



东莞市超威电子有限公司
Chaowei Electronics CO.,LTD

规格书

客 户：
品 名：2.4/5.8G WIFI Antenna
料 号：CW-TG2458G48-113IPEX80B
客户料号：
送样日期：2023.07.25

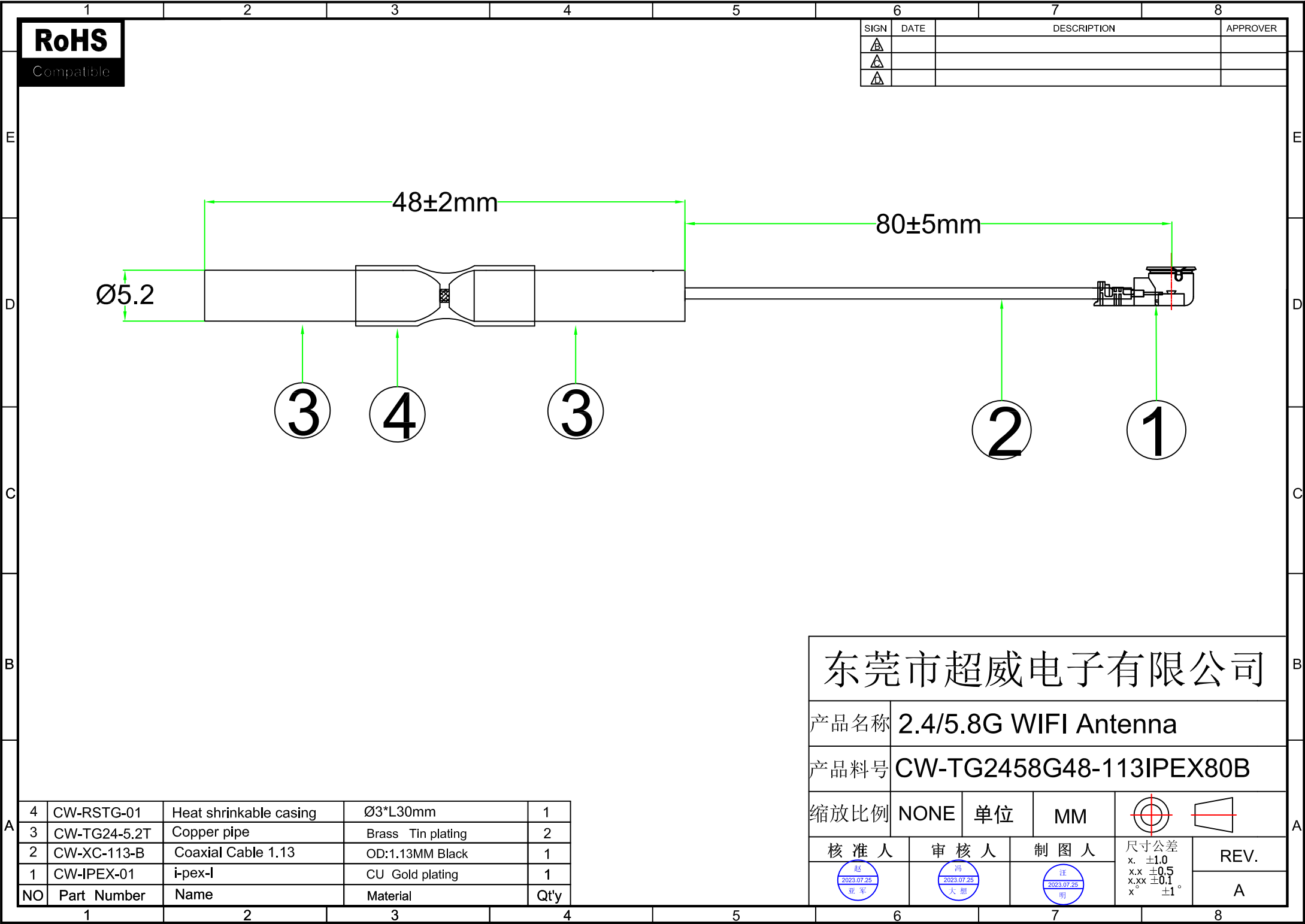
客户确认			供应厂商	
工程部	品保部	采购部	核准	送样人
			赵 2023.07.25 亚 军	梁泳婷

