



深圳云里物里科技股份有限公司

产品天线测试报告 (The Antenna Test Report)

Y-YB-CR-089

V003

密级：绝密 /confidentiality

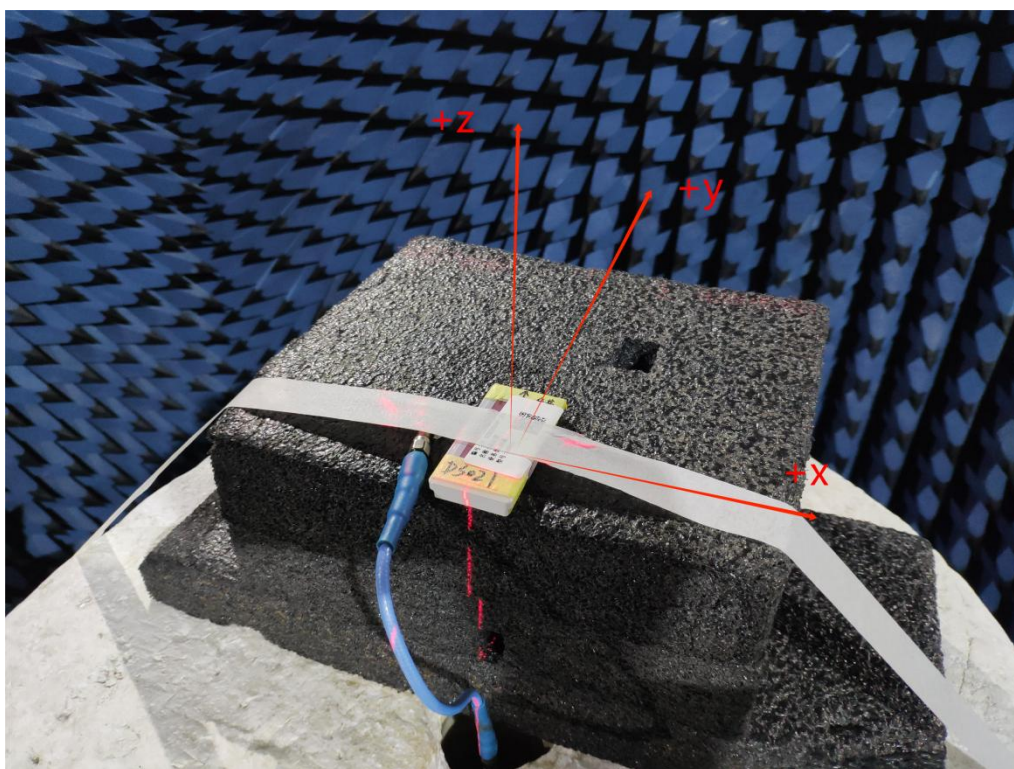
天线型号 (Antenna Version) : ANT-BBNCNC23016
产品型号 (Model of the DUT) : DS021
PCB 编号及版本 (PCB number and version) : ES003F6_V1.1
责任硬件工程师 (Hardware Engineer) : 窦淼全
测试日期 (Test Data) : 2023.11.21
1、技术指标 (Technical Specification)

