

承認書

APPROVAL SHEET

客戶名稱: CUSTOMER NAME:	深圳市科莱德电子有限公司 Shenzhen Klyde Electronics Co., Ltd.
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物料編號:

PARTNO:

產品品名:

TYPE NAME:

BT/WiFi 天线, BT/WiFi antenna

客戶料號:

CUSTOM P/N:

規格:

SPECIFICATON:

IPEX1.13 線-总长 110mm,

IPEX 1.13 Cable - Total Length: 110 mm

1. 新品承認 (Newly Approved) ☒
2. 材料變更再承認 (Material Approved) ☐
3. 規格變更再承認 (SPEC Approved) ☐

製造廠商/供應廠商承認欄 Manufacturer Confirmation			客 戶 承 認 欄 Supplier Confirmation		
深圳市睿達永利科技有限公司 Shenzhen Ruida Yongli Technology Co., Ltd.			深圳市科莱德电子有限公司 Shenzhen Klyde Electronics Co., Ltd.		
承認章: (APPROVAL BY):			承認章: (APPROVAL BY):		
承認日期: (APPROVAL DATE): 2026 年 1 月 5 日/ Jan 5, 2026			承認日期: (APPROVAL DATE): 2026 年 1 月 5 日/ Jan 5, 2026		
供應商 (SUPPLIER)			客戶 (CUSTOMER)		
品質 Q. Dept	工程 E. Dept	業務 S. Dept	經辦 TESTED	審核 CHECKED	核准 APPROVED
吳仕娟 Shijuan Wu	王世海 Shihai Wang	陳榮茂 Rongmao Chen	郭騰飛 Tengfei Guo	李文豪 Wenhao Li	李國 Guo Li
日期 (DATE): Jan 5, 2026			日期 (DATE): Jan 5, 2026		

公司名称: 深圳市睿达永利科技有限公司

Company: Shenzhen Ruida Yongli Technology Co., Ltd.

公司地址: 深圳市龙岗区宝龙街道同乐社区南同大道 5 号 (锦龙二路 15 号) B 栋厂房三楼

Address: 3rd Floor, Factory Building B, No. 5 Nantong Avenue, Tongle Community, Baolong Street, Longgang District, Shenzhen