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RoHS

Compatible

SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			

4	CW-RSTG-01	Heat shrinkable casing	Ø3*L30mm	1
3	CW-TG24-5.2T	Copper pipe	Brass Tin plating	2
2	CW-XC-113-B	Coaxial Cable 1.13	OD:1.13MM Black	1
1	CW-IPEX-01	i-pex-l	CU Gold plating	1
NO	Part Number	Name	Material	Qt'y

东莞市超威电子有限公司

产品名称	2.4/5.8G WIFI Antenna			
产品料号	CW-TG2458G48-113IPEX80B			
缩放比例	NONE	单位	MM	
核准人	审核人	制图人	尺寸公差 x. ±1.0 x.x ±0.5 x.xx ±0.1 x° ±1°	REV.
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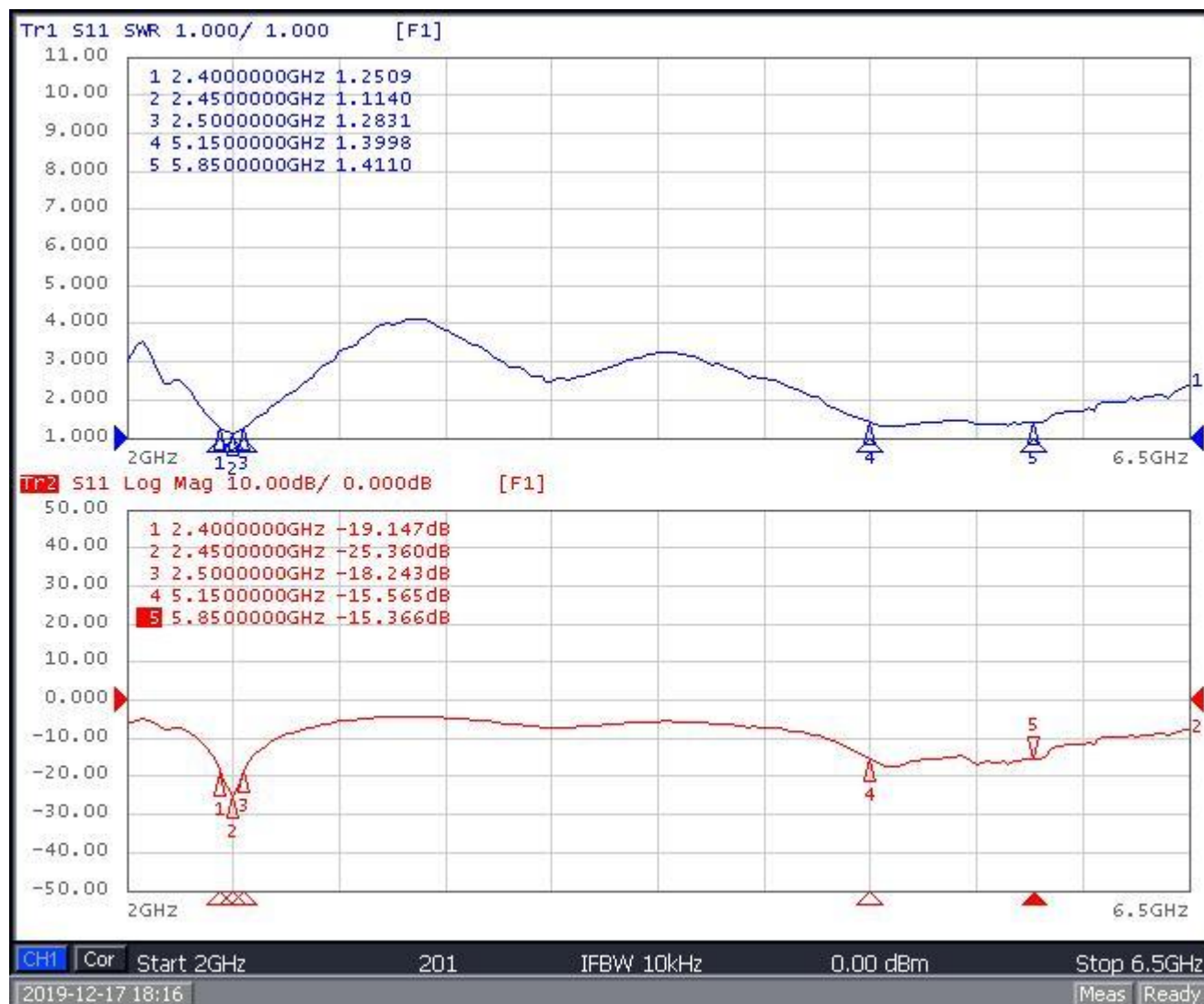
1. Reliability Testing

