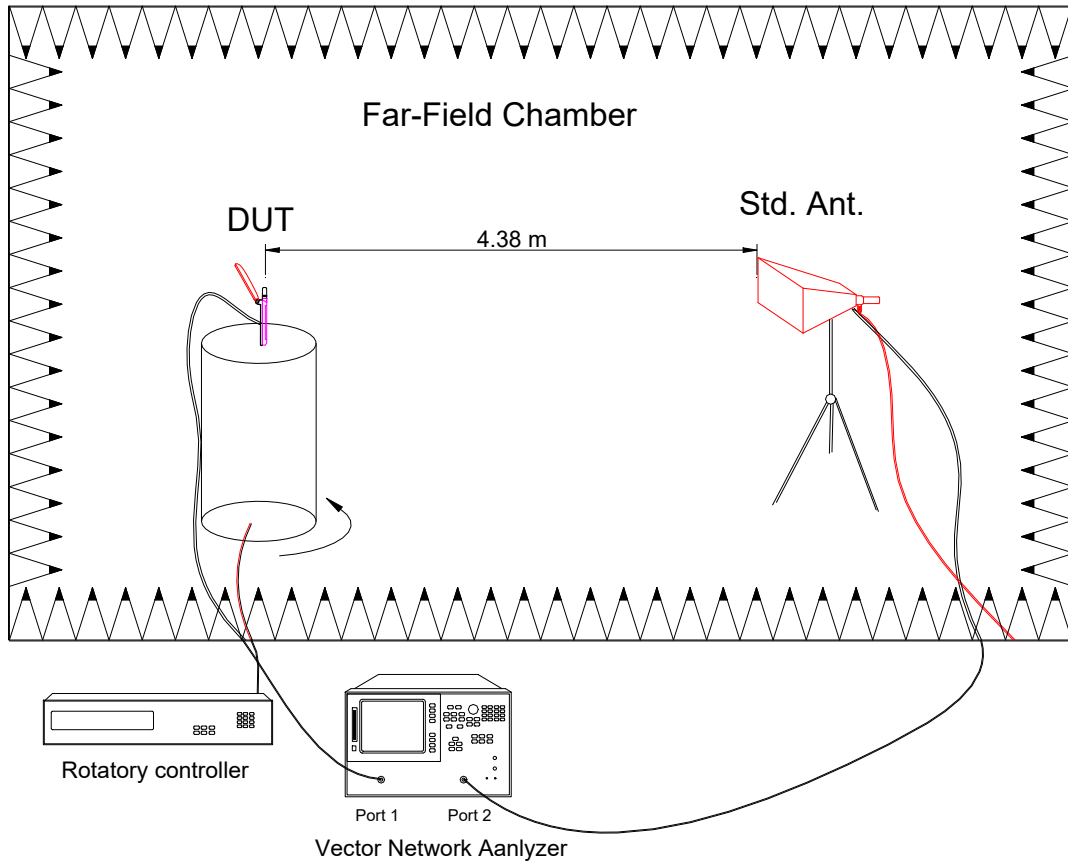
<p>UNLESS OTHER SPECIFIED TOLERANCES ON: X=± X.X=± X.XX=± ANGLES=± HOLEDIA=±</p>			<p>JIA DE WIRELESS TECHNOLOGY (SZ)CO.,LIMITED</p>				
<p>SCALE:</p>	<p>UNIT: mm</p>	<p>THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF KINGRF TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION</p>					
<p>DRAWN BY: LU</p>	<p>CHECKED BY: YS</p>						
<p>DESIGNED BY:JIN TIAN</p>	<p>APPROVED BY: YS</p>	<table border="1"> <tr> <td data-bbox="782 2049 1332 2083"> <p>TITLE: IA.0447.LM.0SE Antenna Specification</p> </td> <td data-bbox="1332 2049 1492 2083"> <p>SPEC REV.</p> </td> </tr> <tr> <td colspan="2" data-bbox="782 2083 1492 2116"> <p>P0</p> </td> </tr> </table>		<p>TITLE: IA.0447.LM.0SE Antenna Specification</p>	<p>SPEC REV.</p>	<p>P0</p>	
<p>TITLE: IA.0447.LM.0SE Antenna Specification</p>	<p>SPEC REV.</p>						
<p>P0</p>							