电话/Tel: 0755-89329300

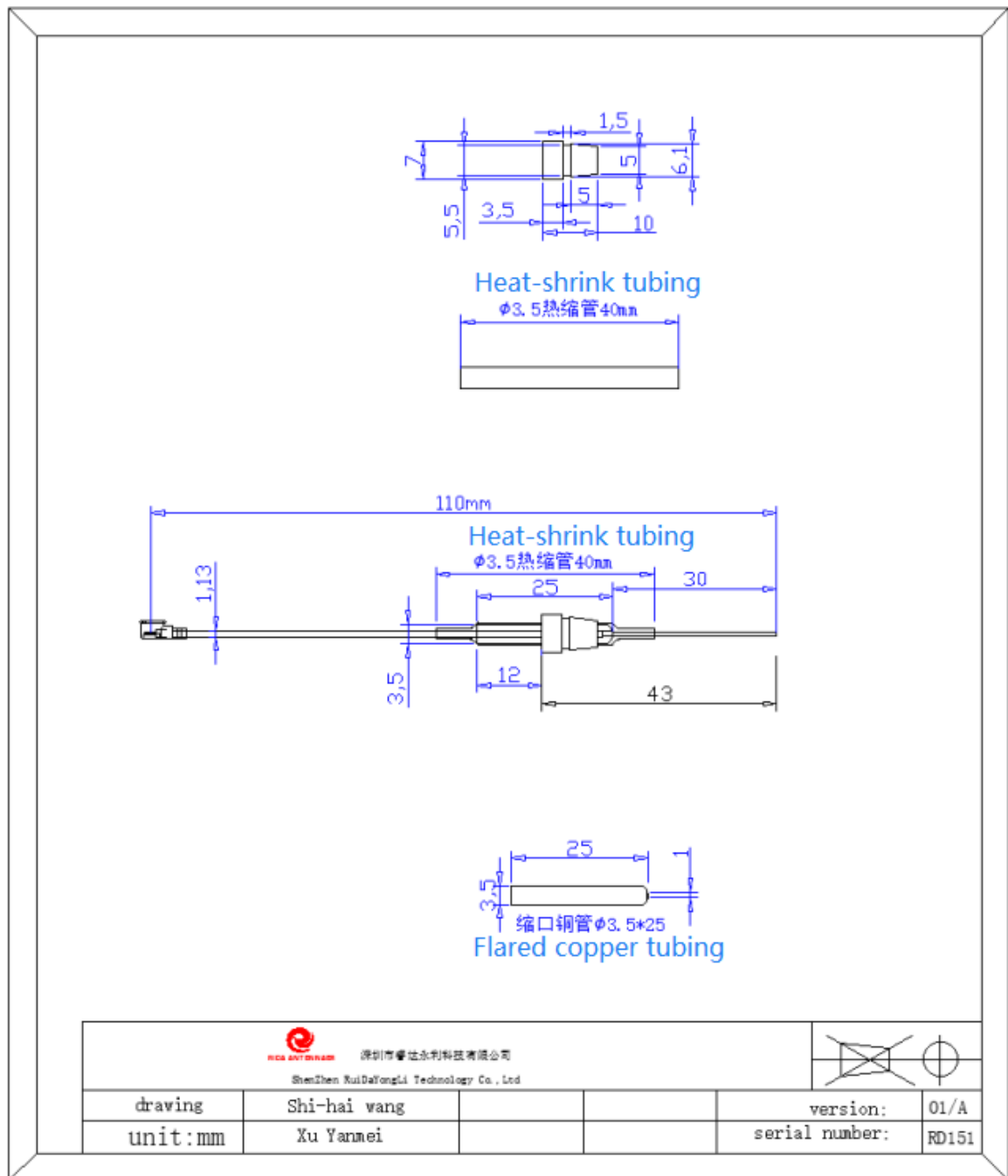
传真/Fax: 0755-28522900

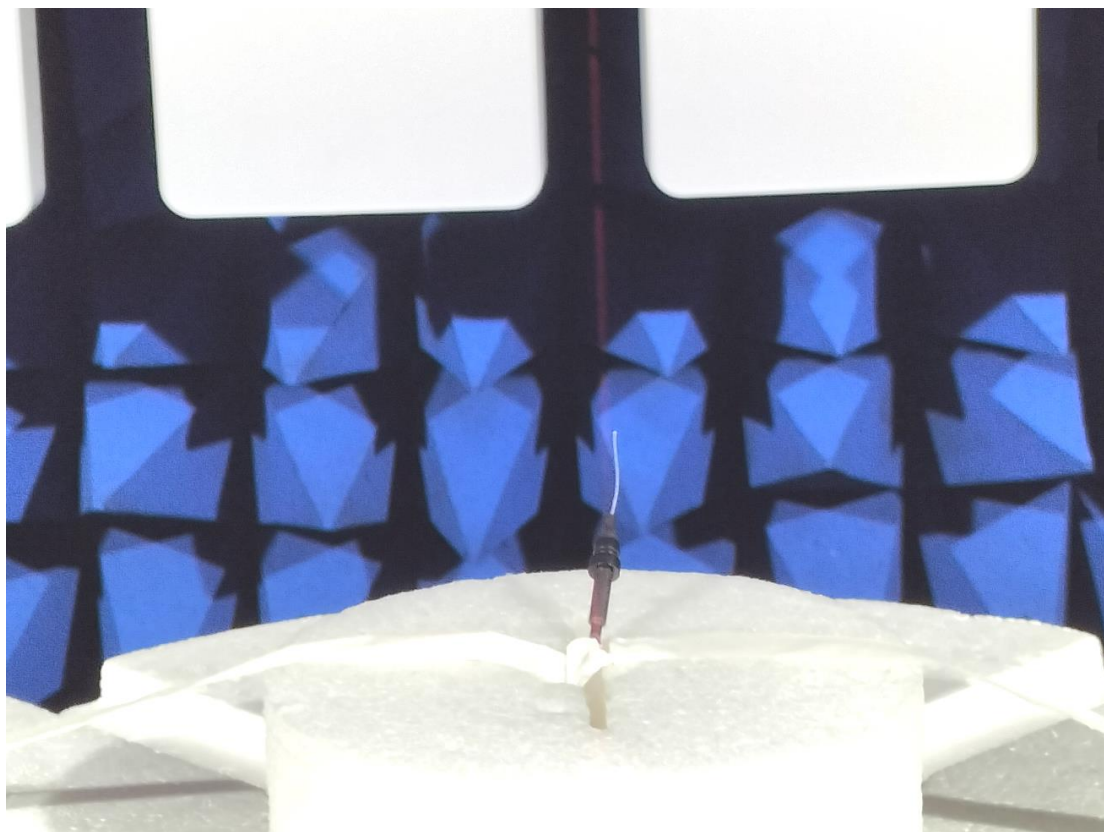
网址/Web: <http://www.szrestart.com>

BT/WiFi

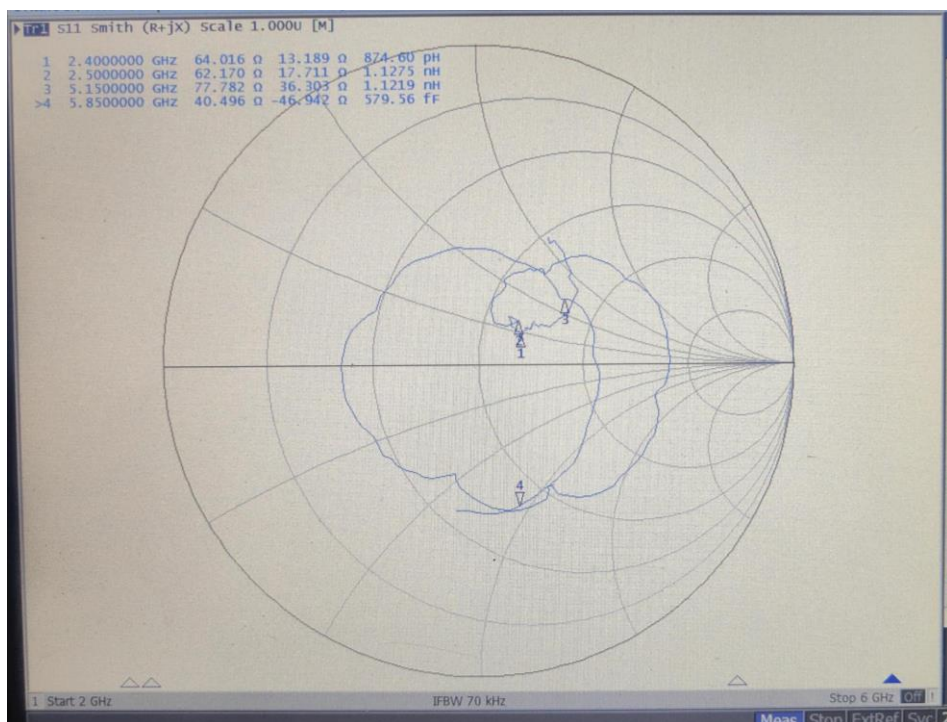
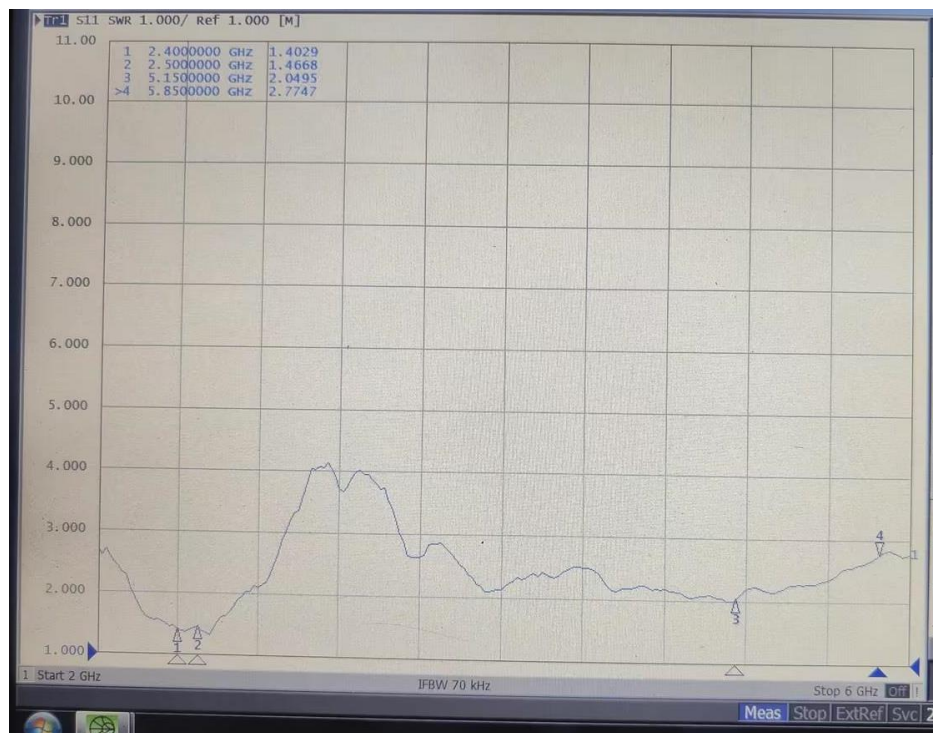
Model 型号	BT/WiFi 天线, BT/WiFi antenna	
Frequency Range 频率范围-MHz	2400-2500MHz	5150-5850MHz
Gain 增益-dBi	2.9	3.13
VSWR 电压驻波比	≤ 1.5	≤ 3.0
Input impedance 输入阻抗- Ω	50	
Polarization 极化方式	Vertical 垂直	
Maximum Power 最大功率-W	20	
Connector Type 连接方式	IPEX 线扣 IPEX wire buckle	
Cable Length 长度-mm	110mm	
Weight 重量-g	5	
Installation 安装方式	Rubber stopper fixing slot 胶塞固定卡槽	
Antenna type 天线类型	Omnidirectional 全向性 Integral Antenna	