Test Item	Procedure	Requirement
1. Visual inspection and Dimension Check	Applicable methods using x5 magnification	follow specification
2. Rapid Changing of Temperature	-40°C (30minutes) to 80°C (30minutes); 24 cycles	After 2 hours recovery: 1. no visible damage 2. bandwidth tolerance < ±5%
3. Damp Heat	24 hours at 60°C; 90 ~ 95% RH	After 2 hours recovery: 1. no visible damage 2. bandwidth tolerance < ±5%
4. Endurance	24 hours at 80°C	After 2 hours recovery: 1. no visible damage 2. bandwidth tolerance < ±5%
5. Connector Pull Strength Test	>= 1.0 Kg	Hold 2~3S: 1. no visible damage 2. bandwidth tolerance < ±5%

2. Specification

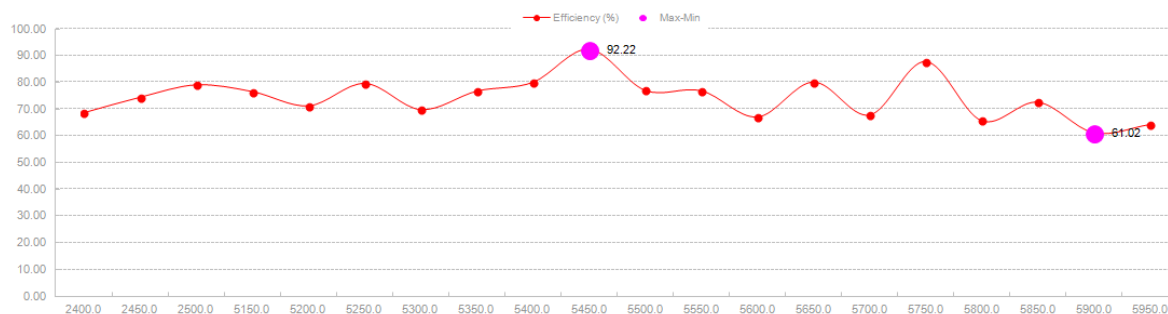
GPS Antenna	
4G Antenna	
Working Frequency	2.4G(2400-2500MHz) 5G(5150-5850MHz)
VS.W.R	<2.0
Gain	4dBi
Polarization	Vertical
Impedance	50 Ohm
Marerial of Plastic	Brass
Connector Type	I-PEX

