



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

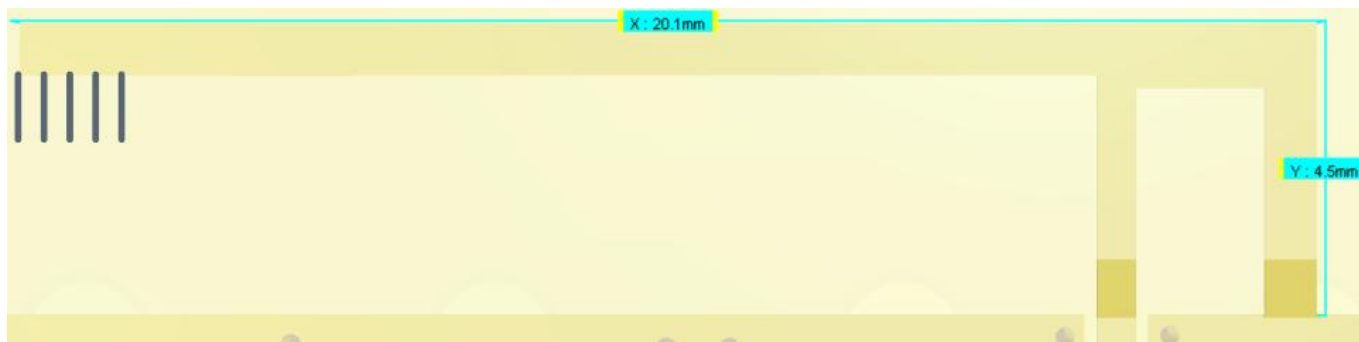
V003

密级：绝密 /confidentiality

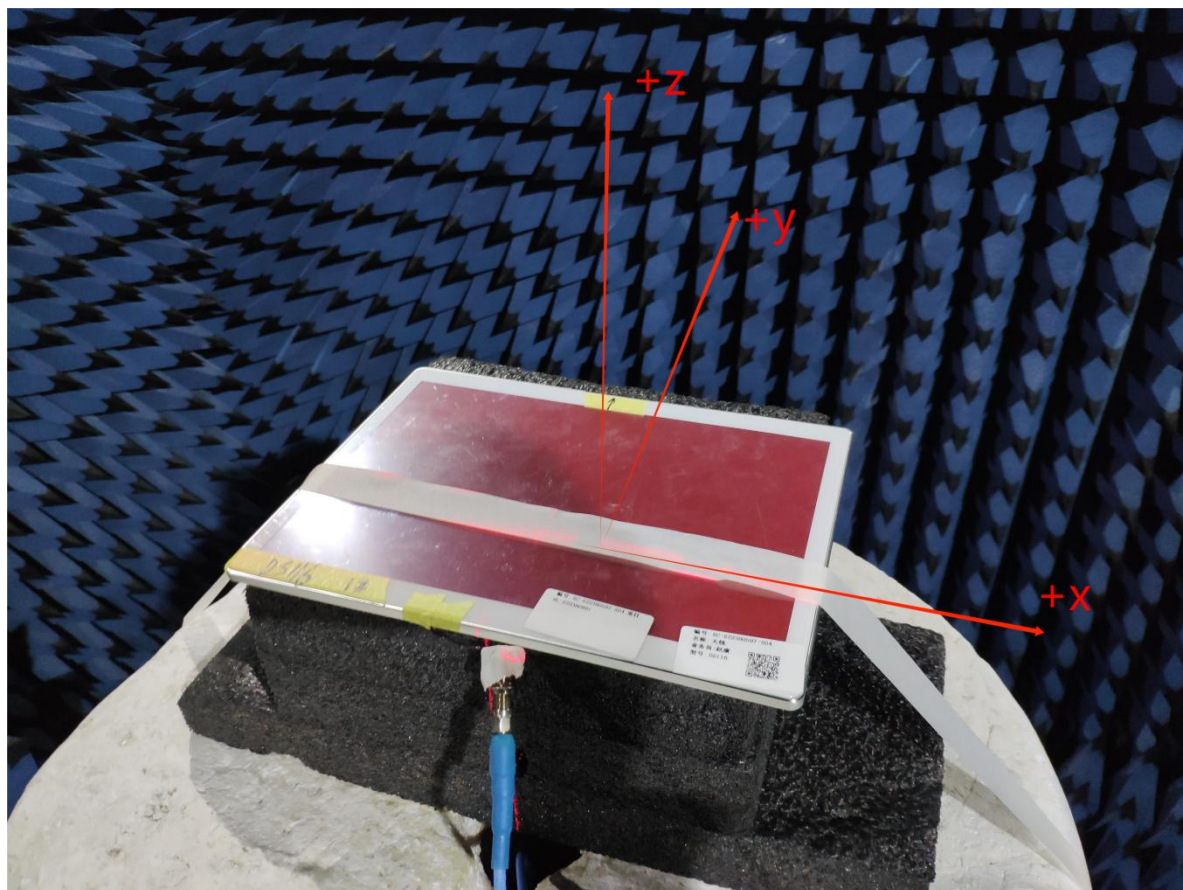
天线型号 (Antenna Version) : ANT-BBNCNC23015
产品型号 (Model of the DUT) : DS116
PCB 编号及版本 (PCB number and version) : ES002EX_V1.0
责任硬件工程师 (Hardware Engineer) : 窦淼全
测试日期 (Test Data) : 2023.11.21
1、技术指标 (Technical Specification)

