



Shenzhen Yingjia Chuang electronic technology Co., LTD

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# APPROVAL SHEET

CUSTOMER NAME		
CUSTOMER P/N		
PART NAME	2. 4G Onboard Antenna	
P/ N		
APPROVAL REV.	A0	
DELIVERY DATE	2022 年 01 月 10 日	
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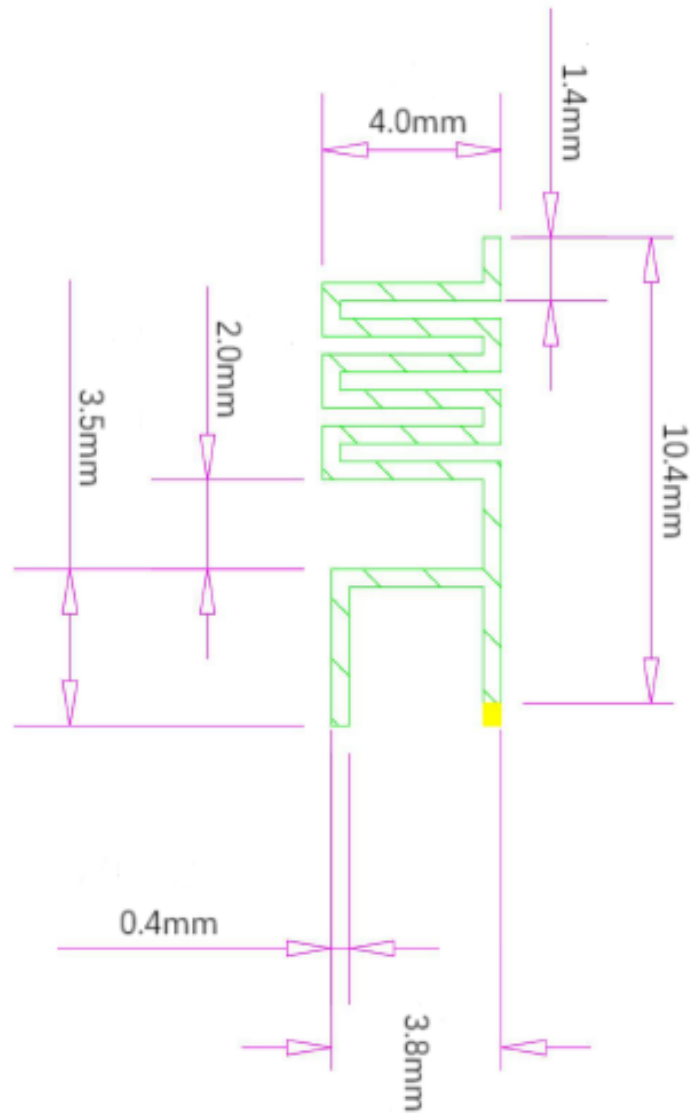
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Revise your resume:

Edition	Content of change and reasons for change	Date	Release
A/0	Initial release	2022 . 01 . 10	



Antenna plan:





## Antenna technical parameters and environmental testing:

Electrical technical parameter	
Electrical Specifications	
Frequency Range	2400-2500MHz
VSWR	<1.92
Input Impedance	50 $\Omega$
Direction	All
Gain	2.04dBi
Mechanical Specifications	
Input connector	OPEN
Working Temperature	-20°C~+70°C
Working Humidity	20%~80%

## Environmental performance test:

Item	Test condition	Specification
Storage environment	Test temperature, humidity, and air pressure without specifying the following: 1. The temperature ranges from -20°C to +70°C 2. Relative humidity is 45%-85% 3. Air pressure is 86kpa-106kpa	Electrical and mechanical properties are normal.
High and low temperature test	The appearance quality is checked after 5 cycles between 70°C and -20°C, and then 1-2H under normal conditions.	Dimensions shall meet the requirements and shall be satisfied with mechanical and electrical properties.
Resistance to constant damp heat test	The relative humidity was 95±3%, and the test temperature was 40°C. After 2H treatment, the electrical properties were measured within 5min after the samples were taken out, and the appearance quality of the samples was checked under normal conditions for 1-2H.	Dimensions shall meet the requirements and shall be satisfied with mechanical and electrical properties.
Vibration test	Vibration frequency range 10-55HZ, displacement amplitude: 0.35mm, acceleration amplitude: 50.0M/S, frequency sweep cycle: 30 times.	Electrical and mechanical properties are normal.
Drop test	Free fall 3 times at 1M altitude in the direction of perpendicular axes	Electrical and mechanical properties are normal.