3. S.W.R. Testing Result

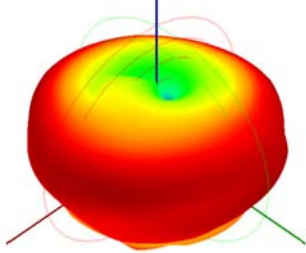


4. Antenna Radiation Pattern

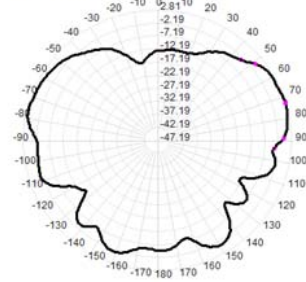
Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Frequency (MHz)	2400.0	2450.0	2500.0	5150.0	5200.0	5250.0	5300.0	5350.0	5400.0	5450.0	5500.0	5550.0	5600.0	5650.0	5700.0	5750.0	5800.0	5850.0	5900.0	5950.0
Efficiency (dBi)	-1.64	-1.29	-1.03	-1.17	-1.48	-1.00	-1.57	-1.16	-0.98	-0.35	-1.14	-1.15	-1.74	-0.97	-1.70	-0.57	-1.84	-1.40	-2.15	-1.93
Gain (dBi)	2.81	3.67	3.06	3.11	2.43	3.13	2.93	2.54	3.29	3.88	3.34	2.75	1.99	3.28	2.46	3.42	2.26	2.52	2.20	3.11
Efficiency (%)	68.56	74.33	78.94	76.39	71.09	79.46	69.68	76.58	79.88	92.22	76.86	76.72	66.93	79.98	67.67	87.64	65.53	72.45	61.02	64.10
Directivity (dB)	4.45	4.96	4.09	4.27	3.91	4.13	4.50	3.70	4.27	4.23	4.48	3.90	3.73	4.25	4.15	3.99	4.09	3.92	4.34	5.04
Peak Gain Position (Theta)	112.00	110.00	108.00	110.00	110.00	107.00	108.00	107.00	104.00	106.00	101.00	106.00	106.00	104.00	105.00	102.00	102.00	132.00	22.00	22.00
Peak Gain Position (Phi)	90.00	90.00	90.00	180.00	180.00	360.00	180.00	180.00	360.00	180.00	30.00	360.00	300.00	360.00	300.00	360.00	360.00	270.00	150.00	150.00
Efficiency ThetaPol (%)	61.18	68.55	74.54	74.58	69.57	77.76	68.41	74.53	77.32	89.74	74.45	74.41	64.24	76.55	64.35	82.88	61.42	68.02	56.11	59.74
Efficiency PhiPol (%)	7.38	5.78	4.40	1.81	1.52	1.70	1.27	2.05	2.56	2.47	2.41	2.32	2.68	3.43	3.32	4.76	4.11	4.42	4.91	4.37
Upper Hem. Efficiency (%)	21.64	24.49	26.29	25.48	24.47	27.30	24.25	26.76	26.77	29.11	22.88	21.76	17.93	19.79	16.68	19.96	14.62	16.70	14.27	16.58
Lower Hem. Efficiency (%)	46.92	49.84	52.65	50.92	46.62	52.15	45.42	49.82	53.12	63.10	53.97	54.96	48.99	60.19	50.99	67.68	50.91	55.74	46.75	47.52
Eff 15deg (dBi)																				
Gain 15deg (dBi)																				
Eff 15deg (%)																				
Eff 30deg (dBi)																				
Gain 30deg (dBi)																				
Eff 30deg (%)																				
Empty																				



