SUNNYWAY TECHNOLOGY(CHINA)

ANTENNA SPEC

Customer name: Wasion	Entry name: MX
Working band: 902-928MHz	

Sunnyway Material specification		
Specification type	Sunnyway number	Customer number
Antenna	SZ22715IA70	

Revision history			
Date of preparation/change	Change content	Altered person	Edition
2023.12.29	New issue	Xu WEI	A

Sunnyway Countersign column				
R&D	ME:	To examine:	QE:	Approval:
	RF:	To examine:		

Customer will sign the column			
Electronic Engineer	Project manager	Structural Engineer	Quality Engineer

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1. Project information

1.1 Mockup picture

2. Matching circuit

No change

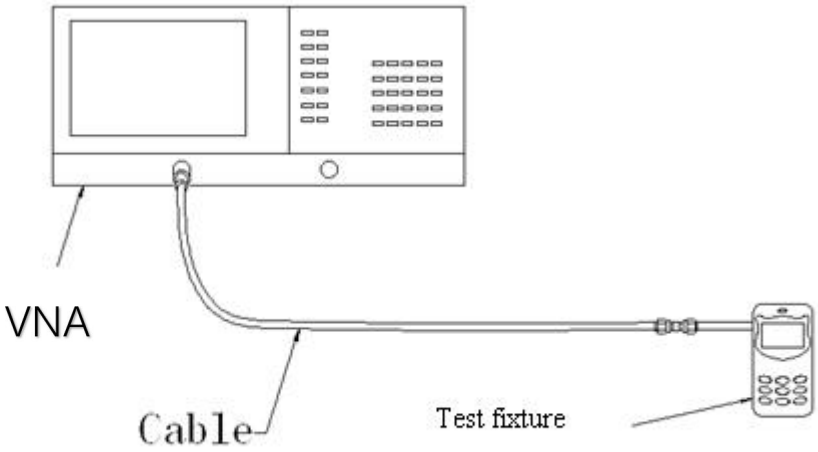
3. Antenna passive testing data

3.1 S11 Description of the test method

Test the equipment: Vector network analyzer (Agilent E5071C)

Test methodology: Use a 50 ohm CABLE cable to export from the instrument test port, use the calibration piece to calibrate and connect the SMA connector of the test fixture, and record the return loss and standing wave ratio corresponding to the relevant frequency point.

Below is a schematic picture of the test:



Test schematic diagram

3.2 Test the environment

Test the system：Multi-probe OTA measurement system（XH-IoT）

Test the environment：Temperature 22°C±3°C, humidity 50%±15%

Test the equipment：When testing passive data, use the network analyzer R&S ZND/ Agilent E5071C
When testing active data, use the Agilent 8960/CMW500/SP9500E/SP8315