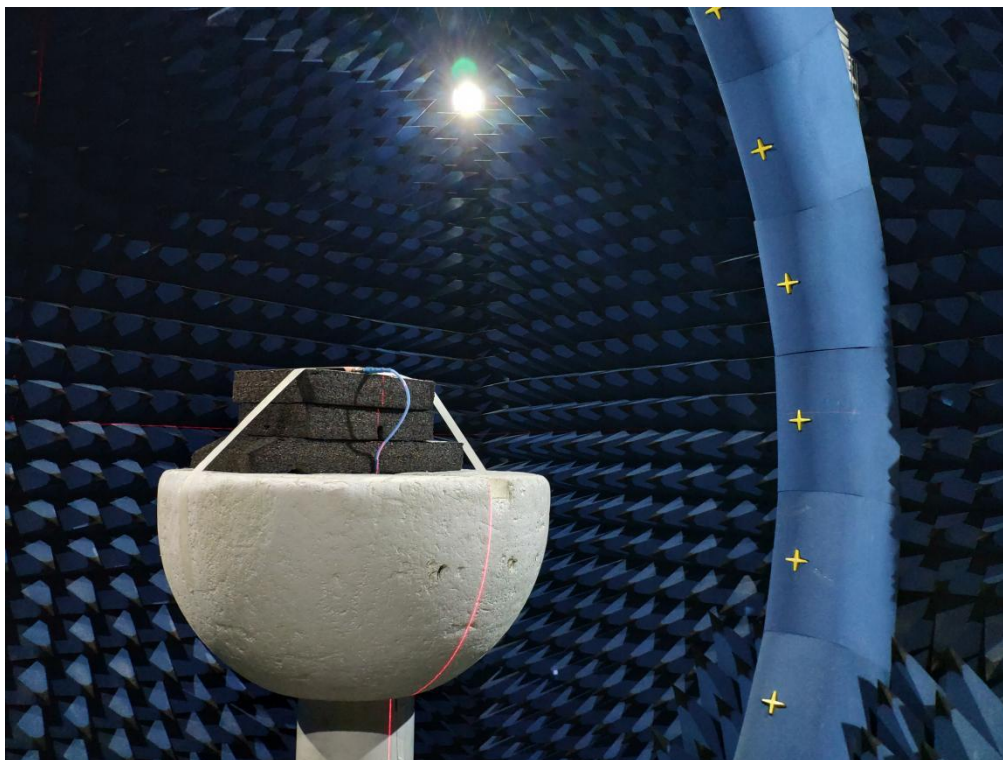
电性能指标 Electrical Specifications	
频率范围 Frequency Range (MHz)	2400-2500
频带宽度 Bandwidth (-10dB) (MHz)	300MHZ
输入阻抗 Input Impedance (Ω)	50
回波损耗 Return Loss (dB)	<-13
电压驻波比 VSWR	<1.5
增益 Gain (@2.44GHz) (dBi)	-1.5
峰值增益 (Peak Gain) (dBi)	-0.83
极化形式 Polarization Type	线极化 Linear polarization
雷电保护 Lightning Protection	直流接地 (DC grounding)
功率容量 Power Capacity (mW)	1000
机械指标 Mechanical Specifications	
天线尺寸 Antenna Size (mm)	17.3mm*5.3mm
辐射体 Radiator	铜 Cuprum
连接器型号 Connect Type	无
工作温度 Working Temperature (℃)	-20~50
存储温度 Storage Temperature (℃)	-40~65

2、天线外形和尺寸 (the shape and size of the antenna)



3、测试结果 (The result of the test)





3.1 增益和效率 (Gain and Efficiency)

样品编号	4#-DS021	
EUT型号	4#	
备注		
Frequency	Gain (dBi)	Efficiency()
2400MHz	-1.97	21%
2402MHz	-1.96	21%
2404MHz	-1.95	21%
2406MHz	-2.04	21%
2408MHz	-2.04	22%
2410MHz	-2.04	22%
2412MHz	-2.07	22%
2414MHz	-2.10	22%
2416MHz	-2.11	22%
2418MHz	-2.15	22%
2420MHz	-2.19	22%
2422MHz	-2.21	22%
2424MHz	-2.16	22%
2426MHz	-2.11	22%
2428MHz	-2.09	22%
2430MHz	-2.01	22%



