



Shenzhen Yingjiachuang Electronic Technology Co., Ltd.

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APPROVAL SHEET

承认书

CUSTOMER NAME		
CUSTOMER P/N (Customer Part Number)		
PART NAME Product Name	2.4G Onboard Antenna	
P/N Part Number		
APPROVAL REV. Edition	A0	
DELIVERY DATE (Sample Delivery Date)	January 10, 2022	
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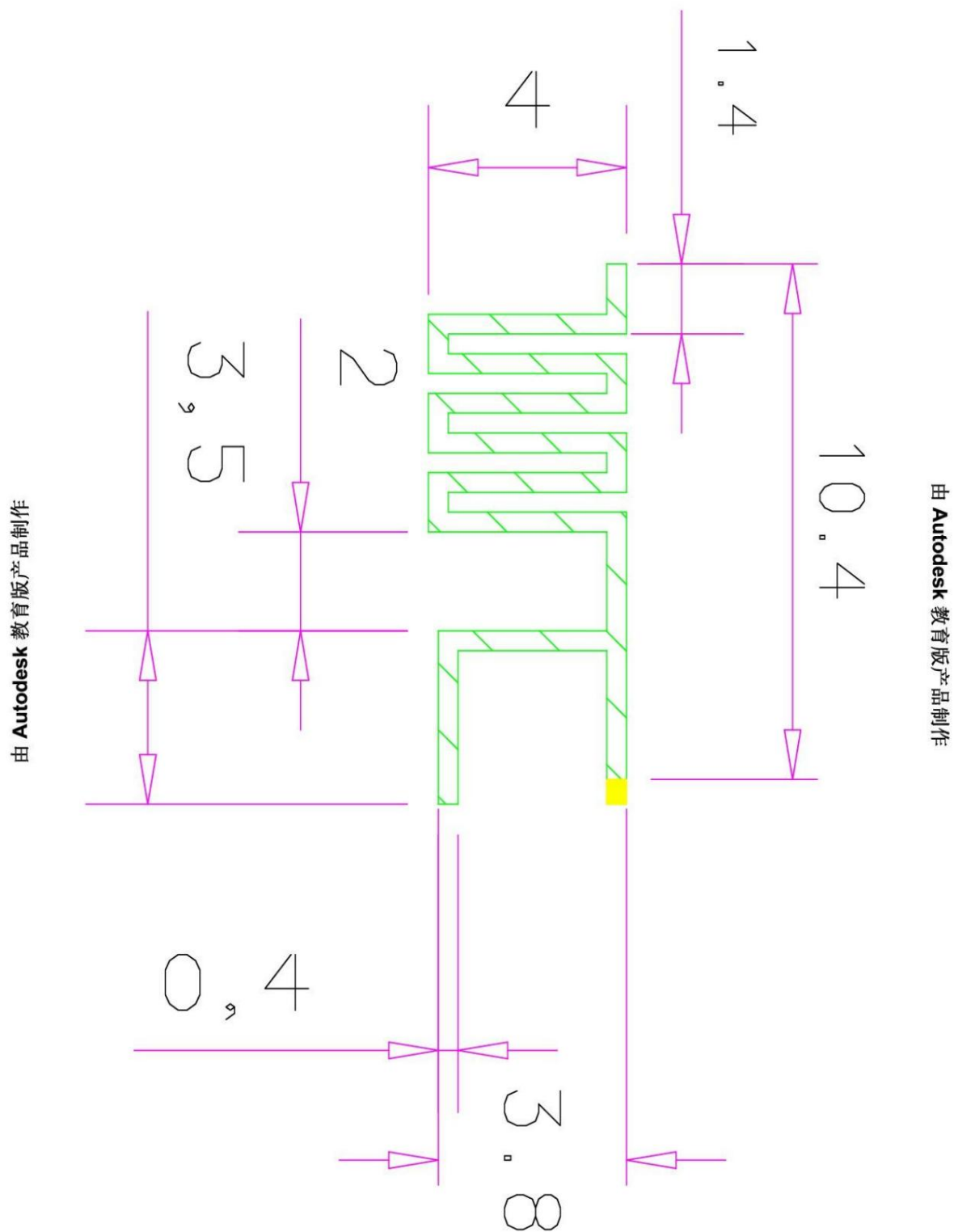
Revised resume:

Version	Changes and Reasons for Changes	date	issued
A/0	First edition	January 10, 2022	



Antenna plan view:

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Antenna technical parameters and environmental testing:

Electrical technical parameters			
Electrical performance indicators		Electrical Specifications	
Frequency range	2400-2500MHz	Frequency Range	2400-2500MHz
Voltage Standing Wave Ratio	<1.92	VSWR	<1.92
Input impedance	50 Ω	Input Impedance	50 Ω
direction	Omnidirectional	Direction	All
Gain	2.04dBi	Gain	2.04dBi
Mechanical indicators		Mechanical Specifications	
Interface	OPEN	Input connector	OPEN
Operating temperature	-20 $\circ$ C~+70 $\circ$ C	Working Temperature	-20 $\circ$ C~+70 $\circ$ C
Operating humidity	20%~80%	Working Humidity	20%~80%

