

Antenna Specification

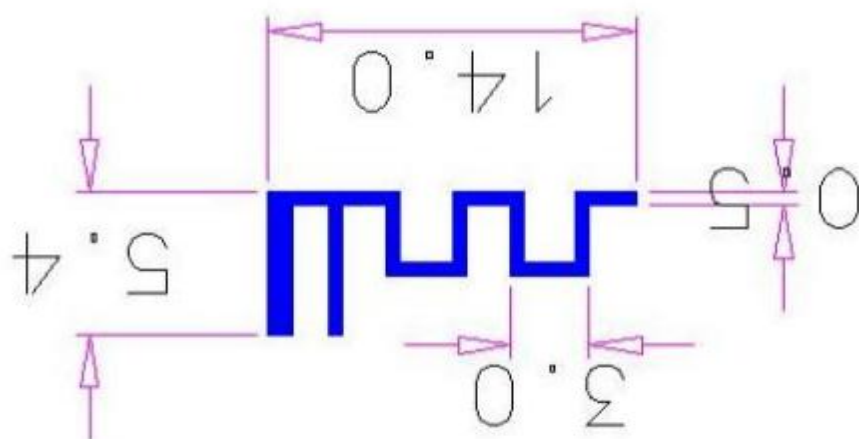
RDMCTMZT-RF01

Model Name: RDMCTMZT-RF01

Item Type: Keyboard PCB Antenna

Date: 2024-05-24

Antenna Plan:



Antenna Technical Parameters and Environmental Testing:

Electrical Technical Parameters			
电 性 能 指 标		Electrical Specifications	
频率范围	2400-2500MHz	Frequency Range	2400-2500MHz
电压驻波比	<1.92	VSWR	<1.92
输入阻抗	50 Ω	Input Impedance	50 Ω
方向	全向	Direction	All
增益	2.59dBi	Gain	2.59dBi
机 械 指 标		Mechanical Specifications	
接口形式	OPEN	Input connector	OPEN
工作温度	-20℃~+70℃	Working Temperature	-20℃~+70℃
工作湿度	20%~80%	Working Humidity	20%~80%

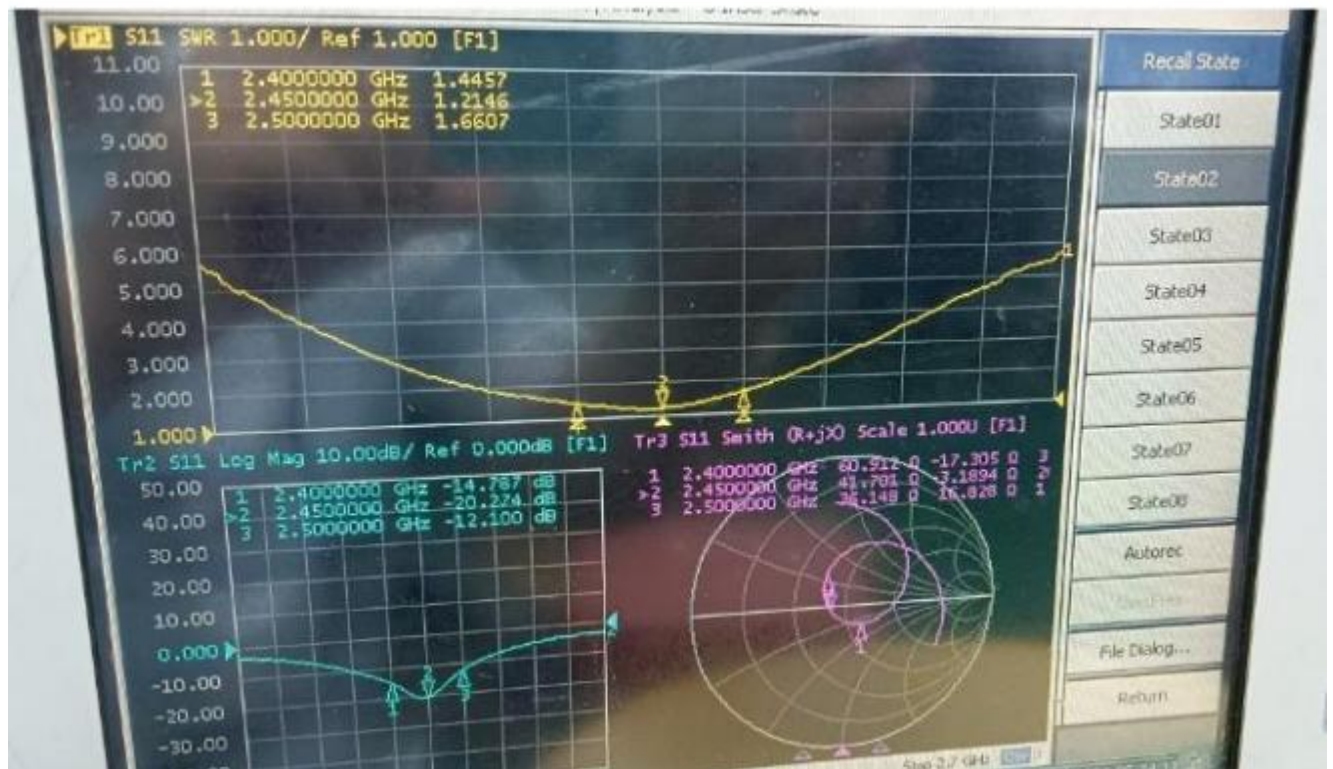
Environmental Performance Testing:

