

# Shenzhen Qixin Hongze Technology Co., LTD

## 产品承认书

Product acknowledgement

产品 P/N: HDC-300

产品描述: 2.4~5.8GHz  
Product Description:

Black/female Pin

客 户: Guangzhou Langguo Electronic Technology Co., LTD

客户 P/N: \_\_\_\_\_

麒麟弘泽		
品保部	工程部	业务部
宋小丽	廖海兵	刘成兰

客户		
确认	审核	批准

结果:  接受  拒绝

意见:

# Product specification overview

## ●Electrical Performance:

1. Frequency Range: 2.4~5.8GHz
2. Impedance: 50 Ohms nominal
3. VSWR:  $\leq 1.92$
4. Gain: 5dBi
5. Connector Type: SMA Plug

## ●Mechanical properties:

1. Cable: RG178 cable,50 Ohm
2. Operation temperature range:  $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
3. Storage temperature range:  $-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$
4. Color:Black

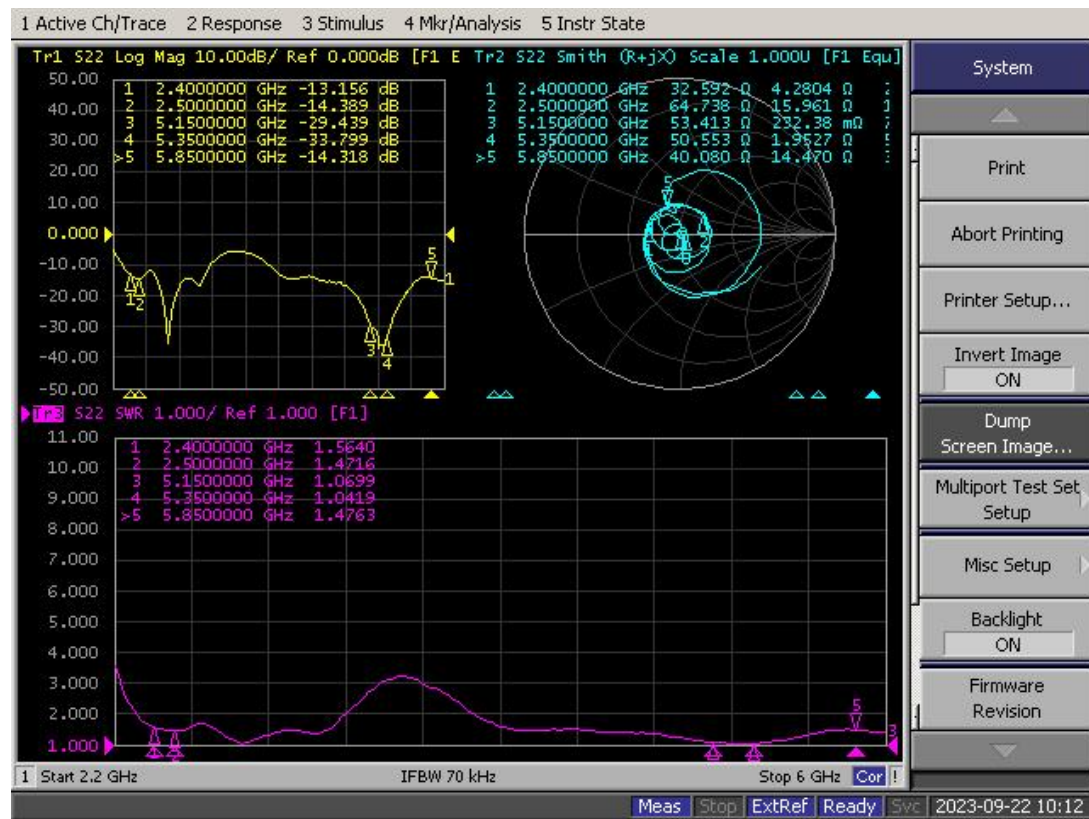
# Shenzhen Qixin Hongze Technology Co., LTD