Environmental performance testing:

project	Test conditions	Specification
Storage environment	Without specifying conditions, the following temperature, humidity, and air pressure were tested: 1. Temperature range: -20 $\circ$ C to +70 $\circ$ C 2. Relative humidity is 45%-85%. 3. Air pressure is 86 kPa-106 kPa	Electrical and mechanical performance is normal
High and low temperature test	The temperature was cycled 5 times between 70 $\circ$ C and -20 $\circ$ C, and then under normal conditions. 1-2H, check the appearance quality.	The dimensions should meet the specifications and should be full. Sufficient in mechanical and electrical performance
Constant resistance Damp heat test	Relative humidity 95 $\pm$ 3%, test temperature: 40 $\circ$ C. After 2 hours of continuous exposure, Electrical properties were measured within 5 minutes of sample removal. The sample was tested under normal conditions. 1-2 hours after application, inspect the appearance quality.	The dimensions should meet the specifications and should be full. Sufficient in mechanical and electrical performance
Vibration test	Vibration frequency range: 10-55Hz, displacement amplitude: 0.35mm, acceleration amplitude: 50.0 M/s, sweep frequency cycle count: 30 times	Electrical and mechanical performance is normal
Drop test: Three free falls	from a height of 1 meter along mutually perpendicular axes.	Electrical and mechanical performance is normal



Antenna performance test diagram:



2D/3D test data (2.4G):

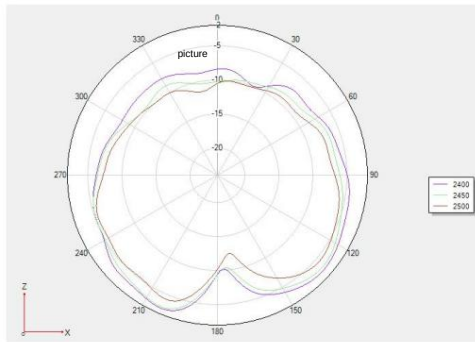
Frequency	Efficiency (%)	Gain.(dBi)
2400MHz	44.36	1.7
2410MHz	46.95	1.87
2420MHz	45.27	1.74
2430MHz	47.35	1.82
2440MHz	48.16	1.82
2450MHz	54.1	2.04
2460MHz	52.32	1.93
2470MHz	50.71	1.71
2480MHz	48.42	1.82
2490MHz	47.1	1.75
2500MHz	47.97	1.71



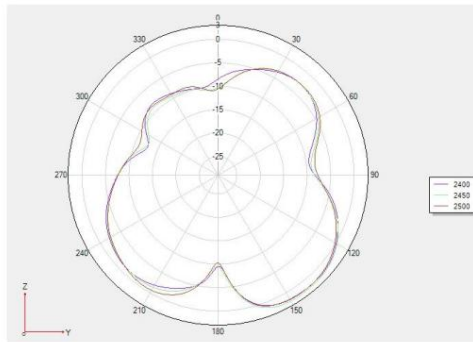
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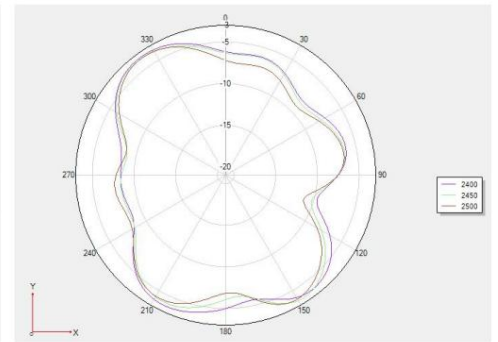
Phi 0 2D diagram:



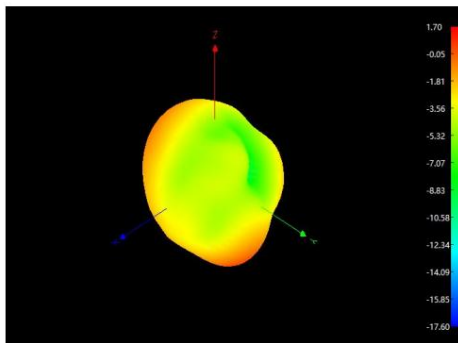
Phi 90 2D diagram



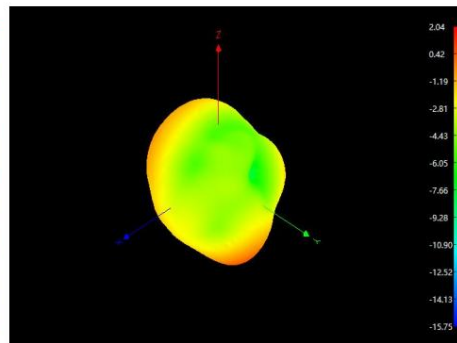
Theta 90 2D



3D 2400:



3D 2450:



3D 2500