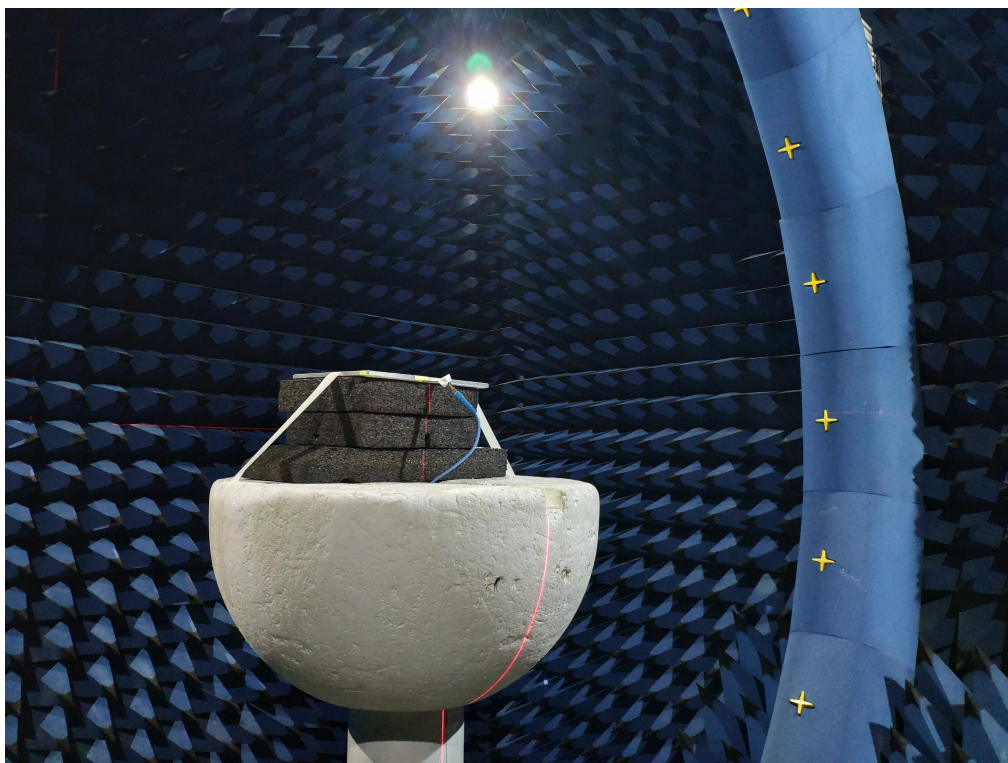
电性能指标 Electrical Specifications	
频率范围 Frequency Range (MHz)	2400-2480
频带宽度 Bandwidth (-10dB) (MHz)	300MHZ
输入阻抗 Input Impedance (Ω)	50
回波损耗 Return Loss (dB)	<-13
电压驻波比 VSWR	<1.5
增益 Gain (@2.44GHz) (dBi)	3.27
峰值增益 (Peak Gain) (dBi)	3.7
极化形式 Polarization Type	线极化 Linear polarization
雷电保护 Lightning Protection	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)	20mm*4.5mm
辐射体 Radiator	铜 Cuprum
连接器型号 Connect Type	无
工作温度 Working Temperature ($^{\circ}\text{C}$)	-20~50
存储温度 Storage Temperature ($^{\circ}\text{C}$)	-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	1#-DS116	
EUT型号	1#	
备注		
Frequency	Gain (dBi)	Efficiency ()
2400MHz	3.70	54%
2402MHz	3.70	54%
2404MHz	3.68	53%
2406MHz	3.64	53%
2408MHz	3.63	53%
2410MHz	3.61	53%
2412MHz	3.57	52%
2414MHz	3.52	52%
2416MHz	3.44	52%
2418MHz	3.41	51%
2420MHz	3.34	51%
2422MHz	3.30	51%
2424MHz	3.30	51%
2426MHz	3.30	51%
2428MHz	3.27	51%