结构图 Structure Picture

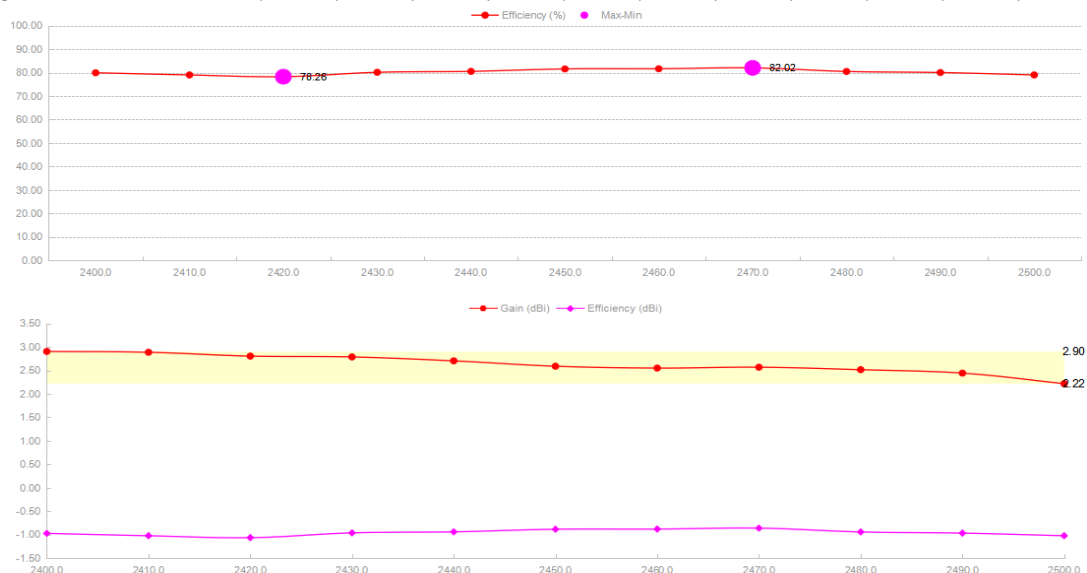


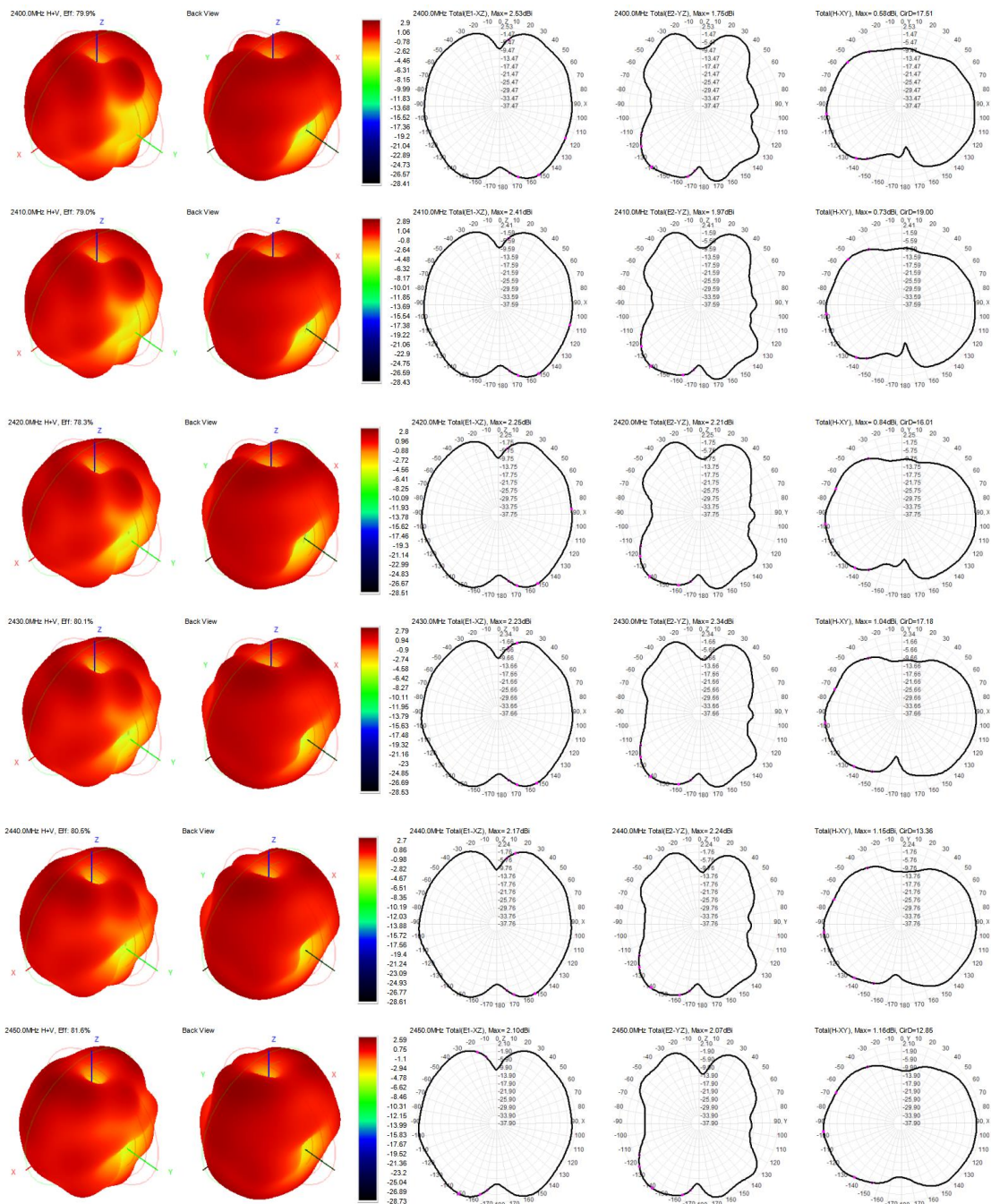


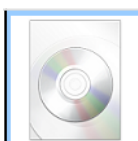
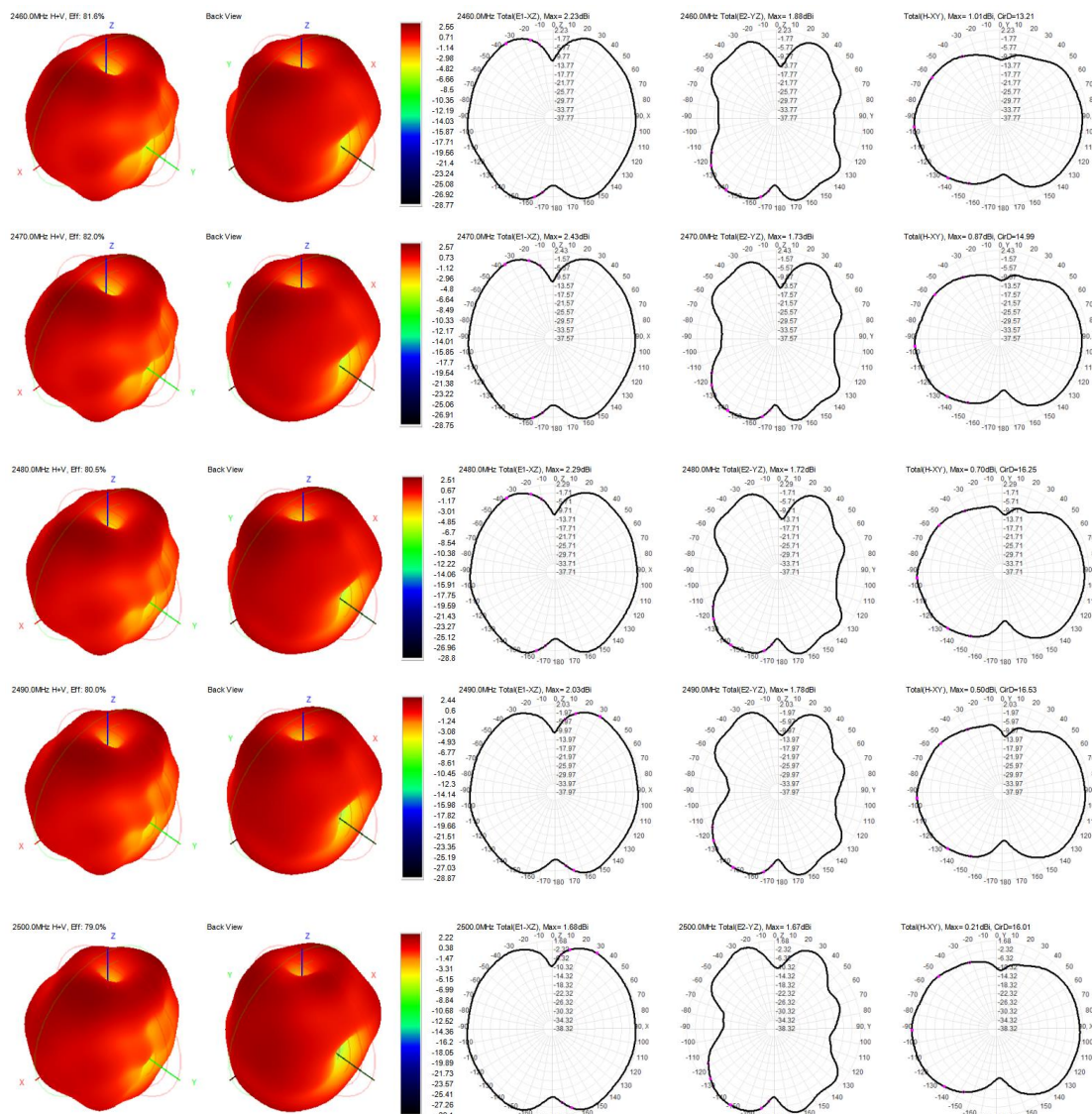
测试图 Test pattern



 深圳市睿达永利科技											
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-0.97	-1.02	-1.06	-0.96	-0.94	-0.88	-0.88	-0.86	-0.94	-0.97	-1.02
Gain (dBi)	2.90	2.89	2.80	2.79	2.70	2.59	2.55	2.57	2.51	2.44	2.22
Efficiency (%)	79.93	79.01	78.26	80.13	80.54	81.58	81.64	82.02	80.49	80.04	79.02
Directivity (dB)	3.88	3.91	3.87	3.75	3.64	3.47	3.43	3.43	3.46	3.41	3.24