## Antenna performance test diagram:



## 2D.3D Test data (2.4G) :

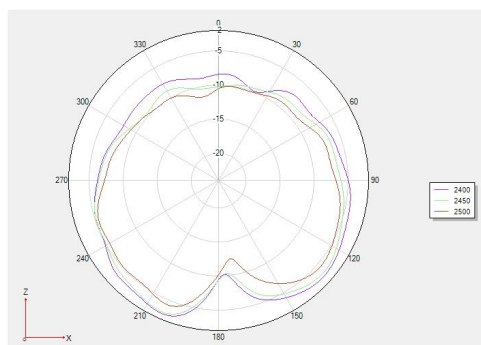
Frequency	Efficiency (%)	Gain. (dBi)
2400MHz	44.36	1.7
2410MHz	46.95	1.87
2420MHz	45.27	1.74
2430MHz	47.35	1.82
2440MHz	48.16	1.82
2450MHz	54.1	2.04
2460MHz	52.32	1.93
2470MHz	50.71	1.71
2480MHz	48.42	1.82
2490MHz	47.1	1.75
2500MHz	47.97	1.71



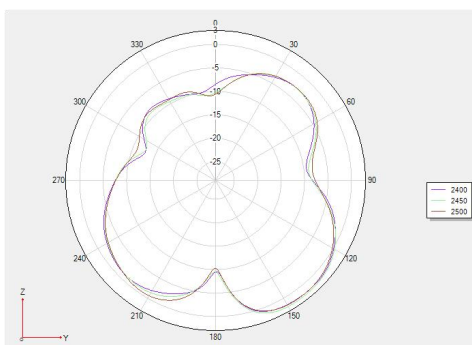
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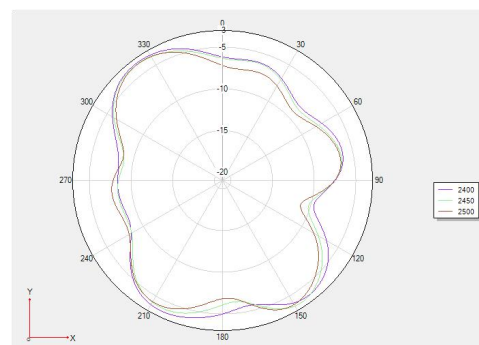
Phi 0 2D:



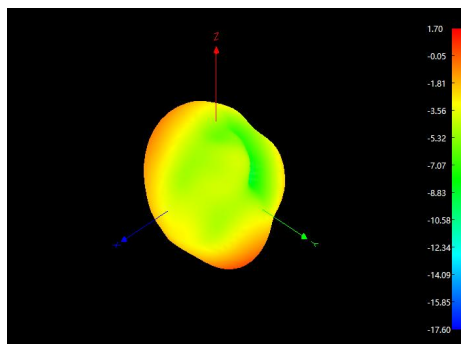
Phi 90 2D



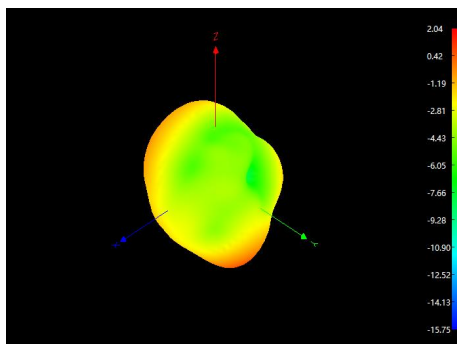
Theta 90 2D



3D 2400:



3D 2450:



3D 2500