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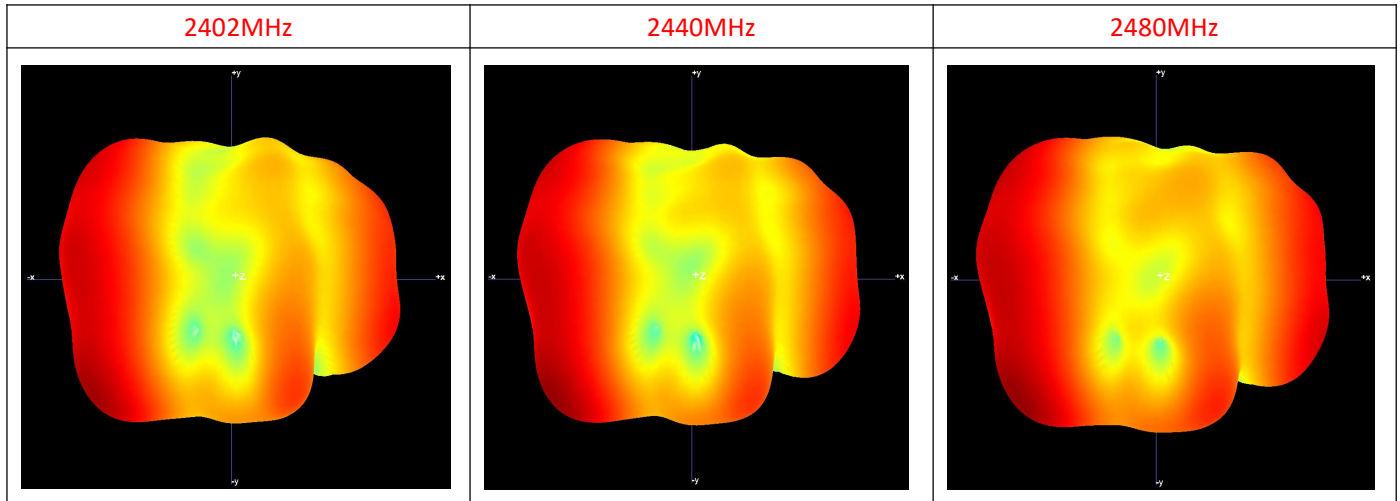
密级: 绝密 /confidentiality

2428MHz	3.27	51%
2430MHz	3.25	50%
2432MHz	3.26	50%
2434MHz	3.26	50%
2436MHz	3.25	50%
2438MHz	3.25	50%
2440MHz	3.27	50%
2442MHz	3.30	50%
2444MHz	3.32	50%
2446MHz	3.22	50%
2448MHz	3.22	50%
2450MHz	3.23	50%
2452MHz	3.24	49%
2454MHz	3.22	49%
2456MHz	3.14	49%
2458MHz	3.14	49%
2460MHz	3.11	48%
2462MHz	3.08	48%