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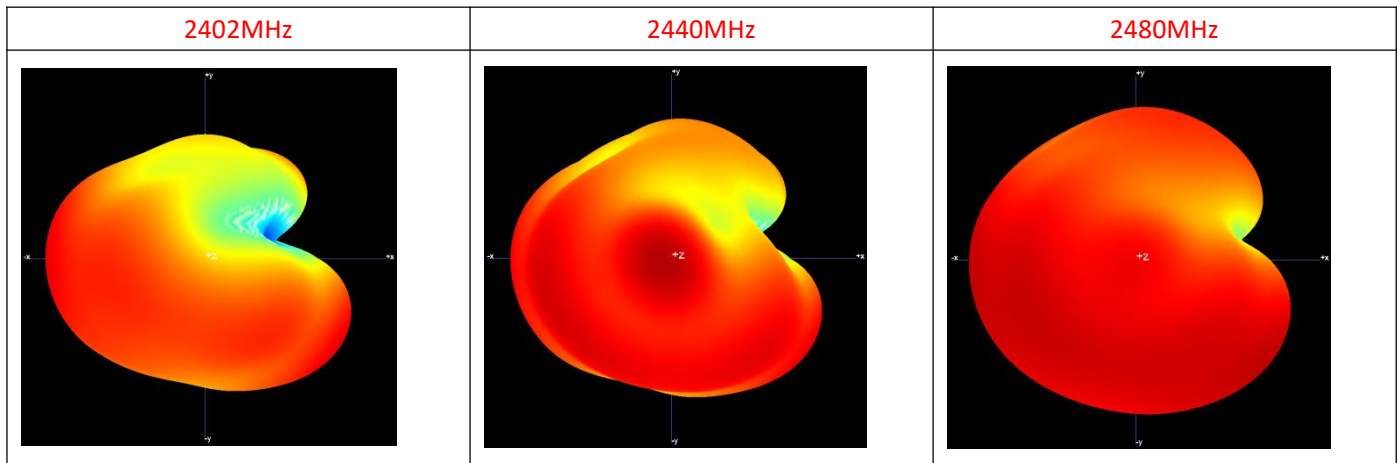
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2432MHz	-1.93	23%
2434MHz	-1.85	23%
2436MHz	-1.71	23%
2438MHz	-1.61	23%
2440MHz	-1.50	23%
2442MHz	-1.41	23%
2444MHz	-1.31	23%
2446MHz	-1.18	24%
2448MHz	-1.12	24%
2450MHz	-1.20	24%
2452MHz	-1.15	24%
2454MHz	-1.13	24%
2456MHz	-1.10	24%
2458MHz	-1.09	25%
2460MHz	-1.11	25%
2462MHz	-1.11	25%
2464MHz	-1.10	25%
2466MHz	-1.15	25%

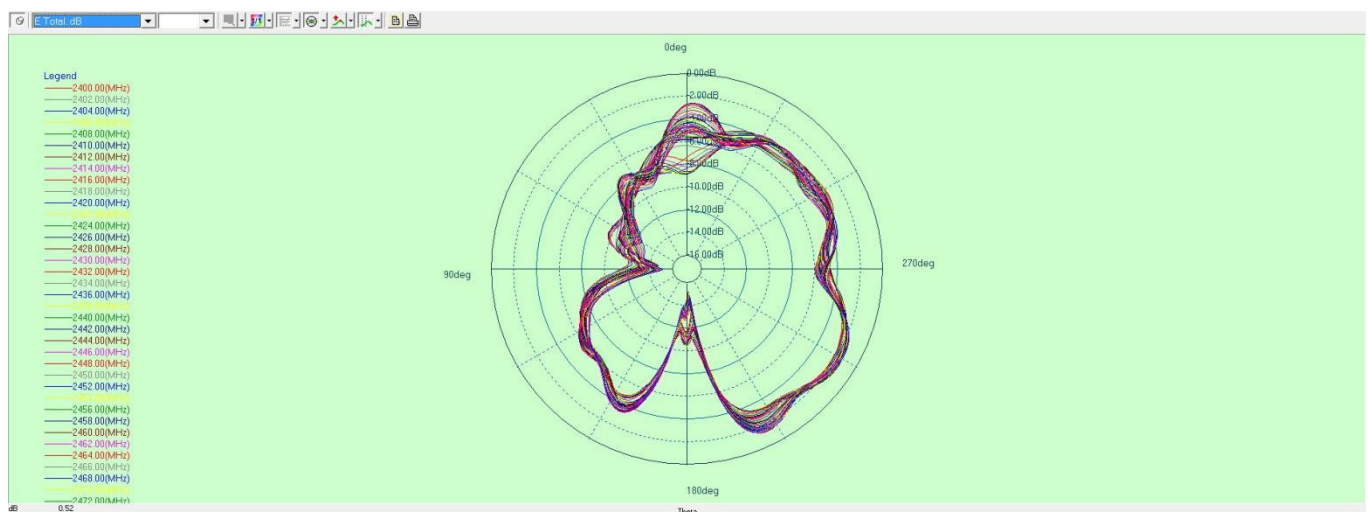
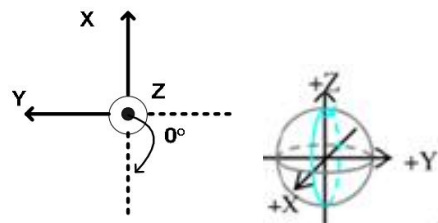
2466MHz	-1.15	25%
2468MHz	-1.14	26%
2470MHz	-1.13	26%
2472MHz	-1.13	26%
2474MHz	-1.11	26%
2476MHz	-1.12	27%
2478MHz	-0.94	27%
2480MHz	-0.93	27%
2482MHz	-0.92	27%
2484MHz	-0.89	27%
2486MHz	-0.85	27%
2488MHz	-0.85	27%
2490MHz	-0.84	27%
2492MHz	-0.83	27%
2494MHz	-0.84	27%
2496MHz	-0.94	26%
2498MHz	-0.95	26%
2500MHz	-0.98	26%