## Network analyzer test diagram

料号:HDC-300

品名规格:2.4~2.5GHz /5.15~5.85GHz 5dBi  $\Phi$  13.0ANTENNA

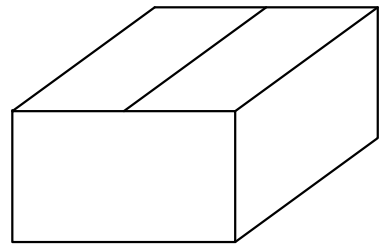
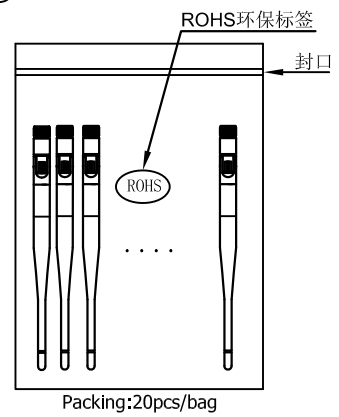
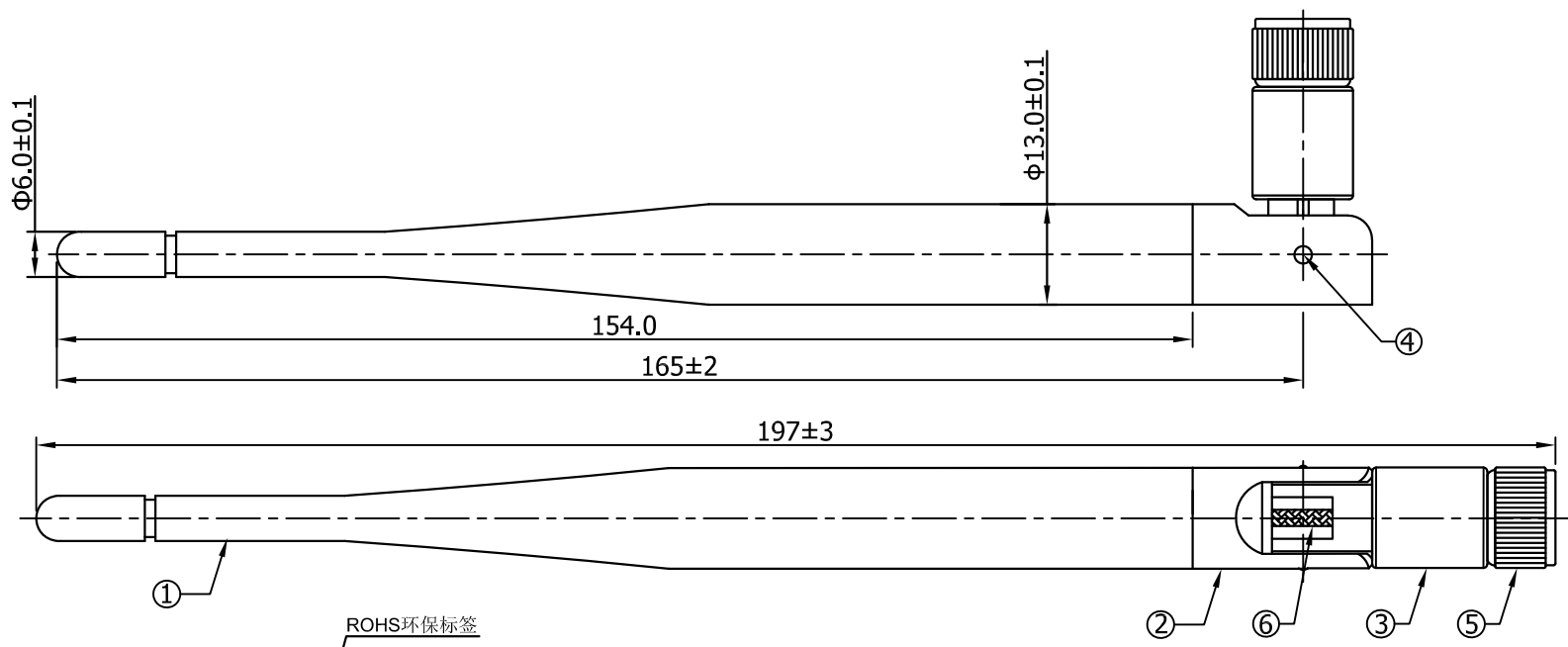
测试数值:Return Loss/VSWR



