

客户:

CUSTOMER: 海凌微 (HLW)

客户编号:

CUSTOMER P/N: EF606

本厂编号:

OUR MODEL NO: ATN1390

规格:

SPECIFICATIONS: 2.4G BT Antenna

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变更记录				
发行/变更日期	变更原因	变更内容	版本	备注
2023. 03. 13	新版发行	新版发行	V1. 0	
2023. 03. 27	增加内容	增加 3D 方向图	V1. 1	

一、测试设备 Test Equipment&Conditions

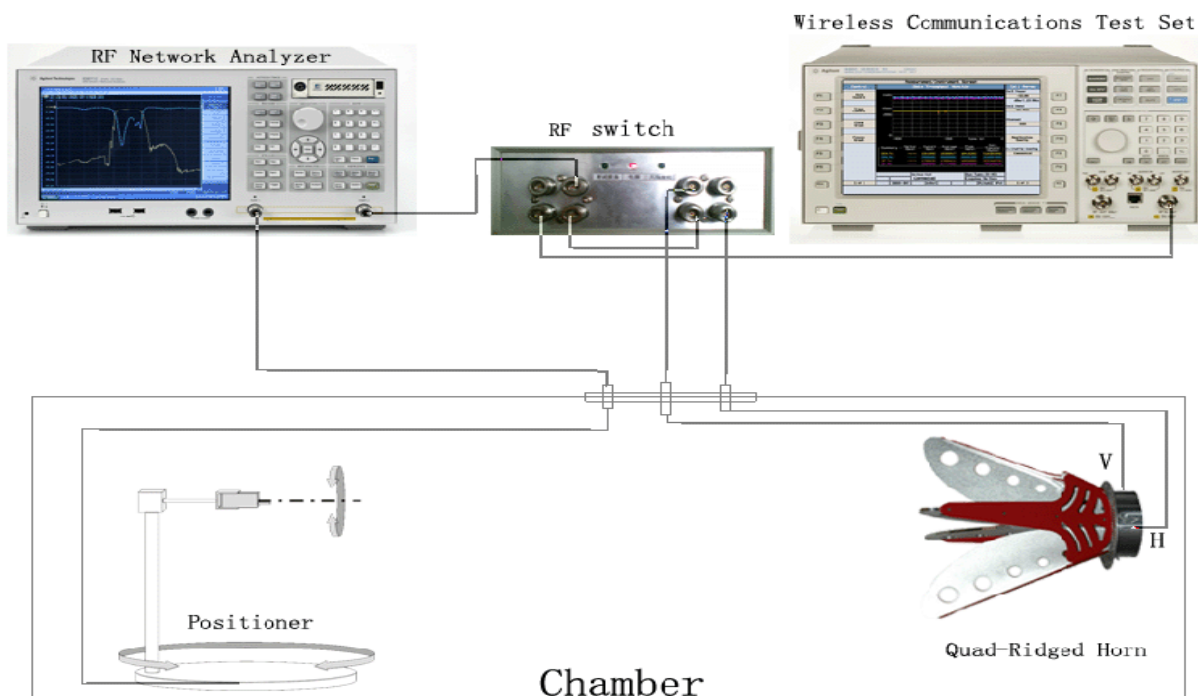
1.1 网络分析仪 (Network Analyzers)

Agilent Technologies E5071B

1.2 综合测试仪 (Communications Test Set)

CMW500

1.3 3D 暗室测试系统 (3D Chamber Test System)