Peak Gain Position (Theta)	150.00	150.00	150.00	151.00	150.00	145.00	146.00	147.00	148.00	149.00	149.00
Peak Gain Position (Phi)	15.00	17.00	18.00	18.00	18.00	221.00	219.00	222.00	229.00	234.00	240.00
Efficiency ThetaPol (%)	27.13	26.29	25.58	25.56	25.25	25.18	25.30	25.73	25.48	25.17	24.35
Efficiency PhiPol (%)	52.80	52.72	52.69	54.57	55.29	56.39	56.35	56.29	55.01	54.86	54.67
Upper Hem. Efficiency (%)	37.67	37.13	36.21	36.97	36.73	37.29	37.37	37.88	37.45	37.58	37.33
Lower Hem. Efficiency (%)	42.26	41.88	42.06	43.16	43.81	44.28	44.28	44.15	43.04	42.45	41.69
T90(H)圆度	17.51	19.00	16.01	17.18	13.36	12.85	13.21	14.99	16.25	16.53	16.01
Gain 15deg (dBi)											
E1(XZ)波瓣宽度	49.00	59.00	79.00	150.00	151.00	152.00	151.00	149.00	150.00	151.00	153.00
E1(XZ)前后比	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.44	0.51	0.34	0.04
E2(YZ)波瓣宽度	46.00	41.00	38.00	37.00	39.00	41.00	43.00	44.00	44.00	43.00	43.00
E2(YZ)前后比	0.44	0.76	0.79	0.65	0.46	0.31	0.19	0.11	0.06	0.01	0.00
最大增益处轴比(P)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
仰角10度最差(大)轴比(P)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Hc(XY)波瓣宽度	88.00	89.00	70.00	68.00	69.00	74.00	80.00	82.00	83.00	85.00	90.00
Hc(XY)前后比	3.49	3.52	3.43	3.49	3.27	3.13	3.22	3.49	3.95	4.24	4.12