2-4. Efficiency and Gain

4-5.1 Measure method

1. Using a low loss coaxial cable to link a standard handset jig
2. Fixed this handset jig on chamber's rotator plane
3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
4. Using another standard gain horn antenna to calibrated those data

4-5.2 Chamber definition



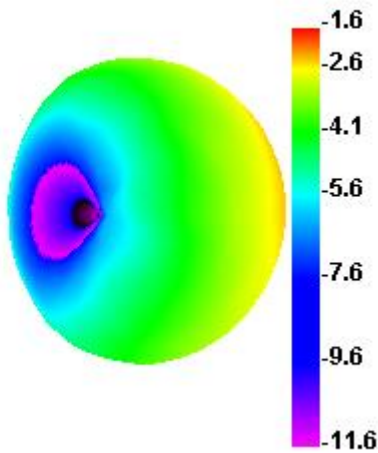
1. An anechoic chamber (7mx4mx3m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quite room region is 40cmx40cmx40cm at the center of rotator
3. The distance between DUT and standard antenna is 4.38 m
4. Probing antenna (9120D horn antenna) and standard gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

UNLESS OTHER SPECIFIED TOLERANCES ON: $X = \pm$ $X.X = \pm$ $X.XX = \pm$ ANGLES = \pm HOLEDIA = \pm		JIA DE WIRELESS TECHNOLOGY (SZ)CO.,LIMITED
SCALE:	UNIT: mm	
DRAWN BY: LU	CHECKED BY: YS	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF KINGRF TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DESIGNED BY:JIN TIAN	APPROVED BY: YS	
TITLE: IA.0447.LM.0SE Antenna Specification		SPEC REV. P0

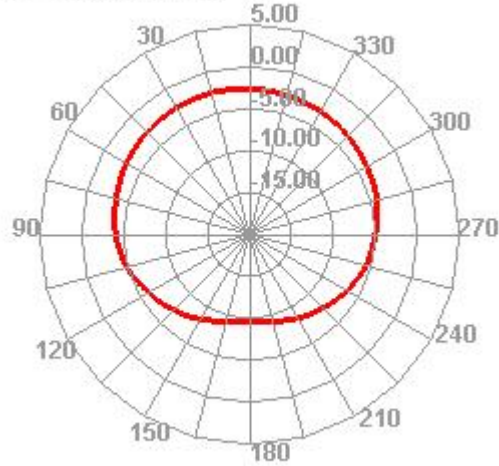
2-4-1 Efficiency and Gain

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
900	34.42	-4.63	-1.64
905	35.24	-4.53	-1.46
910	35.95	-4.44	-1.56
915	34.66	-4.6	-1.93
920	33.38	-4.76	-2.23