# 成品图

REV.	修订内容	修订时间
A	新版发行	2023.06.20
B	材质更改为无铅材质	2023.07.25

ROHS



- 1. 外箱需贴1PCS/ROHS标签于外箱标签上
- 2. 外箱需贴1PCS/外箱标签于外箱侧麦右上角

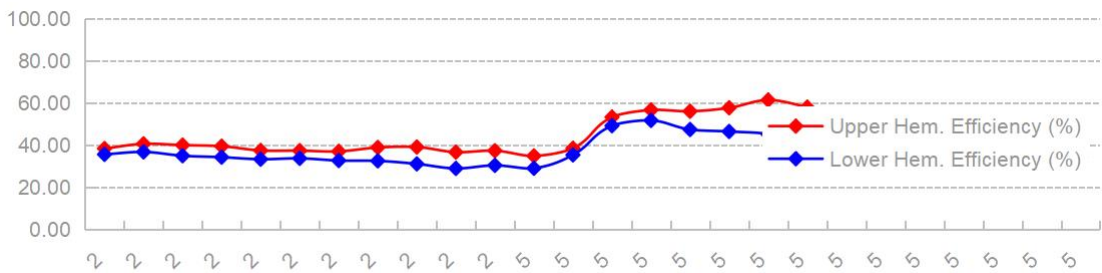
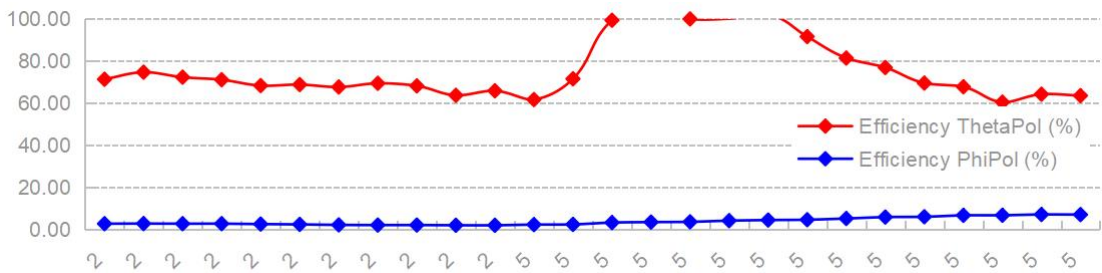
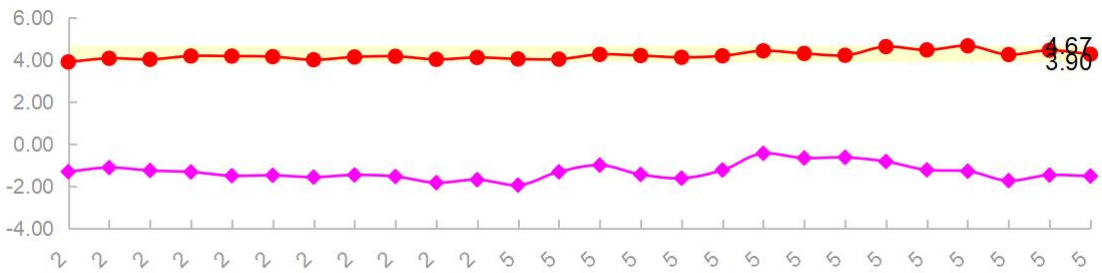
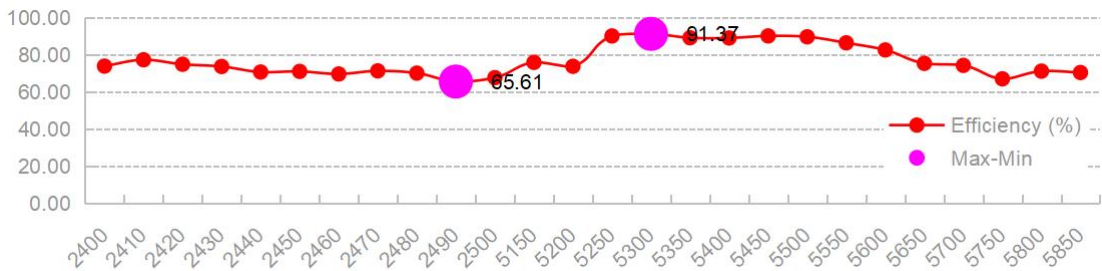
Specification:  
 Frequency Rang: 2.4GHz&5.85GHz  
 Return Loss: -10dB or less  
 VSWR: 1.92 Max  
 Gain: 5.0 dBi

