

Development Project Number:

Y240411802

Day: 2024.07.25

Version: A0-0725

Acknowledgment

Client Name: YisipuDebugging Projects: EASTCOOLER

Customer part number: _____

Boantong part number: 74300199Specifications: Built-in antenna -2.4/5G-grey1.13Tin wire -1Substitute terminal- L=50mm-FPC-35×8.3mm

Factory stamp:

write	Review	approve
Qiu Cuiping	Lü Jie	Liu Lihua

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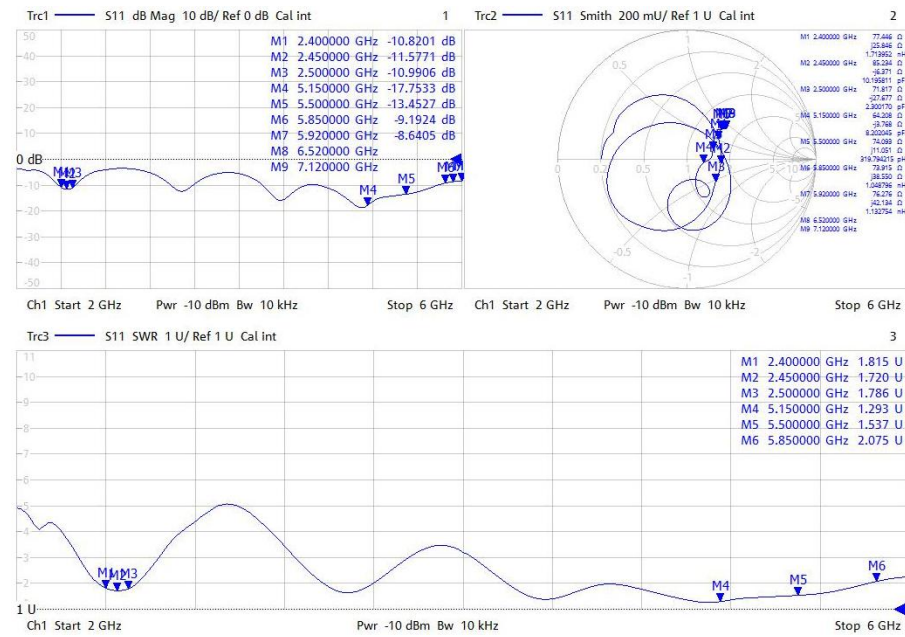
Form Number:B&T-QR-EN-002 Version:B3

Performance parameters

Electrical parameters	
Frequency range	2400~2500/5150-5850MHz
Input impedance	50Ω
Standing Bobby	Compare with the engineering seal sample
Power capacity	<10w
polarization mode	linear polarization
Radiation direction	Omnidirectional
Connector type	1Substitute terminal
Mechanical parameters	
Chief	50±3mm
Terminal holding force	≥1kgf
coaxial cable	grey1.13Tin wire
Salt spray test	24H
Environmental parameters	
Operating temperature	- 30℃~65℃

Electrical performance test report (whole unit)

antennaS11Parameter diagram



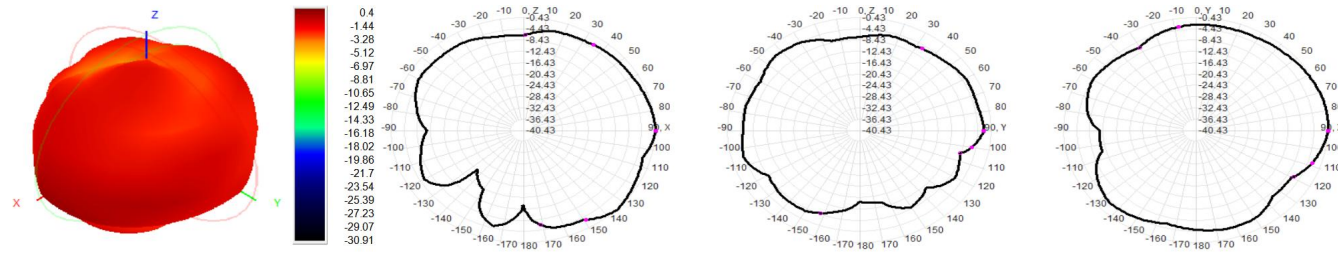
VSWR data - Antenna optimization after potting

Freq/MHz	2400MHz	2450MHz	2500MHz	5150MHz	5500MHz	5850MHz
VSWR	1.81	1.72	1.78	1.29	1.53	2.07

