



APPROVAL SHEET

CUSTOMER NAME	Fusi	
CUSTOMER P/N		
PART NAME	2.4G black PCB built-in antenna (Applicable model: E-ANTO-240030-0000)	
P/ N	YJC-90N1257	
APPROVAL REV.	A0	
DELIVERY DATE	January 31, 2023	
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Customer Approved		
Approved By	Checked By	Prepared By

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Directory

1、	The cover。	1
2、	Directory。	2
3、	resume。	3
4、	The antenna's floor plan。	4
5、	Antenna technology parameters。	5
6、	Environmental performance testing。	5
7、	Antenna diagram。	6
8、	Antenna performance test diagram。	6
9、	Spectrum test diagram。	6
10、	2D 3D test data (2.4G level)。	7
11、	2D 3D Test Data (2.4G Vertical)。	8
12、	ROHS material control report。	9

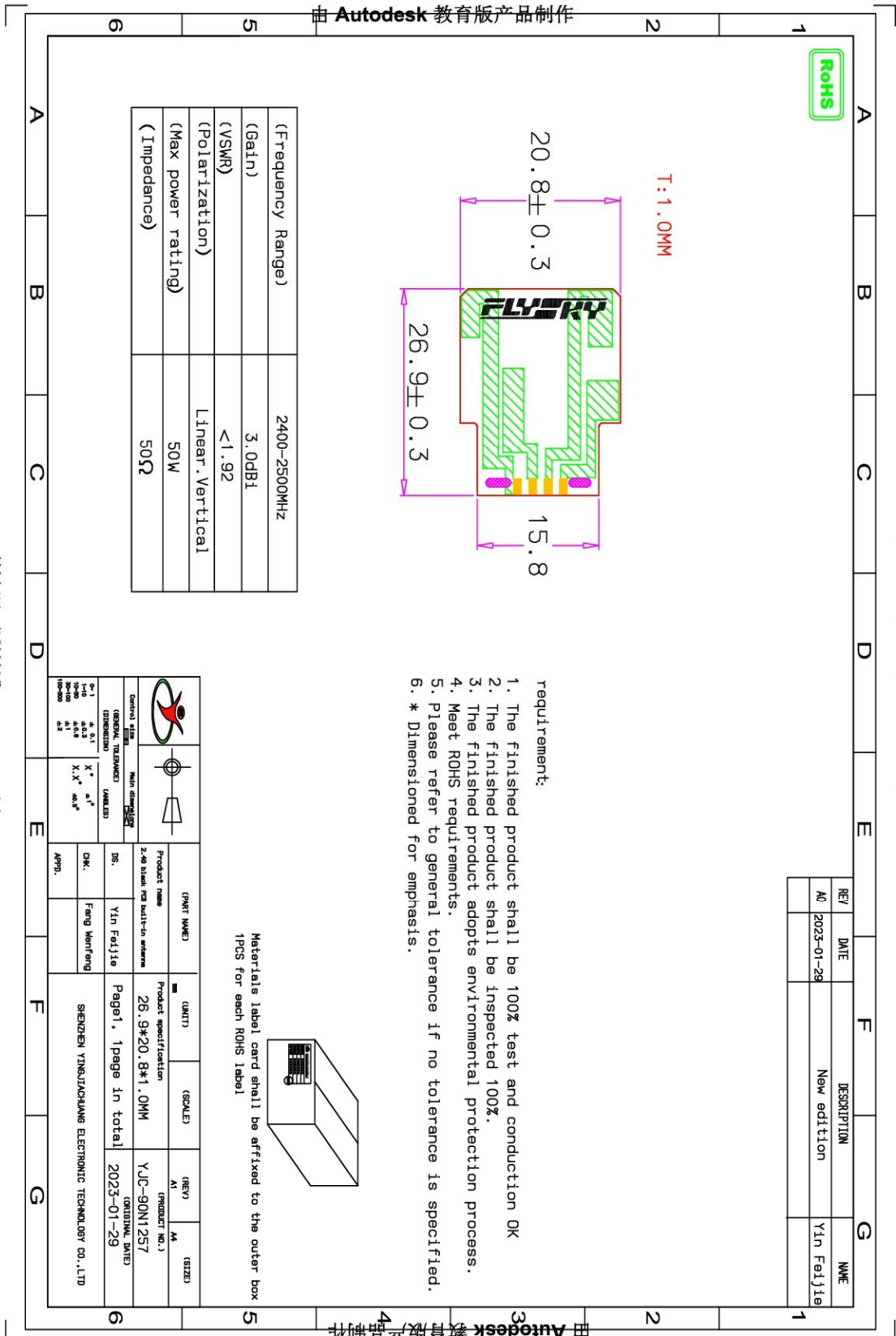


Resumer:

Version	Change contents and reasons	Date	Issue
A0	NEW	January 31, 2023	



The antenna's floor plan:



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Antenna technical parameters and environmental testing:

Electrical parameters of electrical apparatus			
Electrical Specifications		Mechanical Specifications	
Frequency Range	2400-2500MHz	Cable Color	Black
VSWR	<1.92	Working Temperature	-20°C~+70°C
Input Impedance	50 Ω	Working Humidity	20%~80%
Direction	All	Gain	3.0 dBi

Environmental performance test:

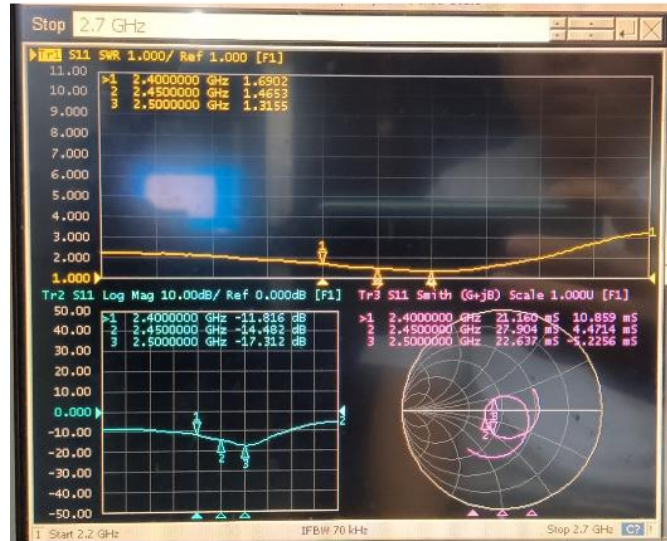
project	test condition	standard
Storage Conditions	In the absence of specified test temperature, humidity, air pressure is as follows: 1. Temperature is - 20 °C ~ + 70 °C 2. Relative humidity of 45% to 45% 3. Air pressure is 86 kpa to 106 kpa	Electrical and mechanical properties is normal
high and low temperature test	Between 70 °C and -20 °C for 5 loops, then 1-2 h under normal conditions, check the appearance quality.	Size should meet the requirements and should satisfy the content with the electrical and mechanical properties
Constant damp and hot resistance test	95 + / - 3% relative humidity, temperature test: 40 °C. Lasts 2 h after, try to take out the determination of electrical properties, within 5 min after try 1-2 h under article normal thing, check the appearance quality	Size should meet the requirements and should satisfy the content with the electrical and mechanical properties
vibration test	10-55 hz, vibration frequency range of displacement amplitude: 0.35 MM, acceleration amplitude: 50.0 M/S, sweep cycles: 30 times	Electrical and mechanical properties is normal
fall down test	1 m high altitude in accordance with the perpendicular axis free drop 3 times	Electrical and mechanical properties is normal



Antenna diagram:



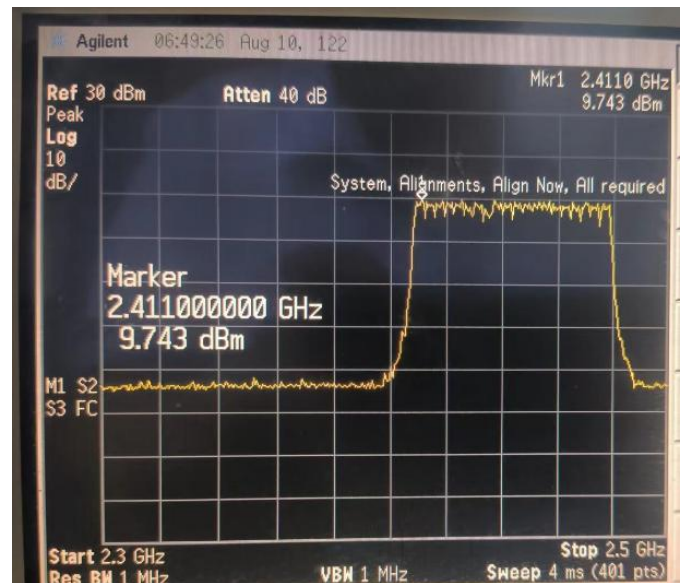
Antenna performance test diagram: (horizontal polarization)