NO	DESCRIPTION	Q'TY	REMARK
6	Cable	RG-178 Cable, Transparency Brown, 50Ω	1
5	Connector	SMA Straight Plug Reverse for RG-178	1
4	Rivet	PBT+PC, Color: Black	2
3	Bottom Base	PBT+PC, Color: Black	1
2	Upper Base	PBT+PC, Color: Black	1
1	Antenna Cap	TPEE, Color: Black	1

TITLE: 2.4G~5.8G 5dBi Antenna		深圳市麒新弘泽科技有限公司 ShenZhen Keesun Technology Co., Ltd					
P/N:							
CUSTOMER: HDC-300							
DRAW NO.:		APPROVED					
DIMENSIONS TOLERANCES UNLESS OTHERWISE NOTED							
一般公差 TOLERANCE		.XXX ±0.05	XX. ±1.0	SHEET: 1/1 SCALE: 1:1	CHECKED		
		.XX ±0.1					
		.X ±0.2		UNIT: mm	REV: A	DRAWN	JULIA
		X. ±0.5					

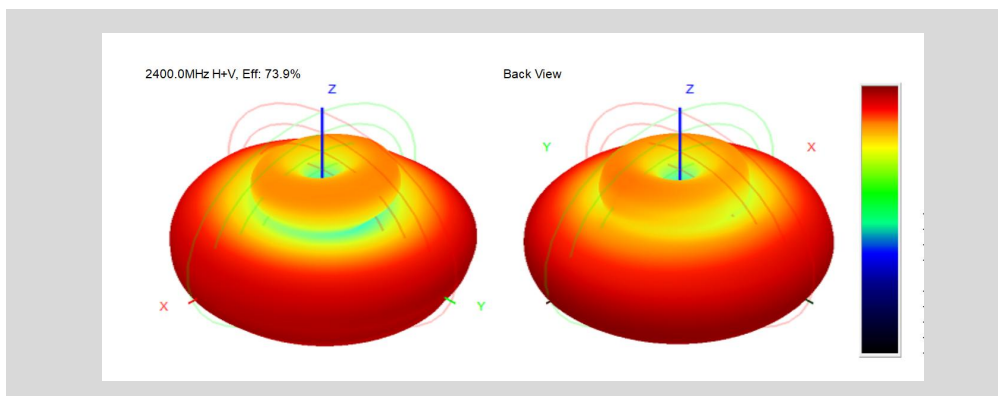
# Antenna Peak Gain&Efficiency

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500	2510	5200	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850	
Efficiency (dBi)	-1.31	-1.11	-1.25	-1.32	-1.50	-1.48	-1.57	-1.46	-1.54	-1.83	-1.69	-1.95	-1.32	-1.00	-1.44	-1.62	-1.23	-0.44	-0.66	-0.63	-0.83	-1.22	-1.29	-1.73	-1.47	-1.52
Gain (dBi)	3.90	4.08	4.03	4.19	4.19	4.16	4.01	4.34	4.17	4.03	4.12	4.05	4.04	4.26	4.21	4.12	4.20	4.43	4.31	4.22	4.63	4.48	4.57	4.26	4.46	4.27
Efficiency (%)	73.95	77.38	74.95	73.75	70.77	71.10	69.71	71.39	70.18	65.61	67.74	75.98	73.85	90.23	91.37	89.25	89.14	90.25	89.78	86.51	82.68	75.44	74.35	67.69	71.25	70.51
Directivity (dB)	5.21	5.19	5.28	5.51	5.69	5.64	5.58	5.60	5.71	5.86	5.81	5.99	5.36	5.26	5.65	5.74	5.43	4.87	4.97	4.85	5.46	5.70	5.96	5.99	5.93	5.79
Peak Gain Position (Theta)	89.00	88.00	88.00	89.00	88.00	89.00	89.00	88.00	89.00	88.00	89.00	89.00	37.00	38.00	39.00	103.00	103.00	104.00	96.00	96.00	96.00	97.00	98.00	98.00	98.00	99.00
Peak Gain Position (Phi)	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	90.00	90.00	90.00	90.00	90.00	180.00	180.00	180.00	90.00	180.00	180.00	180.00	180.00	
Efficiency ThetaPol (%)	71.28	74.65	72.28	71.07	68.28	68.76	67.61	69.37	68.15	63.68	65.82	61.65	71.51	99.33	105.01	99.95	100.10	102.19	91.56	81.37	76.87	69.48	67.71	60.42	64.19	63.51
Efficiency PhiPol (%)	2.67	2.72	2.67	2.68	2.49	2.34	2.10	2.02	1.93	1.92	2.25	2.34	3.20	3.44	3.56	4.11	4.40	4.56	5.14	5.81	5.97	6.64	6.68	7.05	6.99	