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Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Frequency (MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
Efficiency (dBi)	-3.31	-3.26	-3.05	-3.01	-3.17	-3.09	-2.95	-2.88	-3.01	-2.82	-3.12	-3.16	-3.31	-3.37	-3.24
Gain (dBi)	1.47	1.51	2.65	3.13	2.50	2.24	2.31	2.36	1.63	1.70	1.61	1.63	1.32	1.68	1.86
Efficiency (%)	46.63	47.26	49.58	49.95	48.20	49.10	50.69	51.50	50.03	52.19	48.71	48.32	46.62	46.00	47.47
Directivity (dB)	4.79	4.77	5.69	6.15	5.67	5.33	5.26	5.24	4.64	4.53	4.73	4.79	4.64	5.05	5.09
Peak Gain Position (Theta)	105.00	105.00	105.00	105.00	150.00	150.00	135.00	135.00	120.00	135.00	150.00	150.00	150.00	135.00	135.00
Peak Gain Position (Phi)	105.00	105.00	105.00	105.00	240.00	240.00	195.00	195.00	210.00	195.00	225.00	225.00	225.00	210.00	210.00
Efficiency ThetaPol (%)	17.59	16.81	19.13	21.61	18.77	17.69	18.32	16.48	14.61	14.85	13.76	13.87	13.24	13.17	14.32
Efficiency PhiPol (%)	29.04	30.45	30.46	28.33	29.43	31.41	32.37	35.02	35.42	37.33	34.96	34.45	33.38	32.83	33.15
Upper Hem. Efficiency (%)	21.77	21.88	22.83	22.52	21.59	22.80	24.58	25.79	26.27	27.43	25.18	25.87	25.05	24.46	25.49
Lower Hem. Efficiency (%)	24.86	25.38	26.76	27.42	26.60	26.30	26.12	25.71	23.76	24.75	23.53	22.46	21.57	21.54	21.98