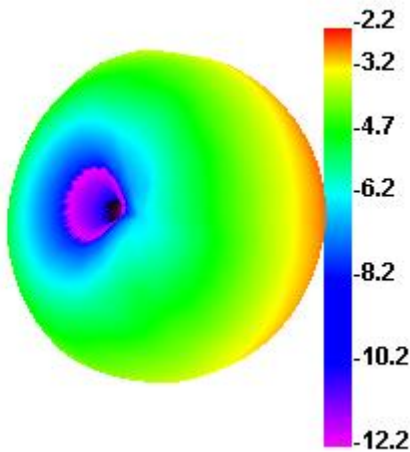
900.000MHz



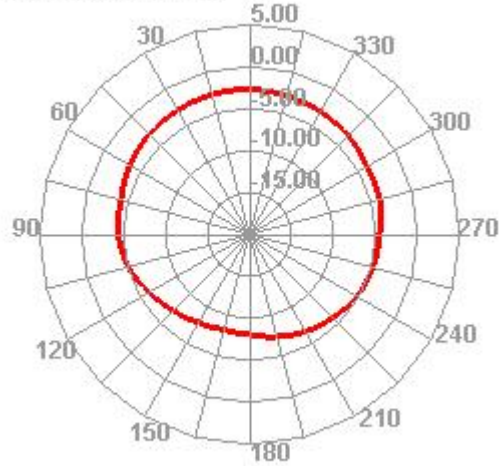
900.000MHz H



920.000MHz



920.000MHz H



UNLESS OTHER SPECIFIED TOLERANCES ON: $X = \pm$ $X.X = \pm$ $X.XX = \pm$ ANGLES = \pm HOLEDIA = \pm		JIA DE WIRELESS TECHNOLOGY (SZ)CO.,LIMITED
SCALE:	UNIT: mm	
DRAWN BY: LU	CHECKED BY: YS	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF KINGRF TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DESIGNED BY:JIN TIAN	APPROVED BY: YS	
TITLE: IA.0447.LM.0SE Antenna Specification		SPEC REV.
		P0