二、产品规格 Product Specification

2.1、Material&Mechanical Characteristics

材质 Material FPC

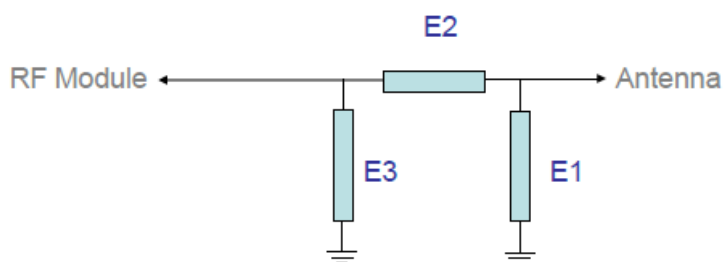
尺寸 Dimension mm

2.2、储存和使用温度 Environmental

使用温度 Operation Temperature $-20^{\circ}\text{C} \sim +80^{\circ}\text{C}$

储存温度 Storage Temperature $-20^{\circ}\text{C} \sim +80^{\circ}\text{C}$

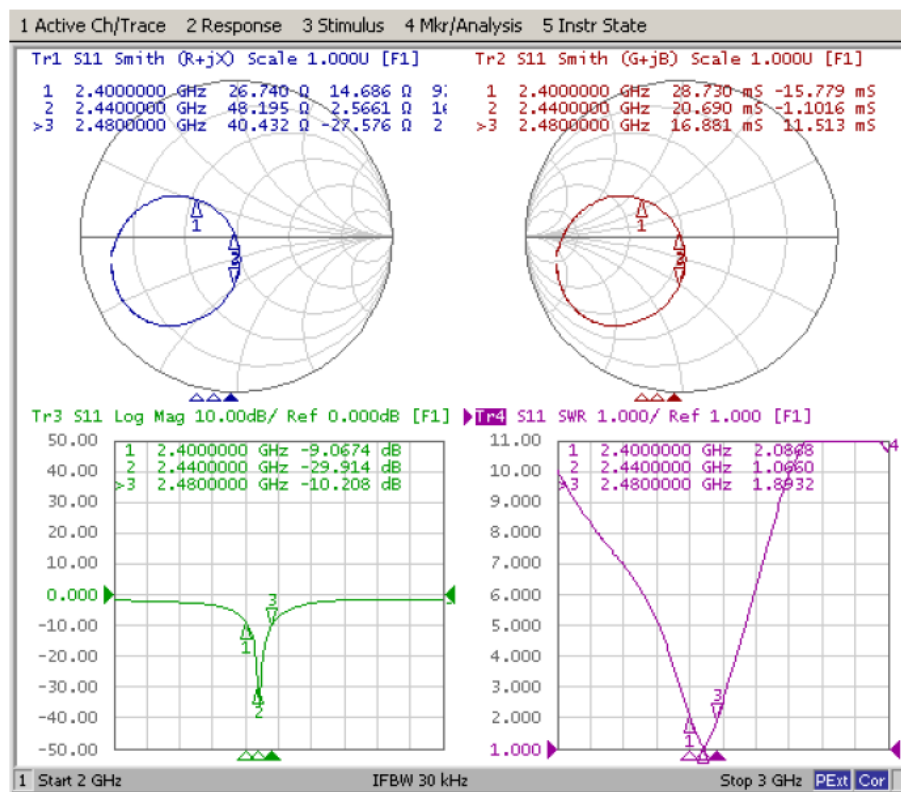
三、匹配电路 Matching circuit



Element	Value
E1(0201)	2.4pF(GRM0335C1H2R4BA01D)
E2(0201)	0欧姆
E3(0201)	NC
L/R匹配电路相同	

四、测试数据报告 Test Data Report

4.1 S11 Parameter

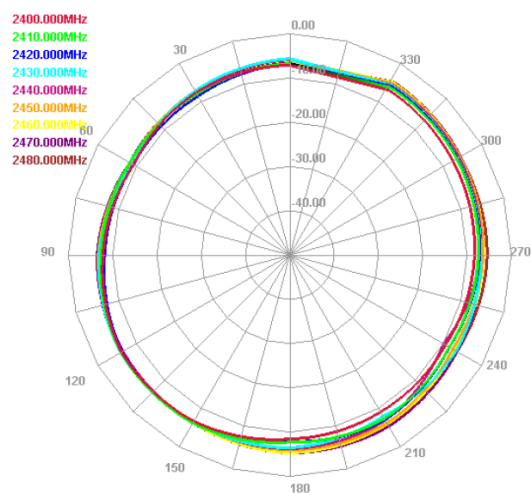


4.2 增益和效率 Gain & Efficiency

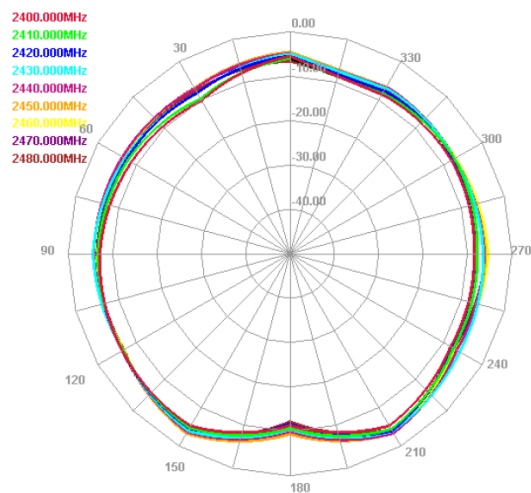
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	19.95	-7	-4.99
2410	20.47	-6.89	-4.32
2420	23.02	-6.38	-3.94
2430	23.54	-6.28	-3.85
2440	25.27	-5.97	-3.32
2450	24.18	-6.17	-3.26
2460	23.62	-6.27	-3.46
2470	22.11	-6.55	-3.84
2480	20.95	-6.79	-3.56