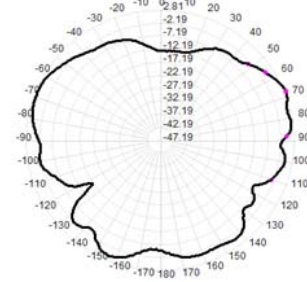
2400.0MHz H+V, Eff: 88.6%



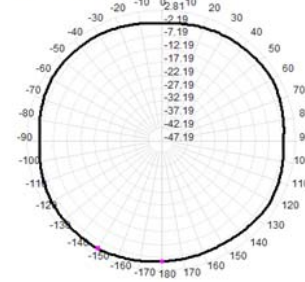
2400.0MHz Total(E1), Max= 2.50dBi



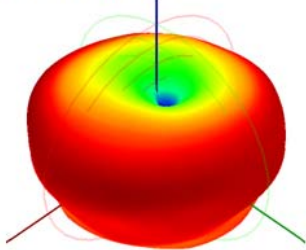
2400.0MHz Total(E2), Max= 2.81dBi



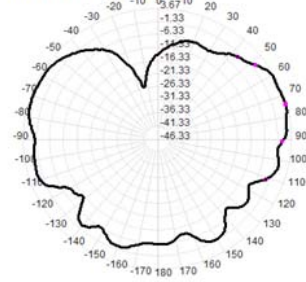
2400.0MHz Total(H), Max= 0.34dBi



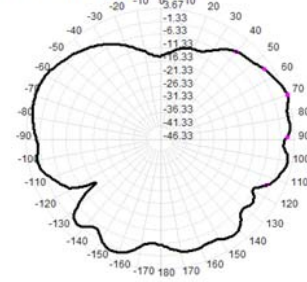
2450.0MHz H+V, Eff: 74.3%



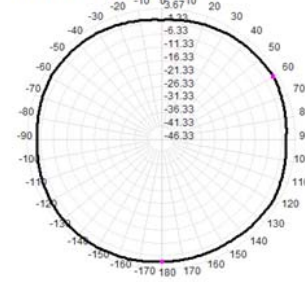
2450.0MHz Total(E1), Max= 3.09dBi



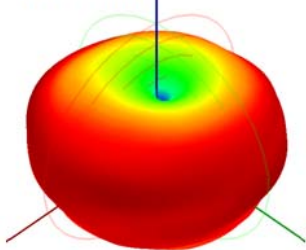
2450.0MHz Total(E2), Max= 3.67dBi



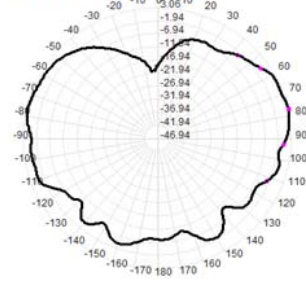
2450.0MHz Total(H), Max= 1.57dBi



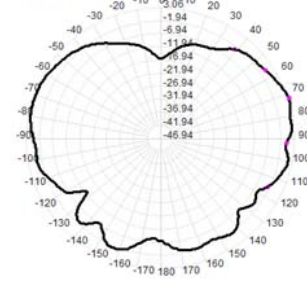
2500.0MHz H+V, Eff: 78.9%



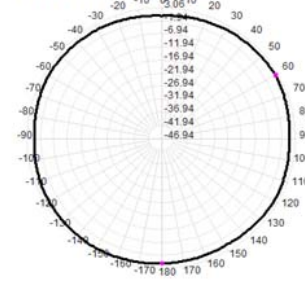
2500.0MHz Total(E1), Max= 2.89dBi



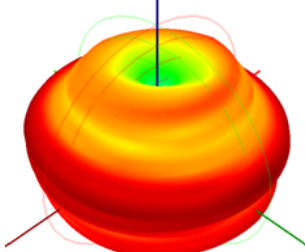
2500.0MHz Total(E2), Max= 3.06dBi



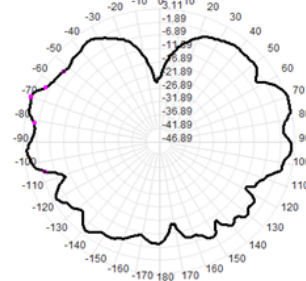
2500.0MHz Total(H), Max= 1.78dBi



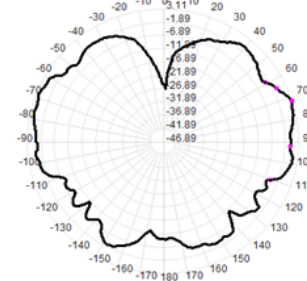
5150.0MHz H+V, Eff: 76.4%