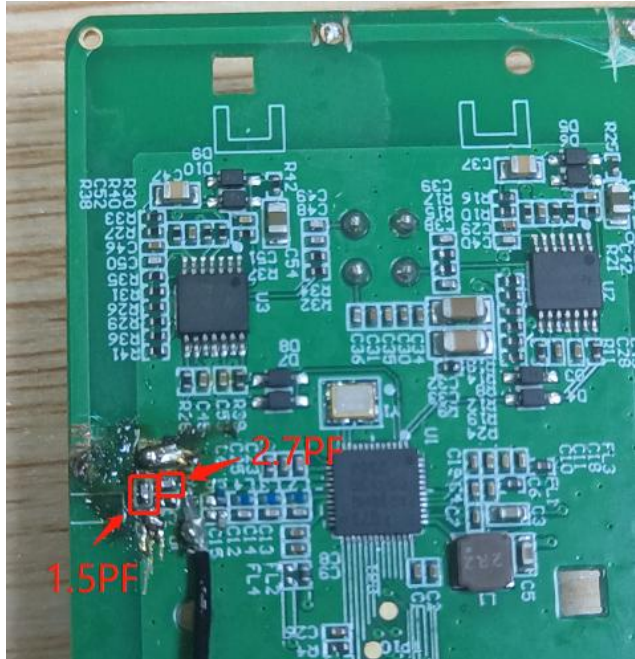
3. Antenna Matching Network

Element	Value
ANT-0	2.7PF
ANT-1	1.5PF
ANT-2	N/C
ANT-3	N/C

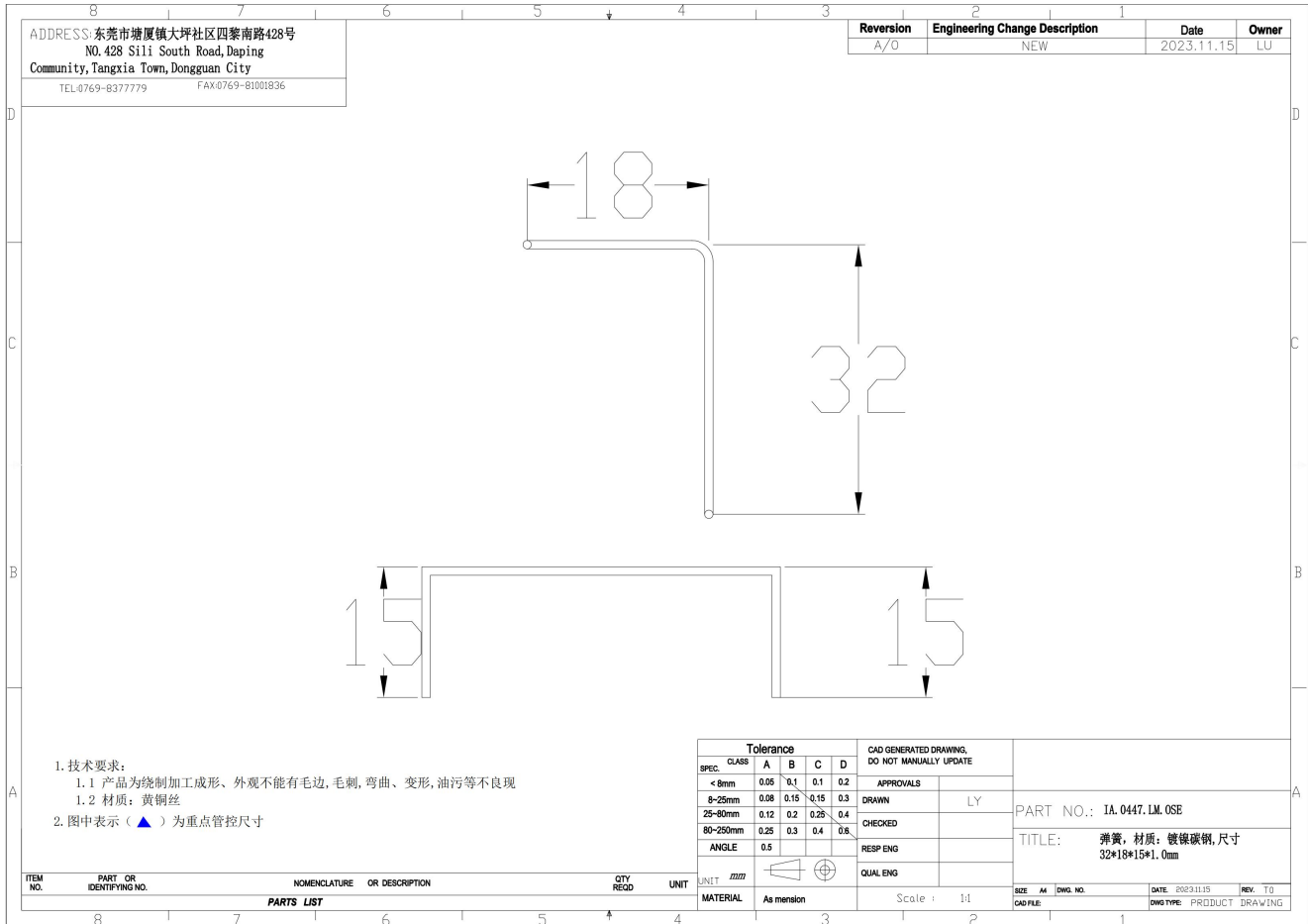
4. Mechanical Specification:

4-1. Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing




UNLESS OTHER SPECIFIED TOLERANCES ON: $X = \pm$ $X.X = \pm$ $X.XX = \pm$ ANGLES = \pm HOLEDIA = \pm		JIA DE WIRELESS TECHNOLOGY (SZ) CO., LIMITED
SCALE:	UNIT: mm	
DRAWN BY: LU	CHECKED BY: YS	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF KINGRF TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DESIGNED BY: JIN TIAN	APPROVED BY: YS	
TITLE: IA.0447.LM.0SE Antenna Specification		SPEC REV. P0




5.ENVIRONMENT AND RELIABILITY TEST

<p>UNLESS OTHER SPECIFIED TOLERANCES ON: $X = \pm$ $X.X = \pm$ $X.XX = \pm$ ANGLES = ± HOLEDIA = ±</p>	<p>JIA DE WIRELESS TECHNOLOGY (SZ)CO.,LIMITED</p>	
<p>SCALE:</p>	<p>UNIT: mm</p>	<p>THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF KINGRF TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION</p>
<p>DRAWN BY: LU</p>	<p>CHECKED BY: YS</p>	
<p>DESIGNED BY: JIN TIAN</p>	<p>APPROVED BY: YS</p>	
<p>TITLE: IA.0447.LM.0SE Antenna Specification</p>		
		<p>SPEC REV.</p> <p>P0</p>