4.3 方向图 Radiation pattern

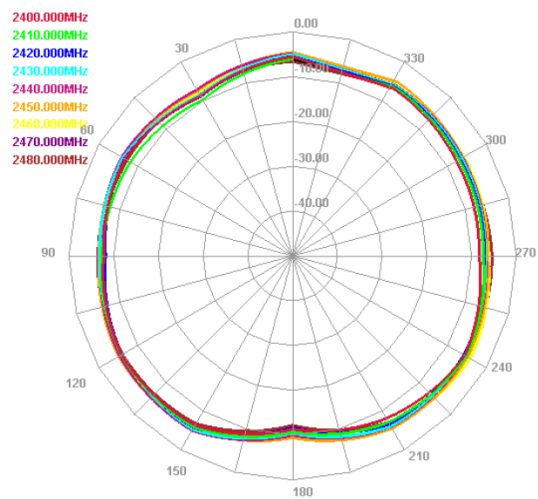
Horizontal



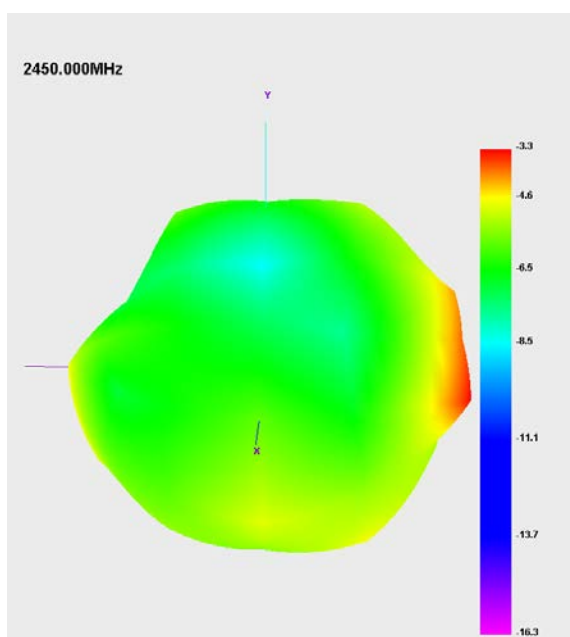
E1 Face



E2 Face



3D



4.3 OTA 测试数据 OTA Test Data

band	channel	TRP (dBm)	TIS (dBm)
Bluetooth BR (L) 自由空间	0	8.4	-88.8
	39	9.5	-88.8
	78	9.3	-88.7
band	channel	TRP (dBm)	TIS (dBm)
Bluetooth BR (R) 自由空间	0	8.5	-89.5
	39	8.4	-89.3
	78	7.2	-88.2
band	channel	TRP (dBm)	TIS (dBm)
Bluetooth BR (L) 头模	0	5.2	-86.0
	39	6.9	-85.7
	78	7.1	-86.0
band	channel	TRP (dBm)	TIS (dBm)
Bluetooth BR (R) 头模	0	5.5	-86.8
	39	4.8	-84.9
	78	3.4	-84.7