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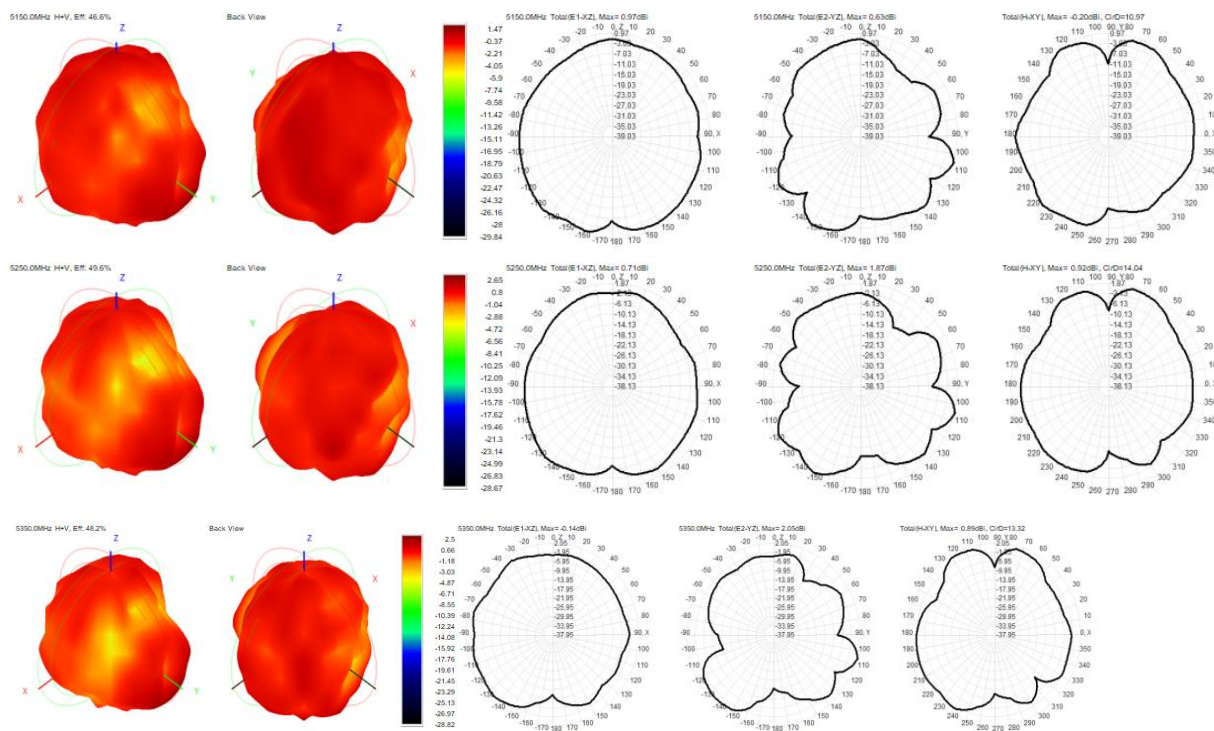
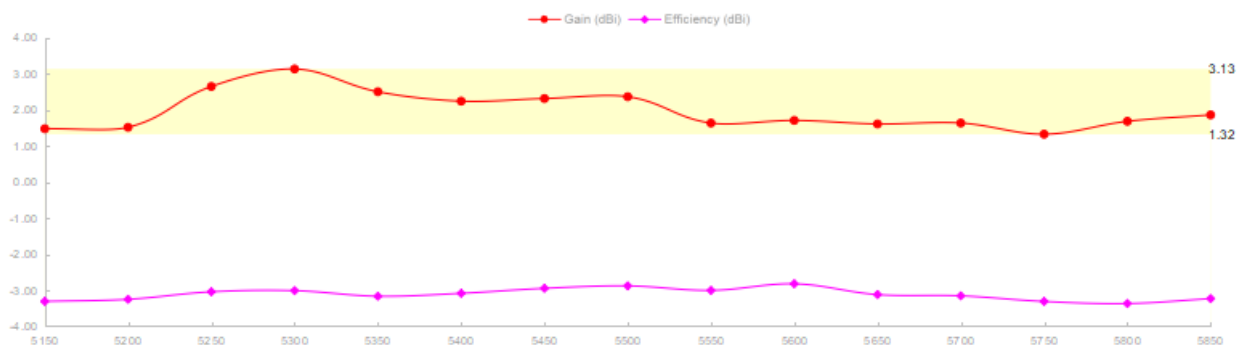
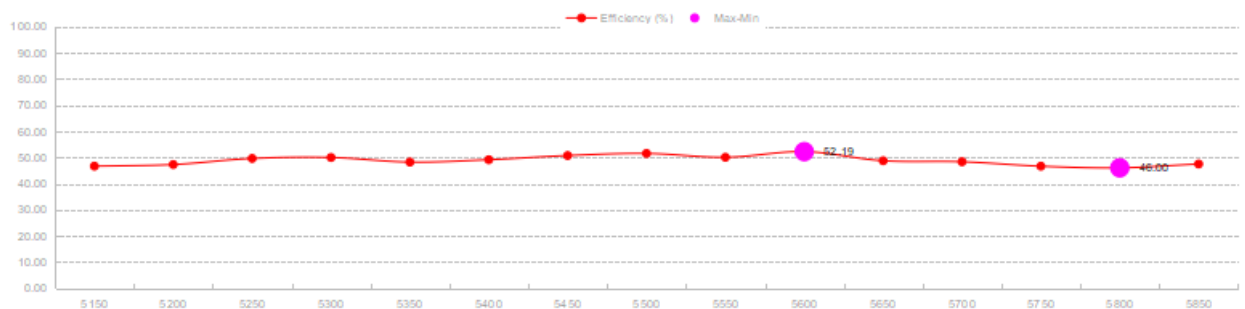
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