Upper Hem. Efficiency (%)	38.34	40.61	40.00	39.47	37.46	37.39	37.03	38.87	39.09	36.68	37.35	34.88	38.50	53.31	56.71	56.08	57.73	61.42	58.04	53.57	52.38	47.07	44.53	38.37	38.65	36.17
Lower Hem. Efficiency (%)	35.60	36.77	34.95	34.27	33.30	33.72	32.68	32.51	31.09	28.93	30.39	29.01	35.36	49.23	51.74	47.42	46.48	45.17	38.07	32.95	30.30	28.38	29.81	28.72	32.60	34.34
T90(H)角度	1.55	1.47	1.50	1.59	1.67	1.66	1.67	1.58	1.62	1.67	1.72	1.50	1.62	1.51	1.53	1.82	1.68	1.26	1.33	1.36	1.57	1.55	2.11	3.21	3.83	3.52
Gain 1.5deg (dBi)	29.00	28.00	27.00	27.00	26.00	26.00	27.00	26.00	26.00	25.00	25.00	21.00	20.00	14.00	14.00	20.00	18.00	16.00	13.00	12.00	11.00	11.00	11.00	11.00	11.00	
E1(XZ)波束宽度	7.17	7.21	7.39	7.54	7.55	7.26	7.09	7.17	7.42	7.52	7.25	2.82	2.86	3.29	3.33	4.36	5.59	6.67	7.85	8.77	9.19	8.03	7.38	6.85	6.65	6.24
E2(YZ)波束宽度	36.00	37.00	36.00	34.00	32.00	32.00	35.00	37.00	36.00	36.00	36.00	13.00	13.00	24.00	15.00	15.00	15.00	18.00	22.00	16.00	15.00	14.00	16.00	15.00	15.00	
E2(YZ)轴心比	0.02	7.88	8.17	8.54	8.75	8.60	8.21	8.08	8.41	8.63	8.38	2.82	2.99	3.34	3.80	4.50	5.59	6.17	7.09	8.07	7.90	6.10	4.89	4.03	3.05	2.09
最大增益轴输出(P)	16.59	15.37	18.79	36.26	18.55	16.57	48.49	35.50	16.65	10.52	9.94	44.32	24.75	13.95	15.58	12.86	14.45	27.83	23.13	17.80	13.35	10.21	15.47	10.12	16.04	15.18
Theta(Theta=0)轴输出(P)	3.19	1.16	1.74	3.19	5.68	6.43	7.04	7.71	8.48	8.79	9.67	14.59	10.39	9.92	9.23	10.16	10.36	18.86	10.45	8.74	13.15	17.76	5.72	1.90	3.32	5.88
Theta(Theta=0)轴输出(P)	47.92	56.94	55.00	46.92	50.29	69.04	49.51	64.21	69.00	67.63	65.01	62.76	64.40	55.26	71.97	59.01	86.09	69.11	59.11	68.98	50.63	54.94	55.83	47.01	49.57	49.12
Hc(XY)轴心比	0.52	0.54	0.58	0.61	0.63	0.66	0.67	0.70	0.76	0.75	0.74	1.00	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
左旋圆极化效率(%)	39.76	42.28	41.09	40.26	38.66	39.07	38.23	38.82	37.98	35.53	36.80	34.25	38.54	53.21	55.83	52.92	51.70	52.86	49.49	46.53	44.65	40.18	39.49	35.54	37.06	35.76
右旋圆极化效率(%)	34.10	35.10	33.87	33.49	32.11	32.03	31.48	32.57	32.20	30.08	30.93	29.64	35.31	49.53	52.61	50.99	52.51	53.73	46.63	39.98	38.03	35.26	34.65	31.56	34.19	34.74