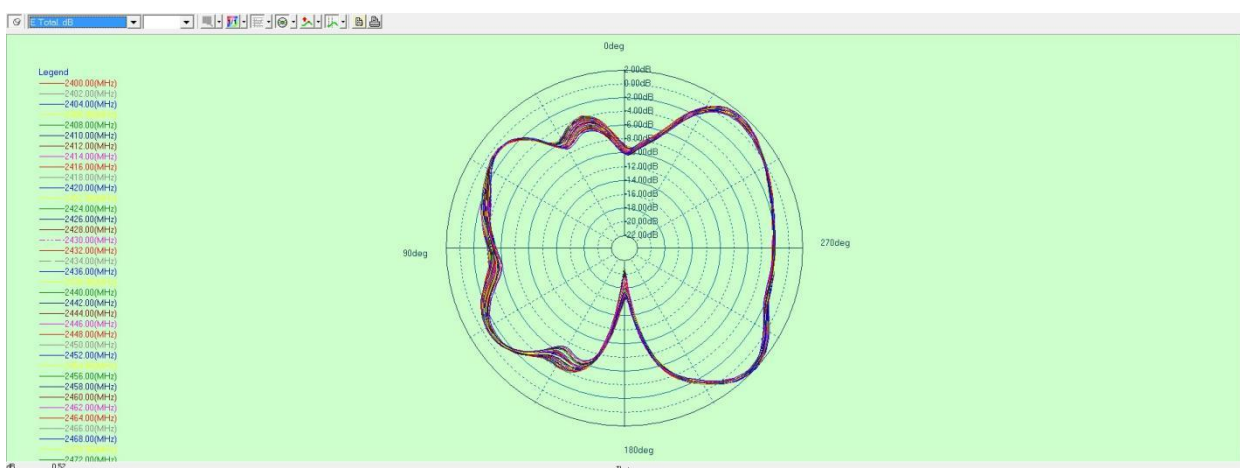
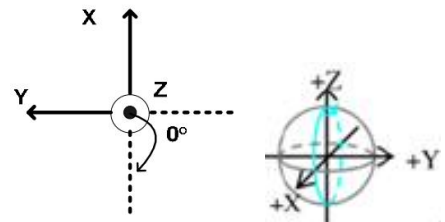
2462MHz	3.08	48%
2464MHz	3.07	48%
2466MHz	3.13	48%
2468MHz	3.13	48%
2470MHz	3.12	48%
2472MHz	3.11	48%
2474MHz	3.12	48%
2476MHz	3.11	48%
2478MHz	3.12	48%
2480MHz	3.13	48%
2482MHz	3.12	48%
2484MHz	3.15	48%
2486MHz	3.03	48%
2488MHz	3.01	47%
2490MHz	3.01	47%
2492MHz	3.02	47%
2494MHz	2.99	46%
2496MHz	2.95	46%
2498MHz	2.95	46%
2500MHz	2.95	45%

3.2 辐射方向图 (Radiation Pattern)

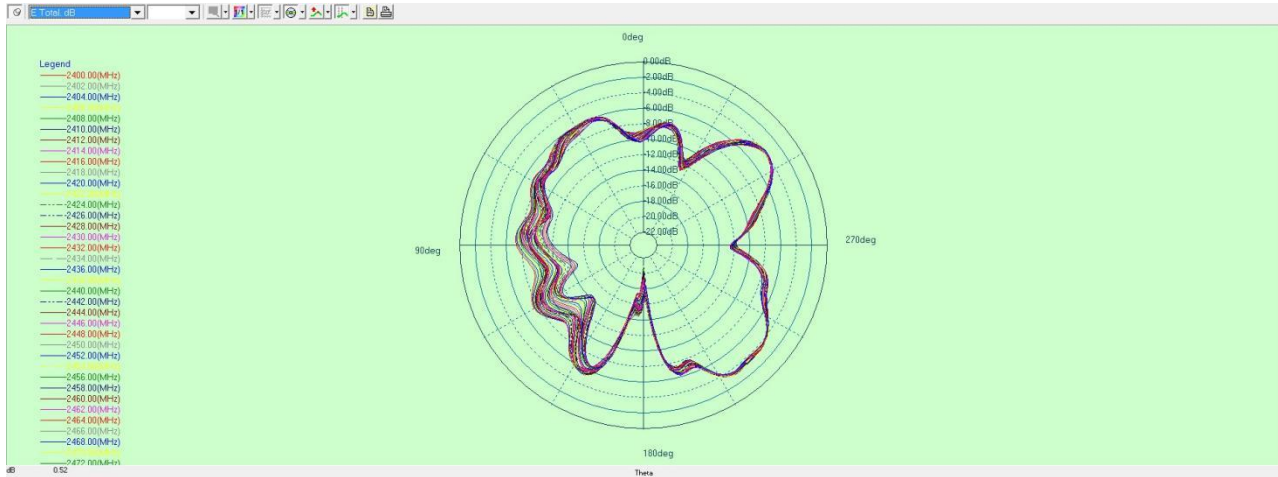
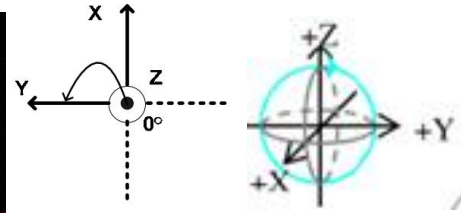
3D 方向图



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



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



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

