

SPECIFICATION

APPLICATION FOR APPROVAL

PART NAME : 433 PCB ANTENNA
DATE : 2024/3/10

Release : Full release

Customer Approval	
Program Manager	R & D director
Peter Lu	Peter Lu
Supplier Approval	
Program Manager	R & D director
郝井强(Jingqiang Hao)	孙高鹤(Gaohe Sun)

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Company:Tianjin Yingshun Communication Technology Co., Ltd

Address: Room 805, Building 2, Fubao Industrial Park, Zhangjiawo Town, Xiqing District, Tianjin

REVISION

REV.NO.	DATE	DESCRIPTION
0	2024/3/10	APPROVAL

1. ELECTRICAL SPECIFICATIONS

1-1 FREQUENCY BAND

Freq. Band	Freq.(MHz)
433	433-434MHz

1-2 IMPEDANCE

Nominal Impedance(including matching circuit) : **50 ohms**

1-3 MATCHING REQUIREMENTS

The matching circuit on the PCB of the handset is according to Figure 1-3.

Optimum matching circuit is highly dependent on the handset and thus.

Final matching circuit layout and values will be defined when handset is available

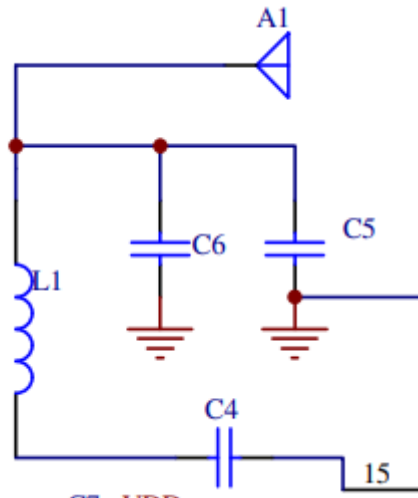


Figure 1-3

Customer No: Sensata Technologies (Changzhou) Co., Ltd.	<i>File: 2024/03/10</i>
Test Condition: FREE SPACE	Note: VSWR/ReturnLoss/Smith Chart
Confirmation: Jing Qiang Hao	Engineer: GaoHe Sun

3.ENVIRONMENTAL CHARACTERISTICS

NO.	ITEM	TEST CONDITION
1	Normal condition	1. Temperature: 24.3±1 °C 2. Humidity: 35%±2% 3. Pressure: 101.2KPa

4. Test equipment

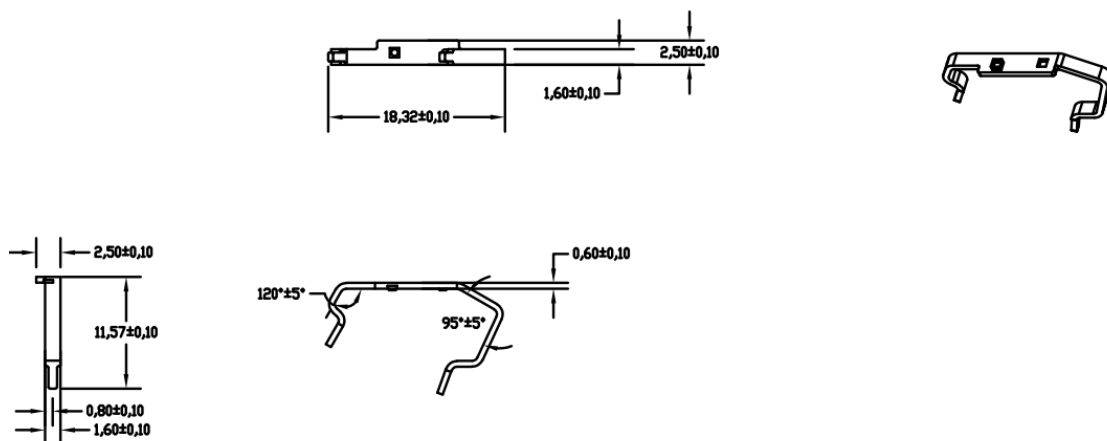
Equipment	Model No	Manufactory	Series No
ENA vector analyzer	E5071C	Keysight	MY46900684
OTA chamber	FT-0024	FEITU	FS20200302

5. PACKAGING

Antenna is Internal loop antenna, packaging with PCB board.

6. APPENDIX

All of the specifications are shown as the attached files.



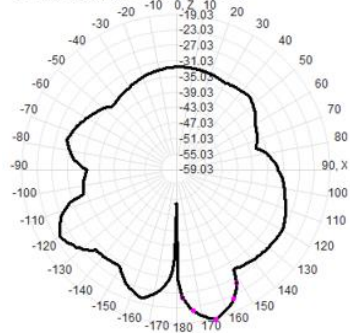
Antenna Test Date

—: Antenna Efficiency&PeakGain

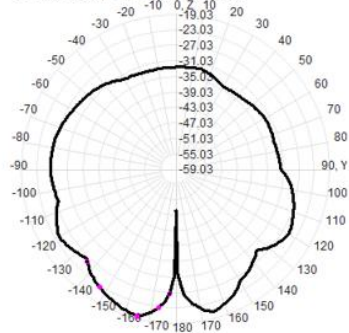
Frequency ID	1	2
Frequency (MHz)	433.0	434.0
Efficiency (dBi)	-27.86	-28.06
Gain (dBi)	-17.66	-17.83
Efficiency (%)	0.16	0.16
Directivity (dB)	10.20	10.23
Peak Gain Position (Theta)	165.00	165.00
Peak Gain Position (Phi)	165.00	165.00
Efficiency ThetaPol (%)	0.11	0.10
Efficiency PhiPol (%)	0.06	0.05
Upper Hem. Efficiency (%)	0.04	0.04
Lower Hem. Efficiency (%)	0.13	0.12