Item	Reference standard, experimental conditions	Judgments based	Number of samples / bad quantity(PCS)	Test/equipment
Collision	GB/T 2423.6-1995 Acceleration: 200m / s ² Collision pulse duration: 6ms Number of collisions per minute: 40~80 times Total number of collisions: 400 times in the vertical direction, before and after, 300 times in the horizontal direction, 1000 times in total.	The electrical characteristics should be met, and the mechanical properties are normal, but the appearance of scratches, whitening and bending are within the allowable range.	5/0	Collision experiment machine
vibration	GB/T 2423.10-1995 Test FC Frequency: 10~30; 30~50Hz; Resonance point amplitude: 0.35mm Amplitude: 0.75mm Duration: X, Y & Z 0.5 hours in each direction. Period: 1min; Tested after 1 hour of experimentation.	And the firmware is not loose, the parts are not broken or fatigued; No original parts fall off, no solder joint breaks; Electrical performance indicators meet technical specifications;	5/0	Vibration tester

UNLESS OTHER SPECIFIED TOLERANCES ON: X=± X.X=± X.XX=± ANGLES=± HOLEDIA=±		 JIA DE WIRELESS TECHNOLOGY (SZ)CO.,LIMITED
SCALE:	UNIT: mm	
DRAWN BY: LU	CHECKED BY: YS	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF KINGRF TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DESIGNED BY:JIN TIAN	APPROVED BY: YS	
TITLE: IA.0447.LM.0SE Antenna Specification		SPEC REV. P0


Shock	Acceleration: 300m / s ² Shock pulse duration: 18ms Number of impacts: 18 times GB/T 2423.5-1995	The electrical characteristics should be met, and the mechanical properties are normal, but the appearance of scratches, whitening and bending are allowed.	5/0	Crushing machine
fall	GB/T2423.8-95 Dropped from the height of 100cm to the floor 10 times. GB/T2423.8-95	1. No obvious abnormal appearance 2. After the test, the electrical performance meets the specification requirements, and the electrical characteristics should be met, and the mechanical properties are normal, but the appearance of the bumps, whitening and bending are within the allowable range.	5/0	Drop test machine
High temperature storage	GB/T 2423.2-2001 Test B Environmental conditions: +85 ± 3 °C for 96H The test was completed after standing at room temperature for 24 hours.	The surface coating shall be free from flaking, cracking, separation, etc.; Non-metallic structural parts have not undergone permanent deformation, cracking, degumming, etc.; Mobile components are not stuck or disconnected; Electrical performance indicators meet	10/0	Temperature and humidity cycle test box

UNLESS OTHER SPECIFIED TOLERANCES ON: X=± X.X=± X.XX=± ANGLES=± HOLEDIA=±		 JIA DE WIRELESS TECHNOLOGY (SZ) CO., LIMITED
SCALE:	UNIT: mm	
DRAWN BY: LU	CHECKED BY: YS	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF KINGRF TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DESIGNED BY:JIN TIAN	APPROVED BY: YS	
TITLE: IA.0447.LM.0SE Antenna Specification		SPEC REV. P0

		technical specifications		
Low temperature storage	<p>GB/T 2423.1-2001 Test A Environmental conditions: $-40 \pm 3^{\circ}\text{C}$ for 96H The test was completed after standing at room temperature for 24 hours.</p>	<p>The surface coating shall be free from flaking, cracking, separation, etc.; Non-metallic structural parts have not undergone permanent deformation, cracking, degumming, Mobile components are not stuck or disconnected; Electrical performance indicators meet technical specifications</p>	10/0	Temperature and humidity cycle test box
High and low temperature cycle	<p>GB/T2423.22-2002 Test N: The antenna was placed in a $T1 = -40^{\circ}\text{C}$ incubator for 30 minutes, then the temperature was increased to $T2 = 80^{\circ}\text{C}$ for 60 minutes, then the temperature was maintained for 30 minutes, and the relative humidity was 50% RH, and the cycle was repeated 20 times.</p>	<p>The surface coating shall be free from flaking, cracking, separation, etc.; Non-metallic structural parts have not undergone permanent deformation, cracking, degumming, etc.; Mobile components are not stuck or disconnected; Electrical performance indicators meet technical specifications</p>	10/0	Temperature and humidity cycle test box