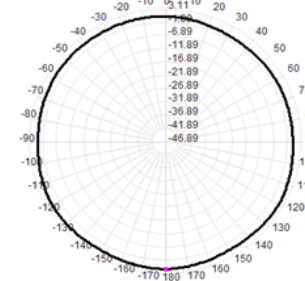
5150.0MHz Total(E1), Max= 3.11dBi



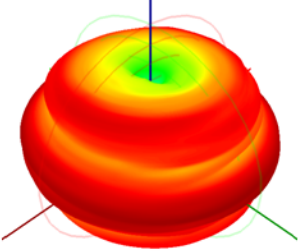
5150.0MHz Total(E2), Max= 2.51dBi



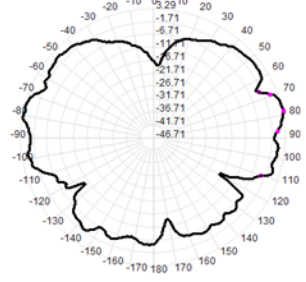
5150.0MHz Total(H), Max= 1.11dBi



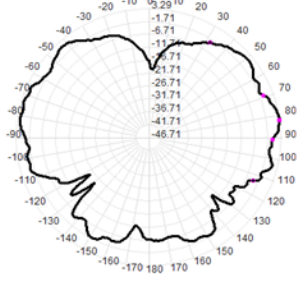
5500.0MHz H+V, Eff: 76.9%



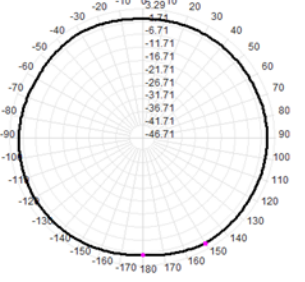
5500.0MHz Total(E1), Max= 3.29dBi



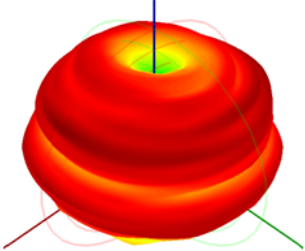
5500.0MHz Total(E2), Max= 2.81dBi



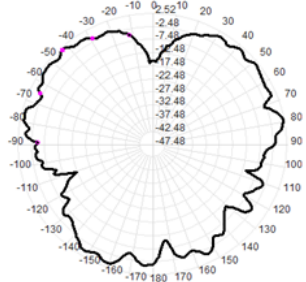
5500.0MHz Total(H), Max= 0.55dBi



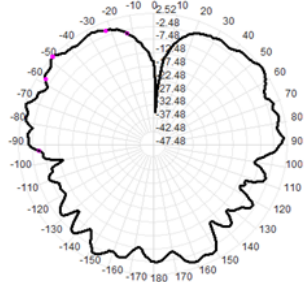
5850.0MHz H+V, Eff: 72.4%



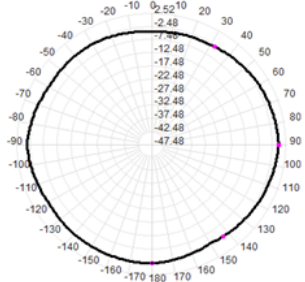
5850.0MHz Total(E1), Max= 1.77dBi



5850.0MHz Total(E2), Max= 2.52dBi



5850.0MHz Total(H), Max= -0.50dBi



5. Testing Equipment Specification:

Antenna Anechoic Chamber Dimension: 7x3 x3 m

Quiet Zone: 600mm @1 GHz

Isolation: >100dB @ 1 MHz ~ 10 GHz

Testing Equipment: Agilent E5071C

Received Antenna: 0.4 ~ 6.0 GHz for Gain Calibration

Double Ridged Horn Antenna