二: Antenna 2D-XZ/YZ/XY

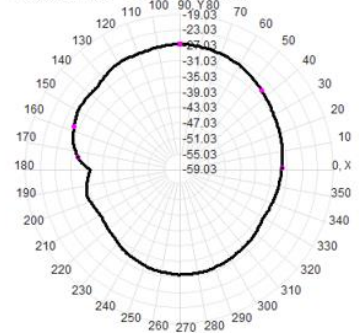
433.0MHz Total(E1-XZ), Max=-19.03dBi



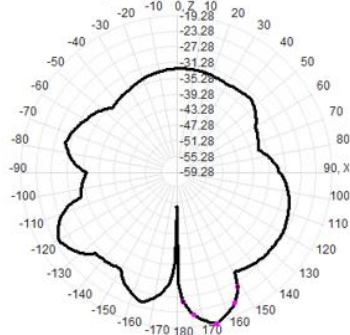
433.0MHz Total(E2-YZ), Max=-19.88dBi



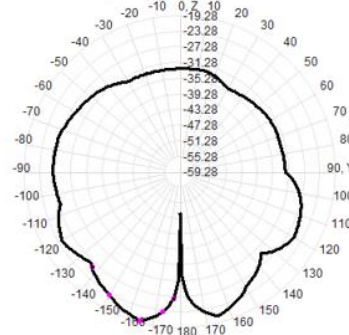
Total(H-XY), Max=-26.58dBi, CirD=9.41



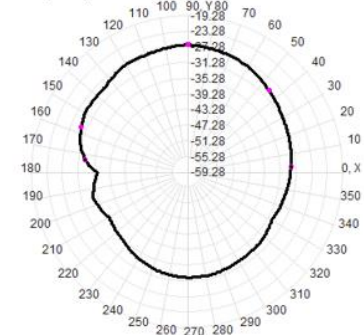
434.0MHz Total(E1-XZ), Max=-19.28dBi



434.0MHz Total(E2-YZ), Max=-20.02dBi

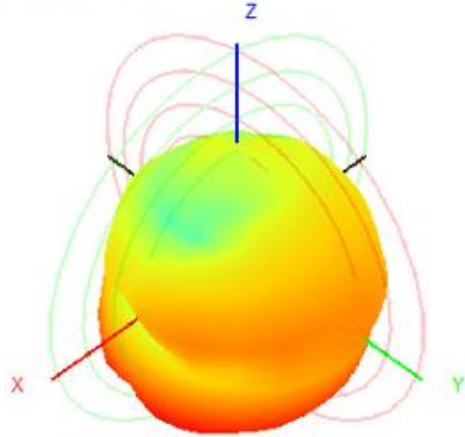


Total(H-XY), Max=-26.73dBi, CirD=9.60

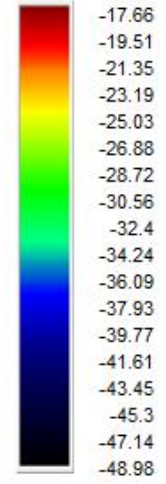
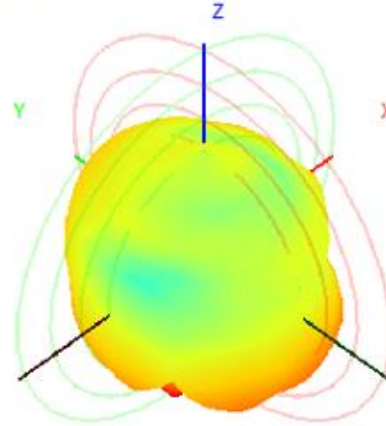


≡: Antenna 3D (433-434MHz)

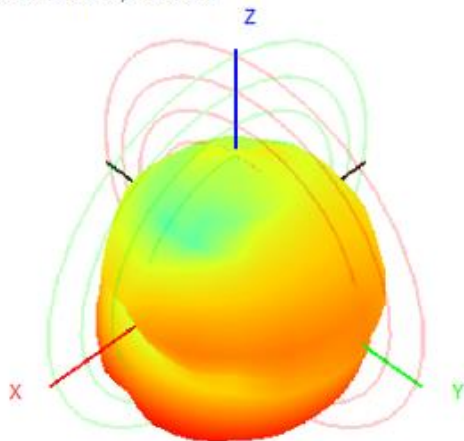
433.0MHz H+V, Eff: 0.2%



Back View



434.0MHz H+V, Eff: 0.2%



Back View

