

深圳市泓德致新科技有限公司

Shenzhen Hongdezhixin Technology Co., LTD

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天线测试报告

客户名称:深圳蝶唯科技有限公司

项目名称: 蓝牙线

报告日期: 2023. 3. 8

Antenna test report

Customer Name: Shenzhen Diwei Technology Co., Ltd.

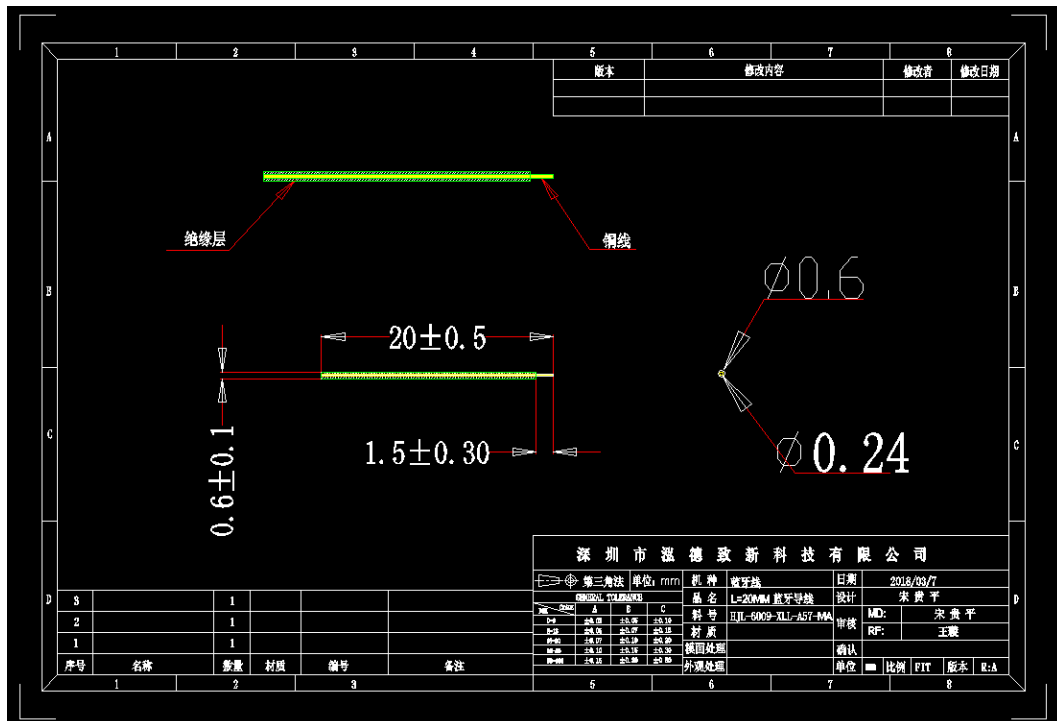
Project Name: Bluetooth Cable

Report date: 2023.3.8

工程确认	审批		客户确认	
孙建	贵春雷			

客户项目基本信息 Customer project basic information

序号		Project configuration information					
1	Operating frequency (MHz)	bluetooth	2.4G				
2	Type of mobile phone						
3	Antenna type						
4	Antenna feed point form	One feed pin					
5	Antenna form	Type of antenna	Electro nic wire				



Bluetooth cable 31.5mm

Antenna design and test report

1. Technical index and experimental equipment

Product electrical performance indicators	
Operating frequency range	2400 ~ 2480MHz
Standing wave ratio	2400~ 2480MHz: < 1.5
Antenna gain	2400 ~ 2480MHz: 3.13dBi
Radiation efficiency	2496 ~ 2690MHz: >60 %
impedance	50 ohm
Product material description	
Electronic wire	High temperature resistance
Product environment description	
Operating temperature	- 30℃ ~ + 85 °C
Storage temperature	- 30℃ ~ + 85 °C