<p>UNLESS OTHER SPECIFIED TOLERANCES ON: $X = \pm$ $X.X = \pm$ $X.XX = \pm$ ANGLES = \pm HOLEDIA = \pm</p>		 <p>JIA DE WIRELESS TECHNOLOGY (SZ)CO.,LIMITED</p>
<p>SCALE:</p>	<p>UNIT: mm</p>	
<p>DRAWN BY: LU</p>	<p>CHECKED BY: YS</p>	<p>THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF KINGRF TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION</p>
<p>DESIGNED BY:JIN TIAN</p>	<p>APPROVED BY: YS</p>	
<p>TITLE: IA.0447.LM.0SE Antenna Specification</p>		<p>SPEC REV. P0</p>

<p>Damp heat test</p>	<p>GB/T 2423.3-1993 test Ca: Environmental conditions: 40 ± 2 °C, relative humidity 80 ~ 90%, placed for 96 hours. The test was completed after standing at room temperature for 24 hours.</p>	<p>1. No obvious abnormality in appearance 2. Various electrical properties after test Meet the specifications, mechanical performance, electrical performance to meet the specifications.</p>	<p>10/0</p>	<p>Temperature and humidity cycle test box</p>
<p>Salt spray test</p>	<p>GB/T 2423.18-2000 Test Kb The test article was placed in a salt spray test chamber, and the test specimen was sprayed with salt at a concentration of (5 ± 1)%, a temperature of 35°C ± 1°C, and a sedimentation rate of (1-2) ml / 50 mm 2 * h, 48 hours. After that, check the appearance.</p>	<p>No rust, mechanical properties and electrical properties meet the specifications.</p>	<p>5/0</p>	<p>Salt spray test machine</p>


<p>UNLESS OTHER SPECIFIED TOLERANCES ON: X=± X.X=± X.XX=± ANGLES=± HOLEDIA=±</p>			<p>JIA DE WIRELESS TECHNOLOGY (SZ)CO.,LIMITED</p>
<p>SCALE:</p>	<p>UNIT: mm</p>	<p>THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF KINGRF TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION</p>	
<p>DRAWN BY: LU</p>	<p>CHECKED BY: YS</p>		
<p>DESIGNED BY:JIN TIAN</p>	<p>APPROVED BY: YS</p>		
<p>TITLE: IA.0447.LM.0SE Antenna Specification</p>			<p>SPEC REV. P0</p>

6 .PACKING INSTRUCTION

Product number: xxx			
Product model: xxx			
一、 Label requirements:			
Customer	xxx		
supplier	xxxxxx		
Material coding	xx		
Product model	xx		
Number	XXX PCS	Factory date	X X X
Remarks			
二、 Boxing:			
Job description:			
1. Inner packaging:			
XXpcs A bag			
2. External packaging:			
Xx PCS ;			
3. Matters needing attention:			
a. Whether to add partition and pearl cotton;			
b. Label attachments, such as ROHS, etc.;			

PE 袋

纸箱

UNLESS OTHER SPECIFIED TOLERANCES ON: $X=\pm$ $X.X=\pm$ $X.XX=\pm$ $ANGLES=\pm$ $HOLEDIA=\pm$			JIA DE WIRELESS TECHNOLOGY (SZ)CO.,LIMITED
SCALE: DRAWN BY: LU DESIGNED BY:JIN TIAN	UNIT: mm CHECKED BY: YS APPROVED BY: YS	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF KINGRF TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION	
TITLE: IA.0447.LM.0SE Antenna Specification			SPEC REV. P0