Project	Test Condition	Specifications
Storage Environment	Test the temperature, humidity, and barometric pressure without specifying as follows: 1. Temperature -20℃~+70℃ 2. Relative humidity of 45%-85% 3. Air pressure 86kpa-106kpa	Normal electrical and mechanical properties
High and Low Temperature Test	5 cycles between 70℃ and -20℃, then under normal conditions 1-2H, check appearance quality.	Dimensions shall be as specified and shall be sufficient for mechanical and electrical performance.
Constant Resistance Damp Heat Test	Relative humidity: 95±3%. Test temperature: 40℃. After 2 H continuous action, the electrical properties are measured within 5min after the specimen is removed, and the specimen is examined under normal conditions for 1-2H to check the quality of appearance.	Dimensions shall be as specified and shall be sufficient for mechanical and electrical performance.
Vibration Test	Frequency range: 10-55Hz, Displacement amplitude: 0.35MM, Acceleration amplitude: 50.0M/S, Sweep cycle number: 30 times.	Normal condition on electrical and mechanical performance.
Drop Test	3 free falls on mutually perpendicular axes at a height of 1M.	Normal condition on electrical and mechanical performance.

Figure of the Antenna:



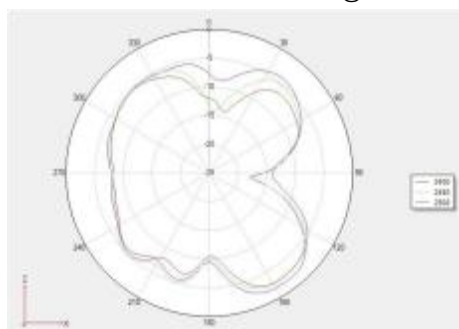
Figure of the Antenna Performance Test:



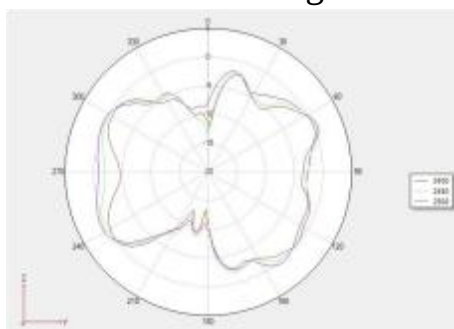
2D.3D Test Data (2.4G).