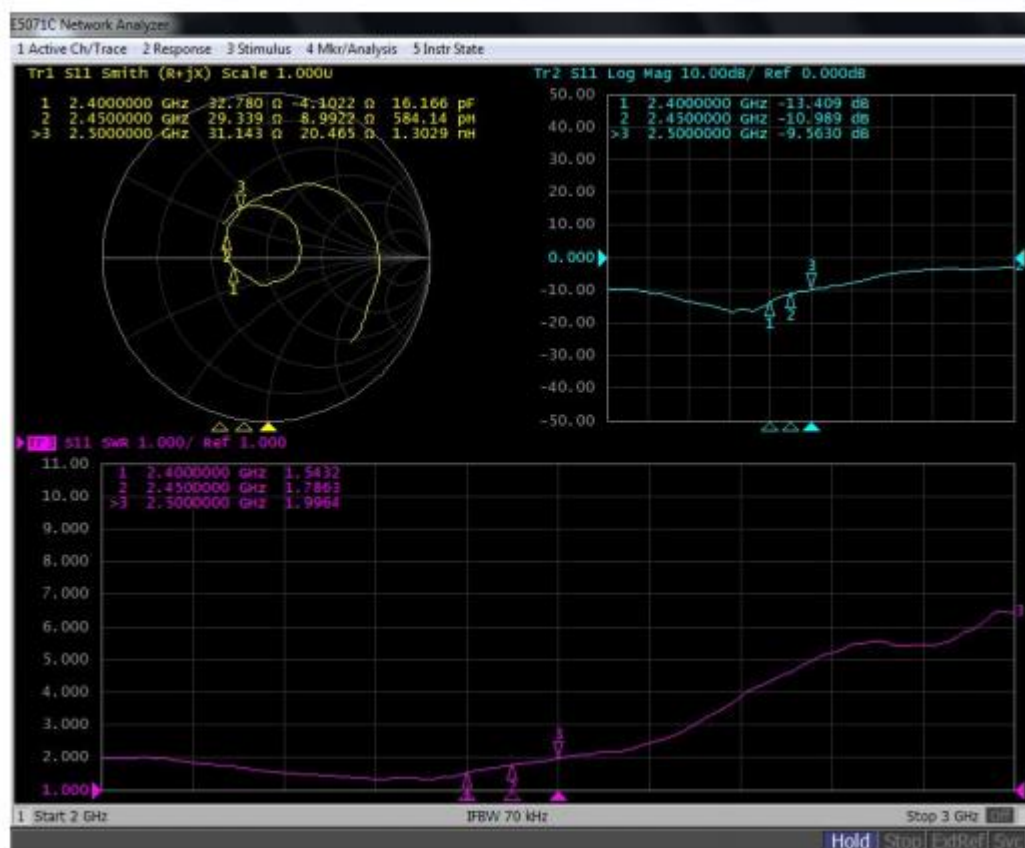
1.3 Test equipment

Equipment	Model No.	Serial No.	Manufacturer	Calibration date	Next calibration date
16 probe microwave chamber	3*3*2.5	RFI-LAB-RF-A00	SUNYIELD	2021.3.15	2023.3.14
Network Analyzer	E5071C	RFI-LAB-RF-A02	Agilent	2022.5.13	2023.5.12
Network Analyzer	E5071C	RFI-LAB-RF-C02	KEYSIGHT	2022.5.13	2023.5.12

1.4 Test environment

Temperature	22.9°C
Humidity	60%RH
Pressure	100.15kPa

3.3.1 S11 parameters



3.3.2 S11 test data

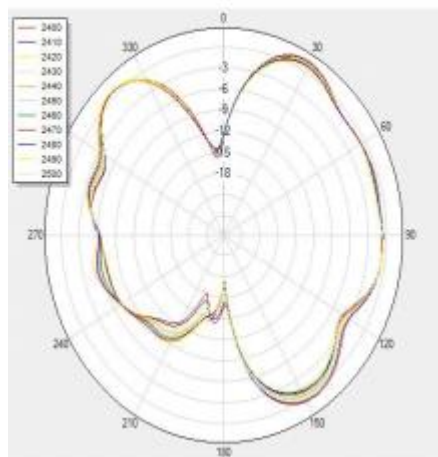
Frequency/MHz	2400	2450	2500
VSWR	1.5432	1.7863	1.9964

3.3.3 Typical free space efficiency and gain

Frequency/MHz	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain/dBi	3.25	3.13	2.99	2.99	2.86	2.98	2.89	2.85	2.9	2.78	2.5
Efficiency/%	59.21	58.08	56.64	55.73	54.97	55.35	53.78	53.75	54.12	53.50	52.05

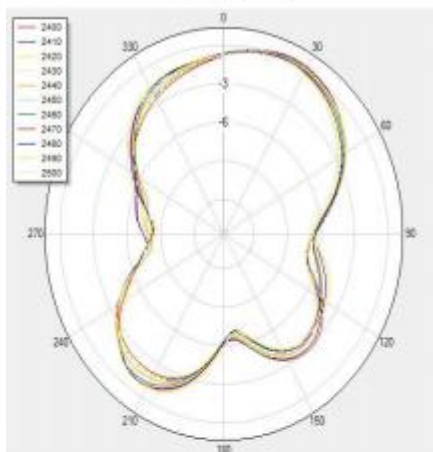
(1) X-Z Plane:

V Phi=0



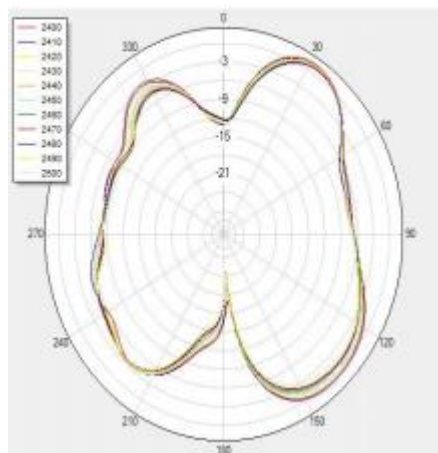
(3) X-Y Plane:

H Theta=90



(2) Y-Z Plane:

V Phi=90



Typical Free Space 3D Radiation Pattern at 2.45GHz