4.4 实测数据 Measured data

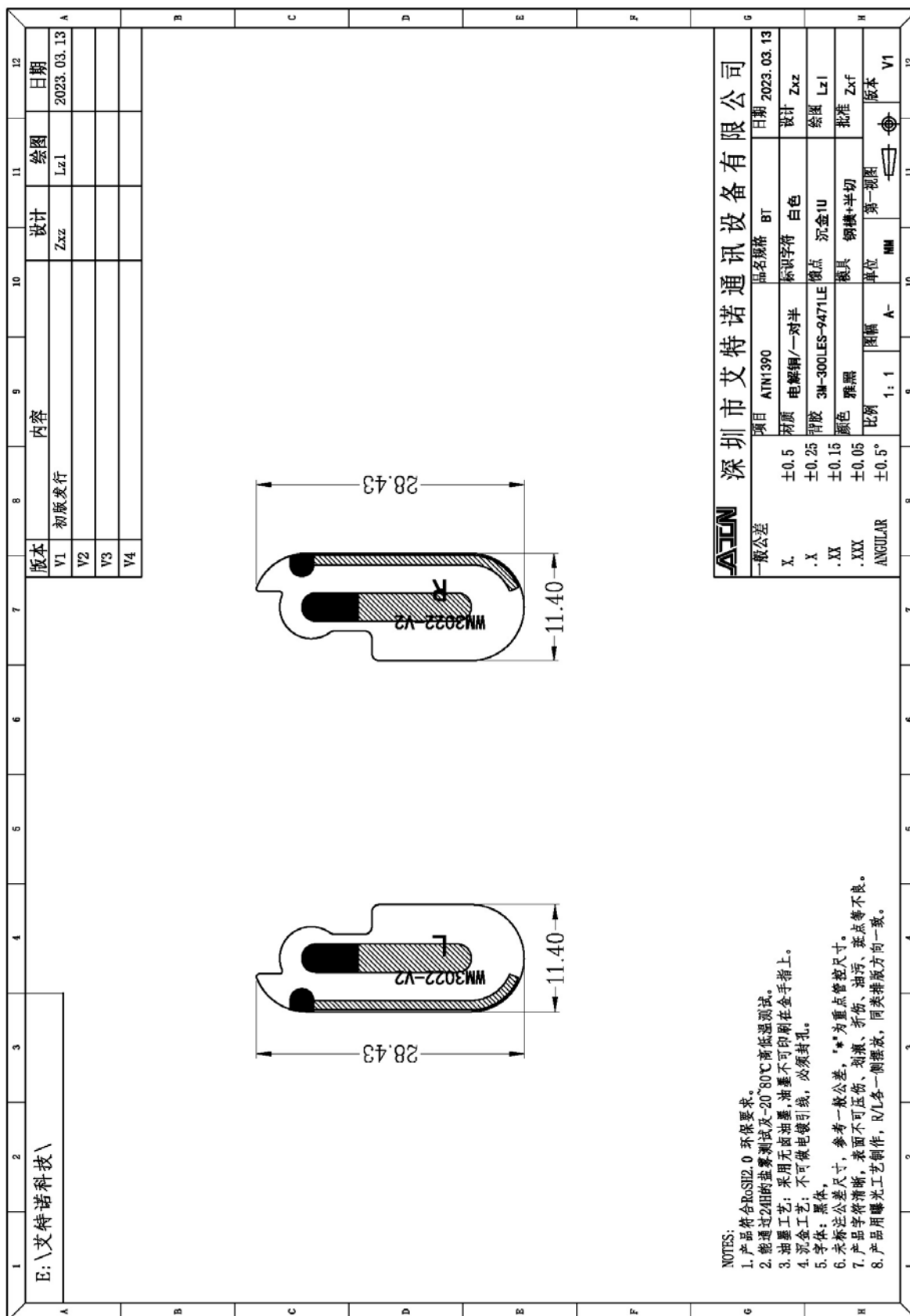
测试地点：美生创谷南门隆昌路

测试手机	iphone6s
听音乐全向 (m)	19

五、装配要求 Assembly requirements

1	无
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六、工程图纸 Product Drawing



七、样品尺寸检测报告 Size test report

尺寸检验报告 Dimension test report

项目 project: WM3022			品名 Product Name: 天线					
类别 category: FPC			数量 Quantity: 5 个		日期 Date: 2023.03.13			
检验依据标准: Inspection basis and standard			☒ 工程图纸 Engineering drawings ☐ 标准样板 Standard template ☐ 其它 Other _____					
检验项目 Inspection items			样品测验值 test value					判定结果 determine
			1	2	3	4	5	
外观检验 Appearance inspectio	1.油污划痕、压伤等不良		√	√	√	√	√	OK
	2、其它 Other							
尺寸检验 Dimensional inspection	1	R						
	2	11.40±0.15	11.44	11.42	11.44	11.46	11.42	OK
	3	28.43±0.15	28.48	28.44	28.5	28.44	28.46	OK
	4	/						
	5	L						
	6	11.40±0.15	11.48	11.46	11.4	11.48	11.48	OK
	7	28.43±0.15	28.44	28.48	28.46	28.46	28.48	OK
	8	/						