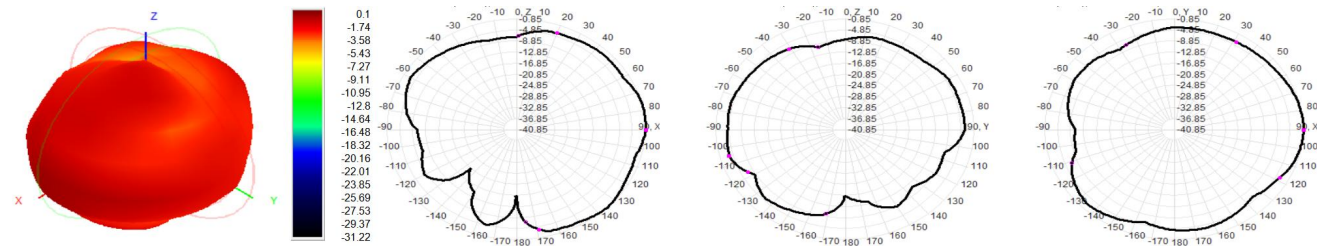
Antenna anechoic chamber test data - Antenna optimization after potting

Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
2400.0	-4.68	0.40	34.02
2410.0	-4.79	0.12	33.18
2420.0	-4.62	0.27	34.47
2430.0	-4.77	0.23	33.36
2440.0	-4.87	0.09	32.58
2450.0	-4.78	0.10	33.26
2460.0	-4.86	-0.04	32.70
2470.0	-4.88	-0.16	32.52
2480.0	-4.85	-0.16	32.70
2490.0	-4.64	0.02	34.38
2500.0	-4.65	0.02	34.28
5150.0	-2.94	2.12	50.82
5200.0	-2.77	1.99	52.79
5250.0	-3.26	0.34	47.16
5300.0	-2.99	2.40	50.25
5350.0	-2.83	2.72	52.16
5400.0	-3.74	1.74	42.22
5450.0	-3.43	2.15	45.40
5500.0	-2.11	4.23	61.52
5550.0	-3.42	2.50	45.49
5600.0	-3.33	3.29	46.46
5650.0	-2.35	4.20	58.27
5700.0	-2.76	3.24	53.00
5750.0	-2.84	2.83	51.97
5800.0	-3.24	2.34	47.47
5850.0	-2.07	5.27	62.07