Antenna performance test diagram: (vertical polarization)



Spectrum test diagram:

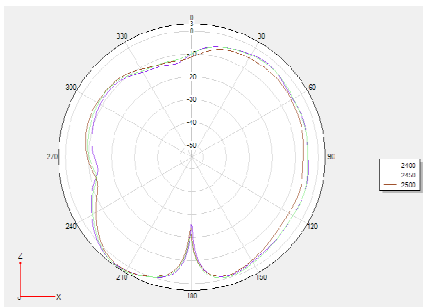




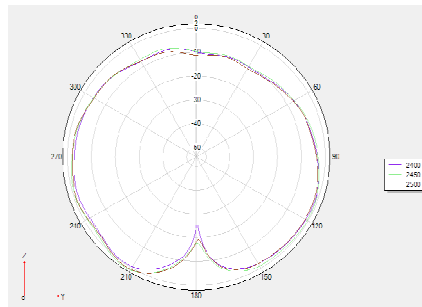
2D and 3D(2.4G) test data :(horizontal polarization)

Frequency(MHz)	Efficiency (%)	Gain. (dBi)
2400MHz	58.48	2.6
2410MHz	62.95	2.03
2420MHz	60.81	2.04
2430MHz	59.7	2.74
2440MHz	59.57	2.62
2450MHz	63.1	2.81
2460MHz	62.09	2.87
2470MHz	59.98	2.76
2480MHz	63.1	2.39
2490MHz	61.52	2.39
2500MHz	61.94	2.6

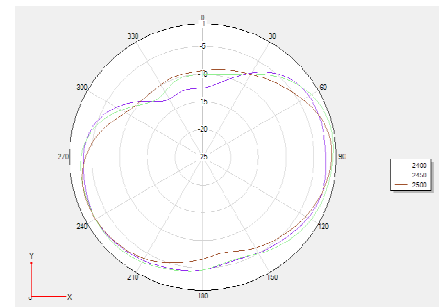
Phi 0 2Dfigure:



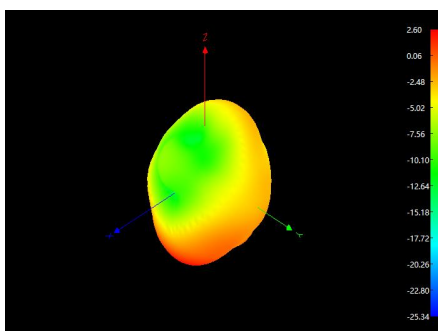
Phi 90 2Dfigure



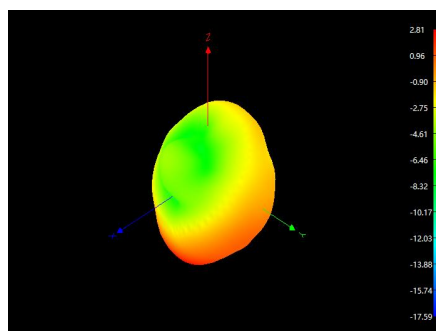
Theta 90 2Dfigure



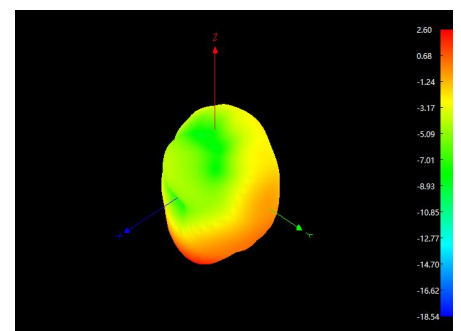
3D 2400:



3D 2450:



3D 2500:

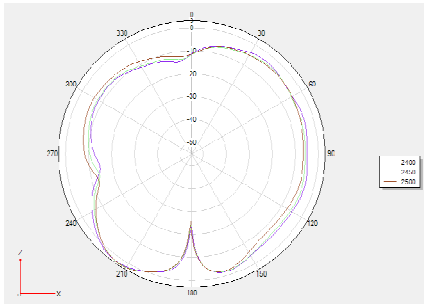




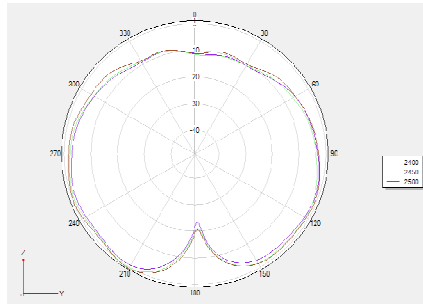
2D and 3D(2.4G) test data :(vertical polarization)

Frequency (MHz)	Efficiency (%)	Gain. (dBi)
2400MHz	55.98	2.45
2410MHz	52.6	2.34
2420MHz	61.09	2.05
2430MHz	52.24	2.36
2440MHz	56.36	2.32
2450MHz	53.46	2.41
2460MHz	55.21	2.28
2470MHz	51.29	2.37
2480MHz	54.33	2.69
2490MHz	51.88	2.81
2500MHz	51.88	2.8

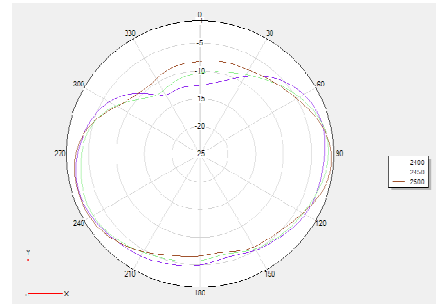
Phi 0 2Dfigure:



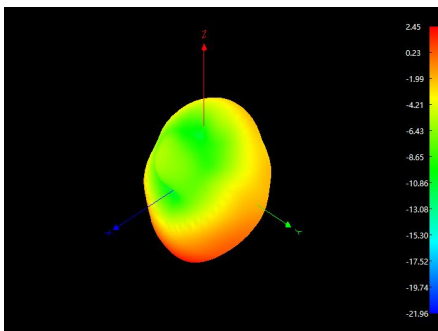
Phi 90 2Dfigure



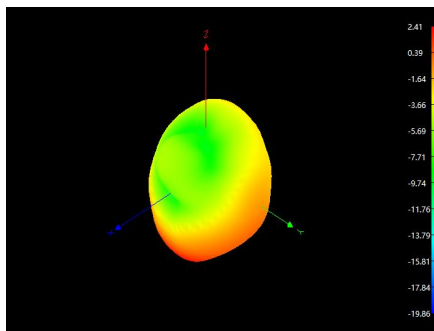
Theta 90 2Dfigure



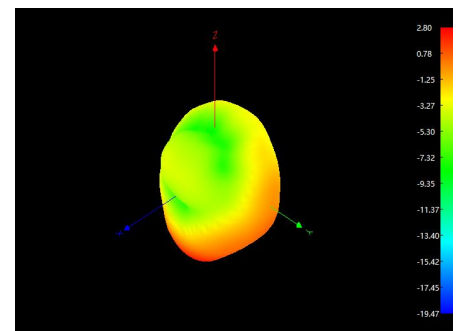
3D 2400:



3D 2450:



3D 2500:





Material RoHS conformity declaration form

This is to certify that the delivery to your company's components, raw materials, auxiliary materials used and the additives in the production engineering are accord with RoHS environmental requirements of the restrictions on the use of hazardous substances directive (RoHS directive 2011/65 / EU)

About components used raw materials, packaging materials, auxiliary materials and additives used in the production process such as composition of the report is as follows:

Component /Part Name	Material Composition	ICP report #	Test Org.	Test Date	Content of harmful substances (ppm)						PASS?
					Cd	Pb	Hg	Cr ⁶⁺	PBB	PBDE	PASS
PCB	PCB	CANEC2202816806	SGS	22/03/08	ND	8	ND	ND	ND	ND	PASS