Frequency	Efficiency (%)	Gain. (dBi)
2400MHz	43.85	2.46
2410MHz	45.92	2.36
2420MHz	46.13	2.10
2430MHz	46.88	2.13
2440MHz	47.10	2.27
2450MHz	48.19	2.49
2460MHz	47.53	2.44
2470MHz	48.75	2.59
2480MHz	46.77	2.39
2490MHz	47.42	2.36
2500MHz	45.60	2.21

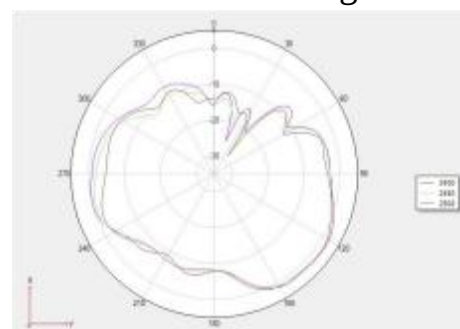
Phi 0 2D fig:



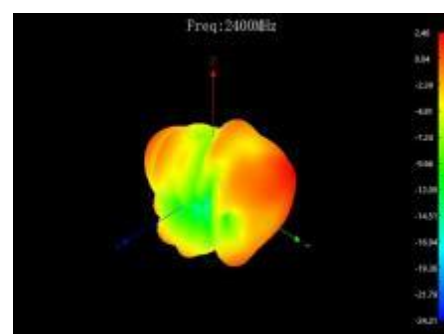
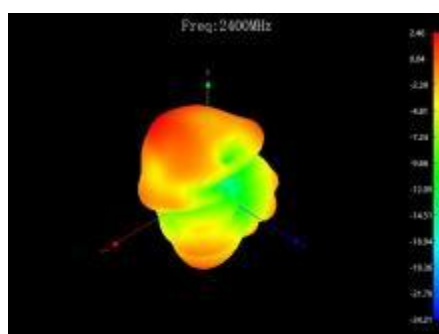
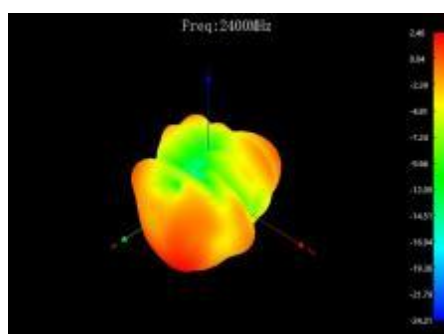
Phi 90 2D f i g



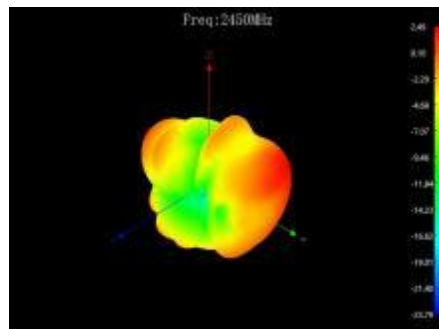
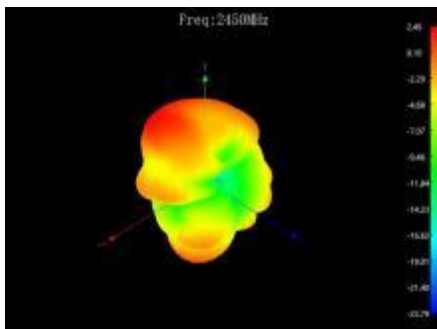
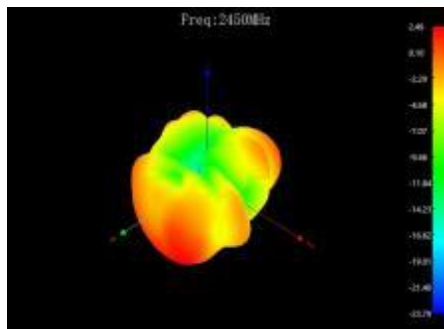
Theta 90 2D f i g



3D 2400:



3D 2450:



3D 2500