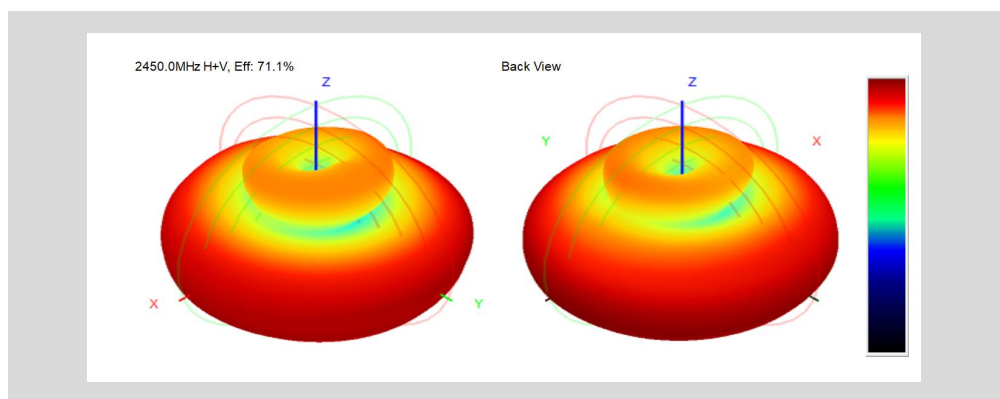


# 3D 图 (2.4~2.5MHz&5.15~5.85MHz)

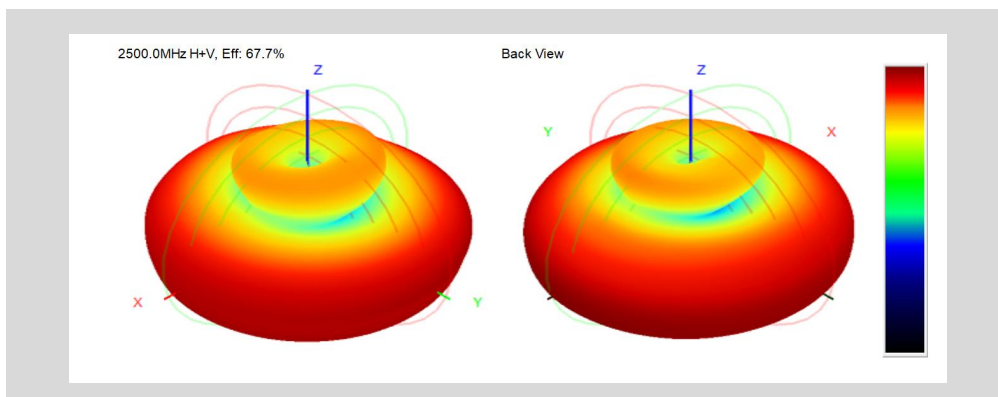
## 2400MHz



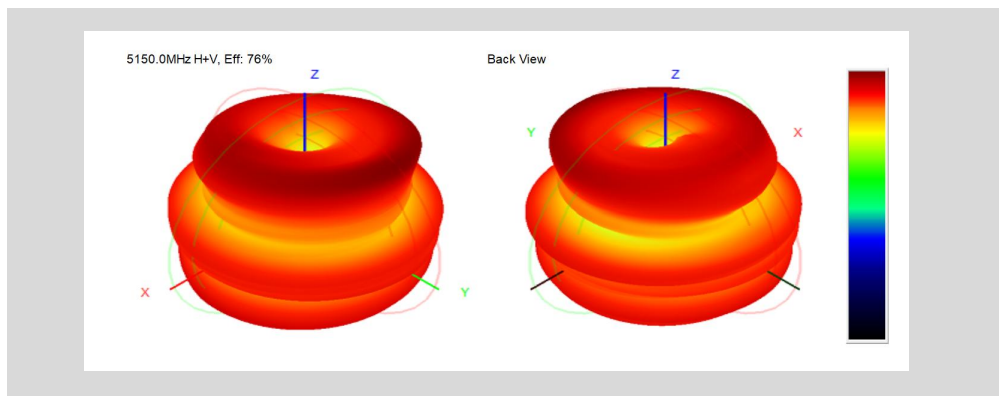