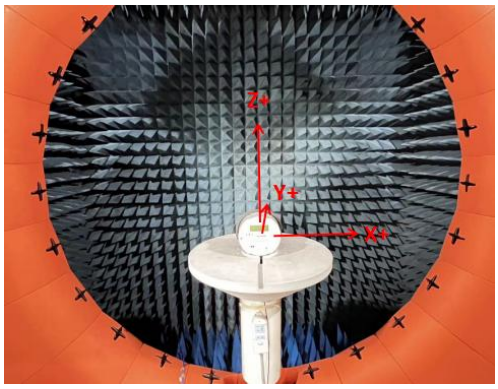
3.3 S11 Test parameters

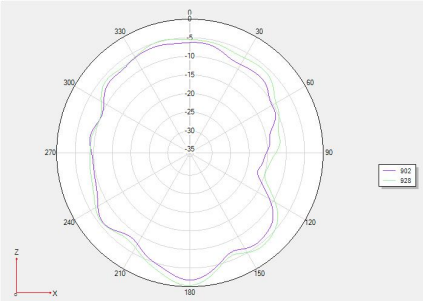
（Freq.）MHz	902	928
VSWR	2.1	1.8

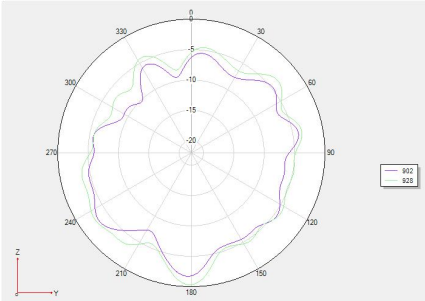
3.4 Antenna efficiency and gain

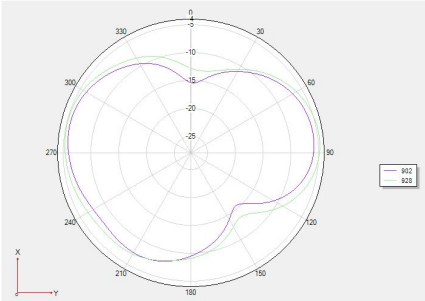
Frequency/Mhz	MaxGain/dBi	Efficiency / %
902	-3.6	21.18
903	-3.44	21.98
904	-3.32	22.65
905	-3.03	24.04
906	-2.89	24.83
907	-2.89	25
908	-2.94	24.77
909	-2.95	24.55
910	-3.07	23.99
911	-3.06	23.99
912	-2.98	24.21
913	-2.89	24.72
914	-2.86	25.12
915	-2.7	25.7
916	-2.68	25.88
917	-2.78	23.59
918	-2.87	23.29
919	-2.88	23.06
920	-3.12	22.15
921	-3.17	21.99
922	-3.07	22.21
923	-2.87	22.95
924	-2.7	23.64
925	-2.38	22.79
926	-2.25	23.23
927	-2.3	22.92
928	-2.41	22.18