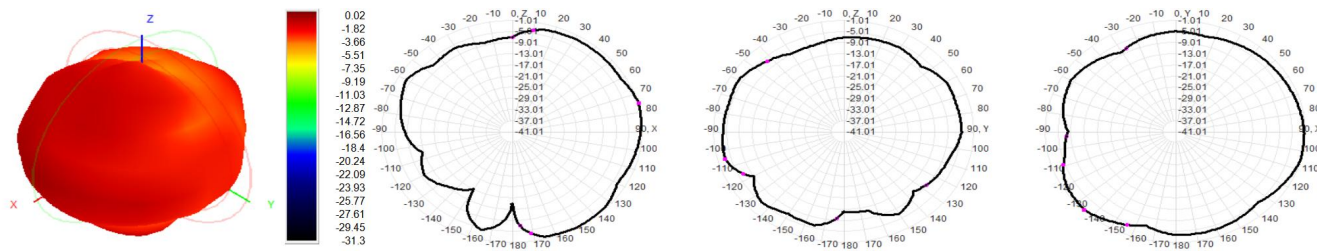
2400MHz 3D-E1-E2-H



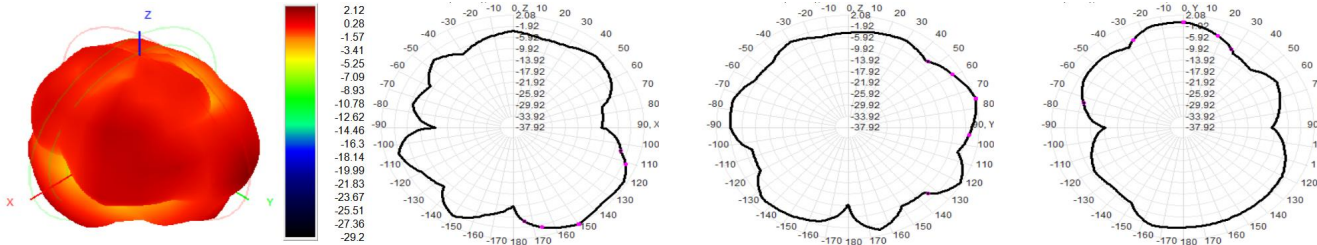
2450MHz 3D-E1-E2-H



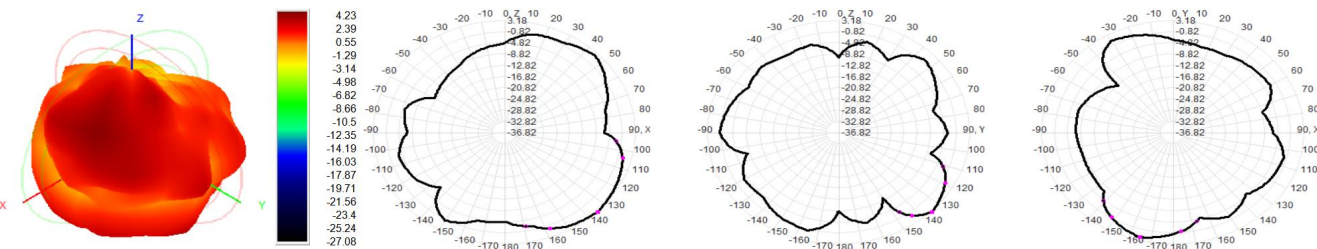
2500MHz 3D-E1-E2-H



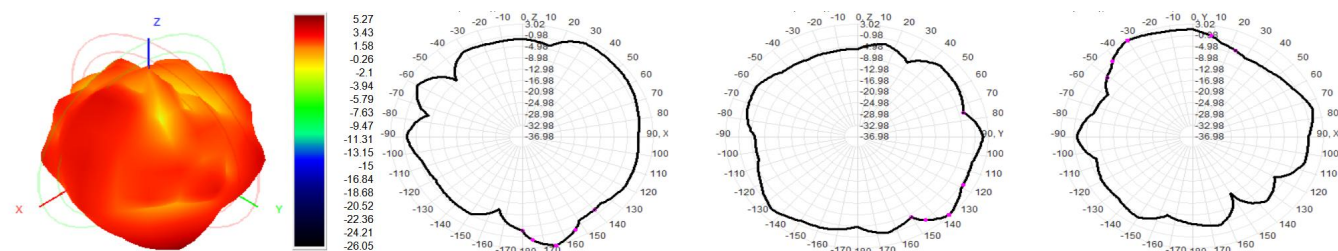
5150MHz 3D-E1-E2-H



5500MHz 3D-E1-E2-H



5850MHz 3D-E1-E2-H



Material composition and list of hazardous substances

item	Specification Second-rate	Material	RoHS test results (PPM)						ICP test number	Detection time
			Cd	Pb	Hg	Cr+6	PBB	PBDE		
1	1.13 line	FEP	ND	ND	ND	ND	ND	ND	NGBPC24000131241	2024/1/16
		Tinned copper wire	ND	ND	ND	ND	ND	ND	A2240376995101001	2024/7/1
2	terminal	PBT	ND	3.76	ND	ND	ND	ND	ETR23705930	2023/8/4
		Phosphor bronze	ND	6	ND	ND	ND	ND	CANEC24000977301	2024/1/22
3	FPC	PI	ND	ND	ND	ND	ND	ND	SHAEC24000428805	2024/1/12
		Adhesive backing	ND	ND	ND	ND	ND	ND	SHAEC23021627701	2023/12/27

Antenna schematic diagram



Reliability testing requirements

序号	可靠性试验名称	试验条件	判定标准
1	恒温恒湿试验	高温:70℃, 湿度:80%RH 24H; 低温 -40℃ 24H;共持续 48H;	试验前后外观要求: 金属表面 镀层应无剥落, 裂痕起皱, 分 离等。非金属部分不应变色, 发生开裂, 变形, 脱胶等不良; 电气性能测试符合标准要求;
2	高低温冷热冲击试验	70℃持续 2H、-40℃持续 2H, 6 次循环, 共 24 小时;	试验前后外观要求: 金属表面 镀层应无剥落, 裂痕起皱, 分 离等。非金属部分不应变色, 发生开裂, 变形, 脱胶等不良; 电气性能测试符合标准要求;
3	盐雾试验	配制浓度 (5±1) % NaCl 溶液, 确保盐溶 液的 pH 值为中性 (6.5~7.2); 压力桶温 度 47±1℃, 喷雾压力保持在 1.00± 0.1kgf/cm ² , 喷雾量 1.0~2.0ml/80cm ² /h; 试验时间 24H;	产品表面外露区域不可有氧化、 锈蚀现象; 其它区域盐雾 试验后的氧化/生锈面积 < 1.0%
4	端子维持力试验	常温常湿; 试验维持力要求: ≥1.0 kgf;	端子与线缆无脱落、松动等; 测试后电气性能测试符合标准 要求;
5	端子插拔力试验	常温常湿; 端子与座子正常连接, 插入力/ 拔出力 ≥1.0 kgf;	端子插入力/拔出力符合要求, 且端子无脱落、损伤等不良;