## 2450MHz



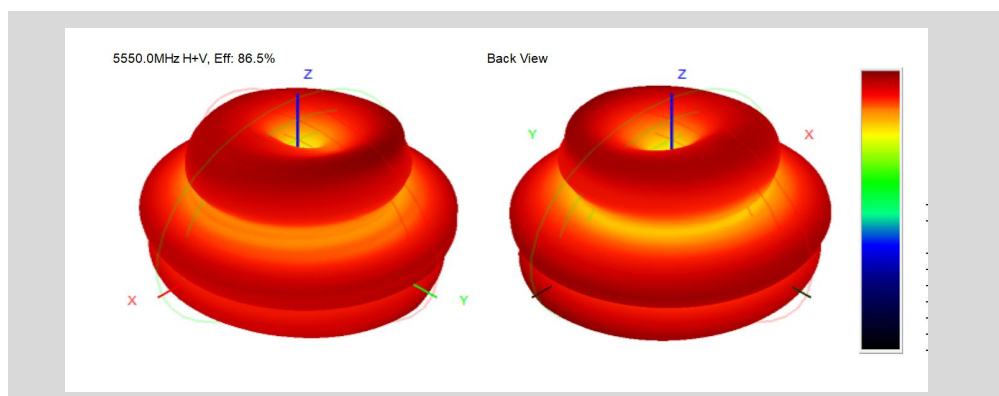
## 2500MHz



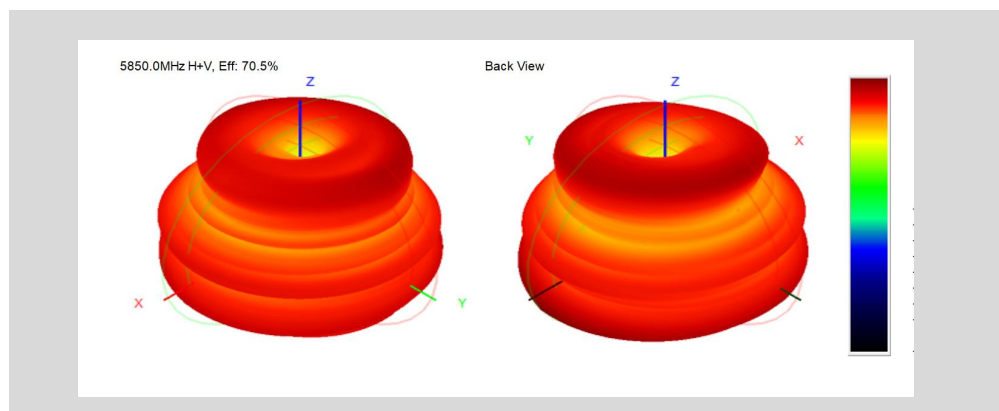
### 5150MHz



### 5550MHz



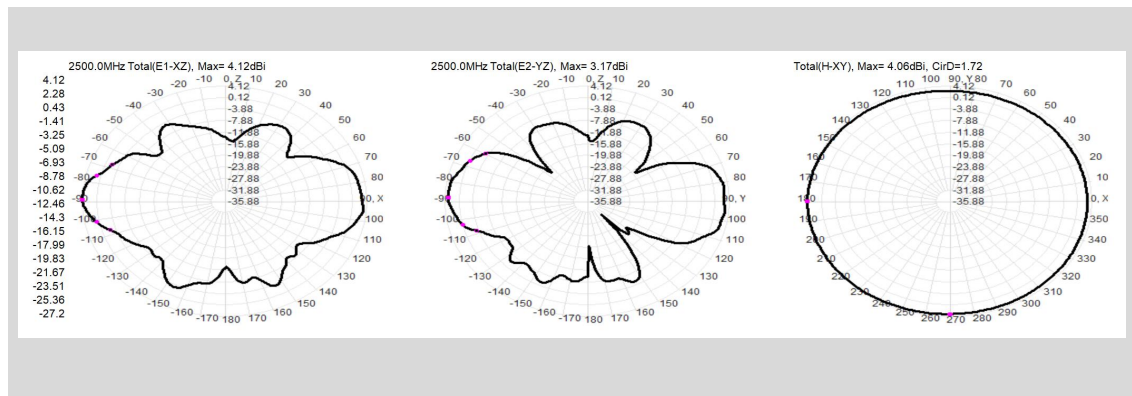