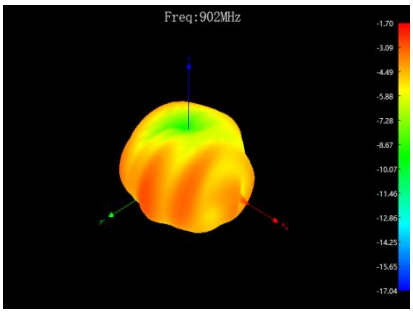
3.5 Radiation pattern

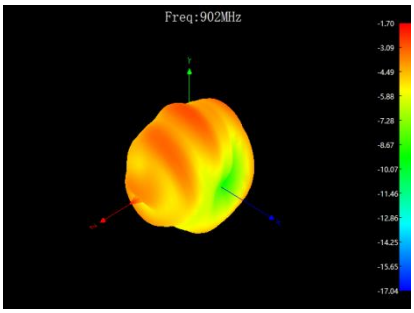


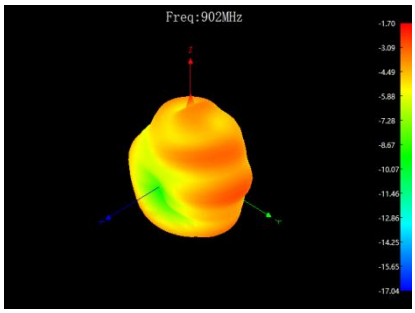


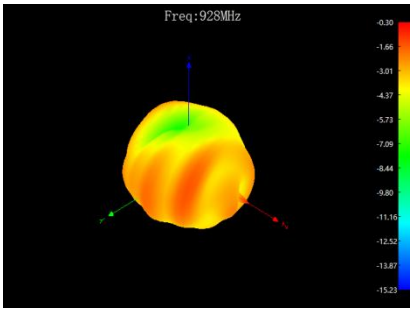


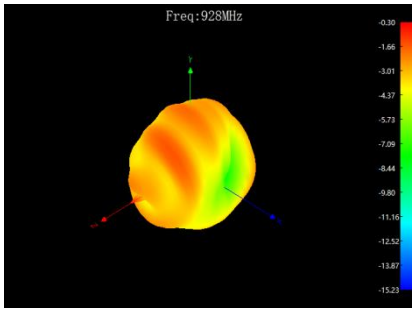


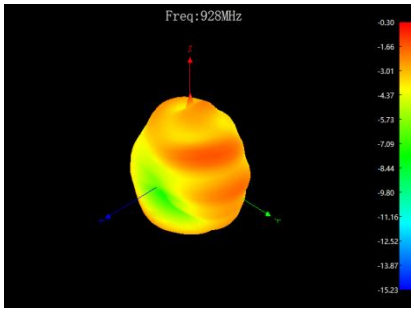








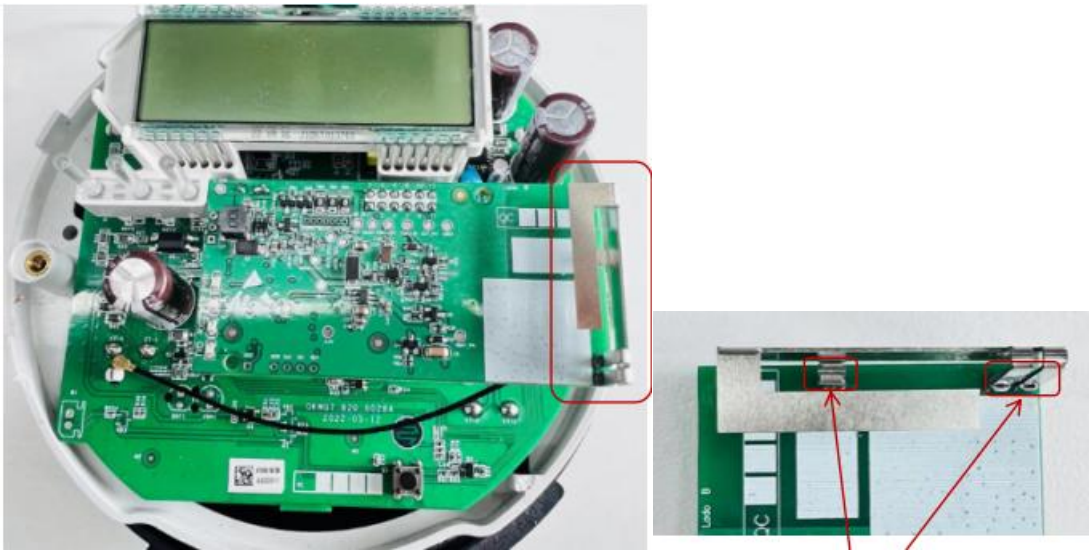




4. Environmental treatment methods

No antenna environmental treatment added

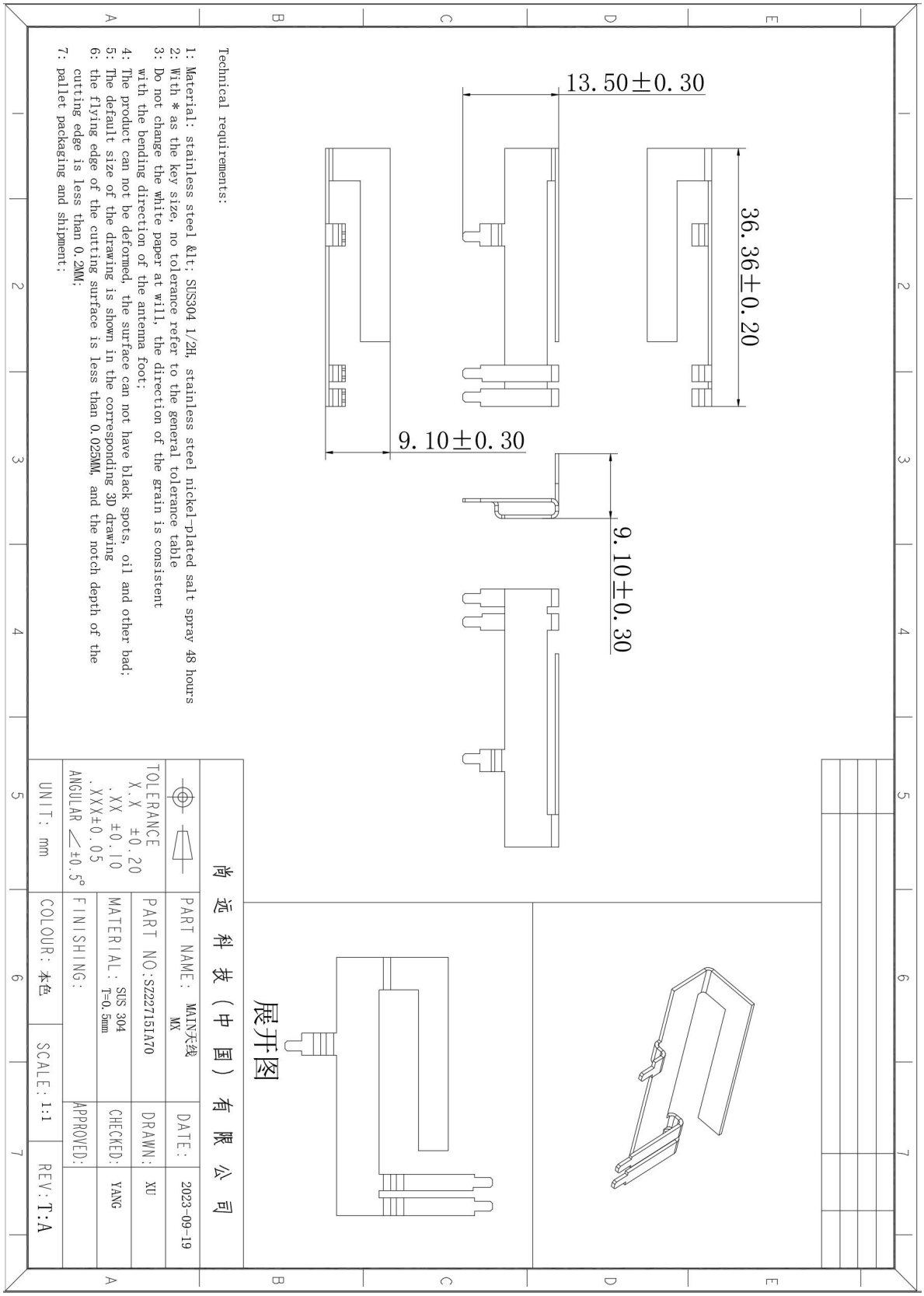
5. Antenna mounting position



6. Standard for mass production antennas

When the antenna is mass-produced, the VSWR is used as the mass production test standard.

According to the differences in the project itself, the following criteria are given:

Freq. (MHz)	Mass production standards
902-928MHz	VSWR(Production performance)<VSWR(Confirmed performance)+0.5

7. Engineering drawings