3.2 辐射方向图 (Radiation Pattern)

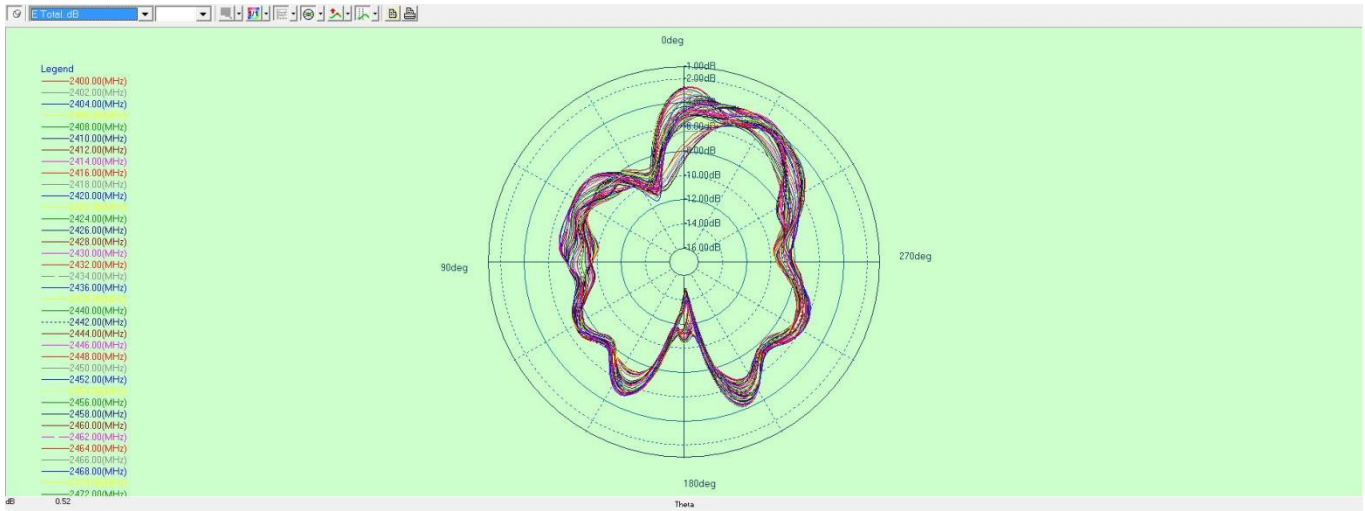
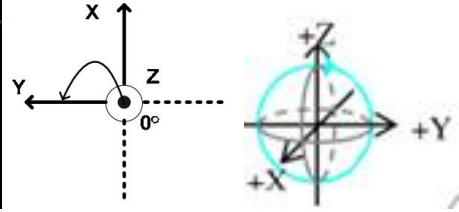
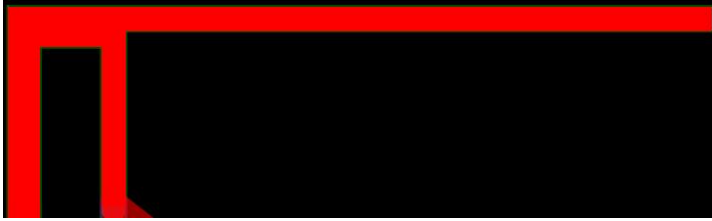
3D 方向图



(1) E1, XZ 面, $\phi=0^\circ$; (E1, XZ plane, $\phi=0^\circ$)



(2) E2, YZ 面, $\phi=90^\circ$; (E2, YZ 面, $\phi=90^\circ$)



(3) H, XY 面, $\theta=90^\circ$; (H, XY plane, $\theta=90^\circ$)