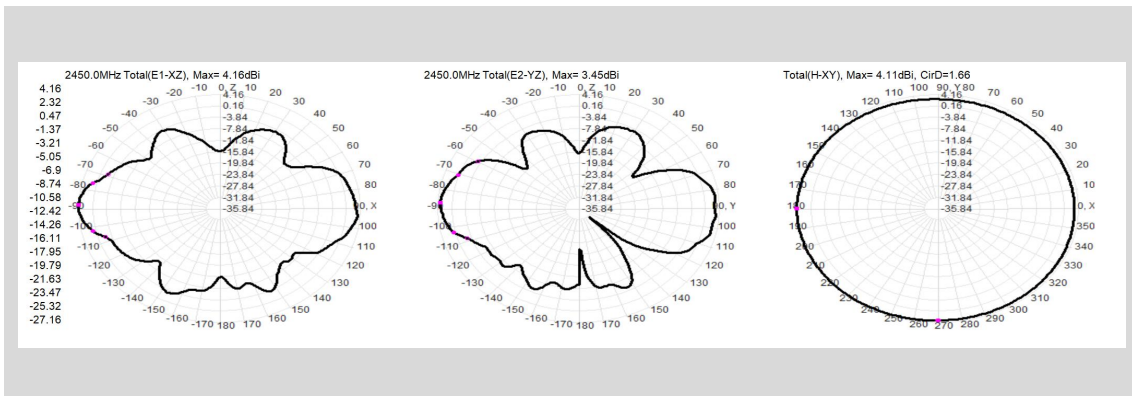
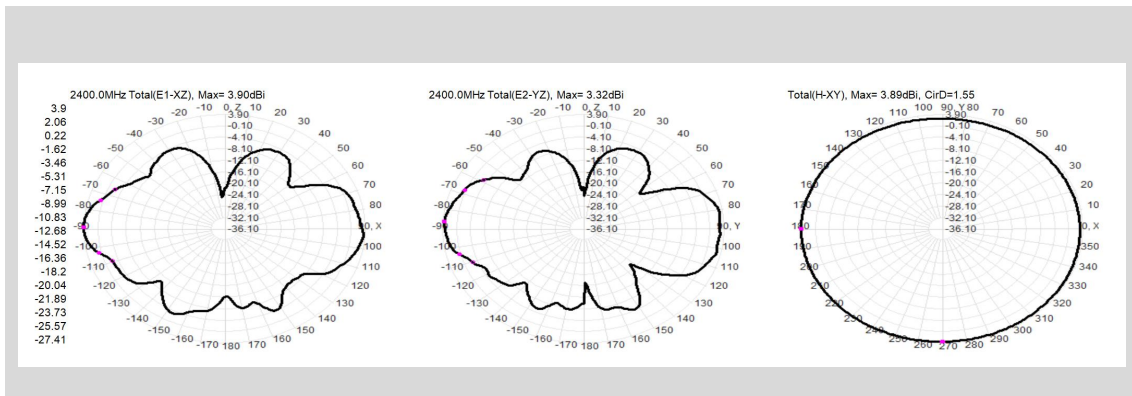
### 5850MHz





# 2D 图 (2.4~2.5MHz&5.15~5.85MHz)

## 1.1 2D (2.4G#1)





# 1.2 2D (5.8G#1)

