

DONGGUAN CITY SLEING INTELLIGENCE TECHNOLOGY CO.,LTD

SPECIFICATION FOR APPROVAL

CUSTOMER: _____

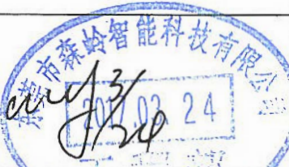
CUSTOMER NO: T8911C 琛玛壳

SUPPLIER NO: SLB-209300145-C01

送样日期Date: 2017.03.24

版本Revision: X2

客户确认 CUSTOMER APPROVED BY		
APPROVAL	CHIEF	SUPERVISOR

供方确认 SUPPLIER SIGNATURE		
APPROVAL	CHECK	DESIGN
		 

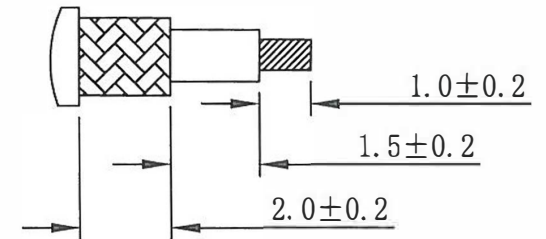
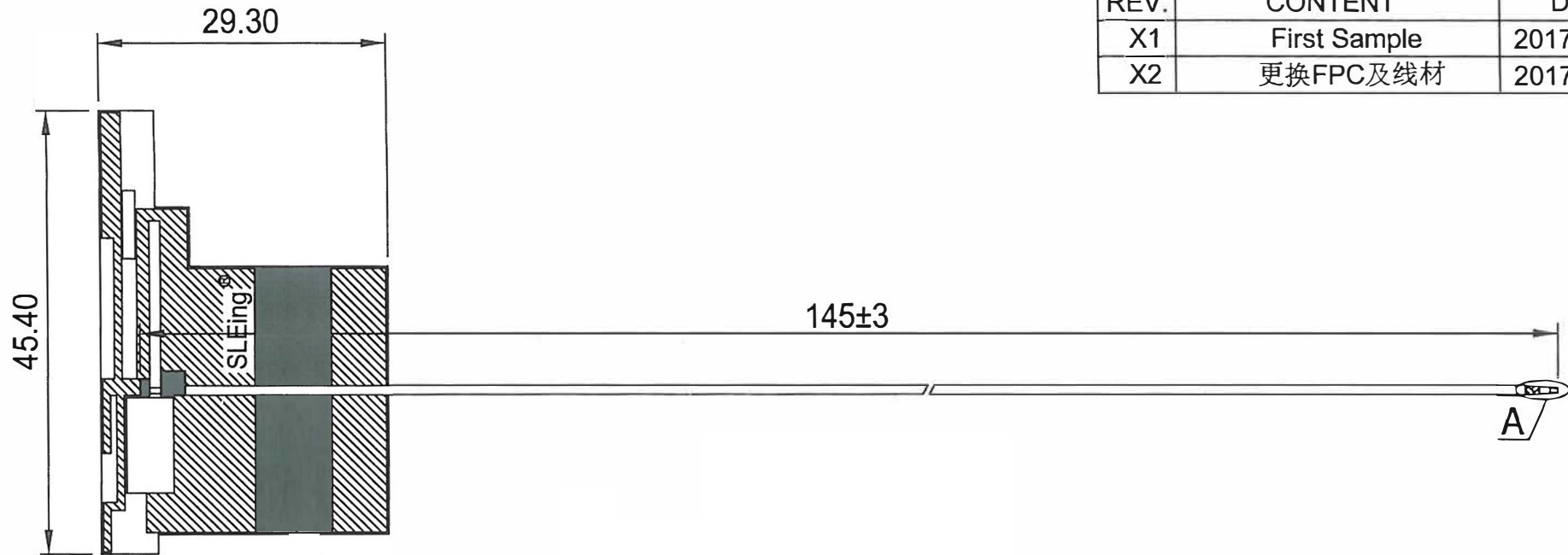
DONGGUAN CITY SLEING INTELLIGENCE TECHNOLOGY CO.,LTD

电话：0769-89208968 传真：0769-89208969

承认书项目表

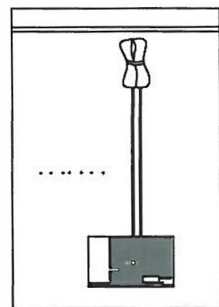
NO.	内容（Contents）	页数 （Number of Page）	页码 （Page Code）
1	承认书封面（Spec Cover）	1	1
2	承认书项目表（Spec Item ）	1	2
3	工程成品图（Drawing）	1	3
4	电性测试报告（Test Reports ）	1	4
5	天线安装图(Antenna Install)	1	5
6	S参数测试（S Parameter）	1	6
7	测试设备（ Test Equipment）	1	7
8	方向图(Patten)	3	8~10
9	测试效率（Test Efficiency）	1	11
10	样品检验记录（Sample inspection）	1	12
11	材质证明（Material Certificate）	3	13~15

REV.	CONTENT	DATE
X1	First Sample	2017.03.15
X2	更换FPC及线材	2017.03.24

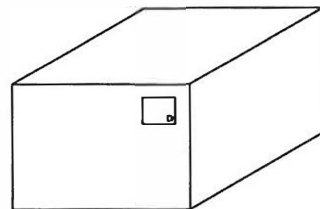


SECTION A
SCALE 5:1

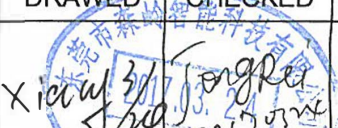
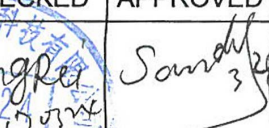
Specification:
Frequency Rang:2.4-2.5/5.15-5.85GHz(带机测试)
Return Loss:-10 dB Max
VSWR:<= 1.92



25pcs/Bundle
Packing:50pcs/bag



外箱须贴GP标签与物料标签各1PCS

SLEing® 森岭 东莞市森岭智能科技有限公司 DONGGUAN SLEing INTEL-TECH CO.,LTD	CUSTOMER	
	PART NO	
	TITLE	
	S.L P/NO	
 TOLERANCE UNLESS OTHERWISE SPECIFIED	SIZE	DRAWN
	CHECKED	APPROVED
		
		

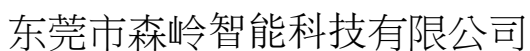
Q'TY	REMARK	DESCRIPTION	PART NAME
1	300MP Adhesive	L45.4*W29.3*T0.1mm Black	FPCB
1		Φ0.81mm Coaxial Cable Black,50Ω	Cable

Electrical Properties

Frequency	1.57542GHz/2.4~2.5/5.15~5.8G Hz(带机测试)
Impedance	50 Ohm Nominal
V.S.W.R	≤1.92
Return Loss	-10 dB Max
Radiation	Omni-directional
Gain (Peak)	2±0.5 dBi
Polarization	Linear, Vertical
Admitted Power	2 W
Connector	Tin

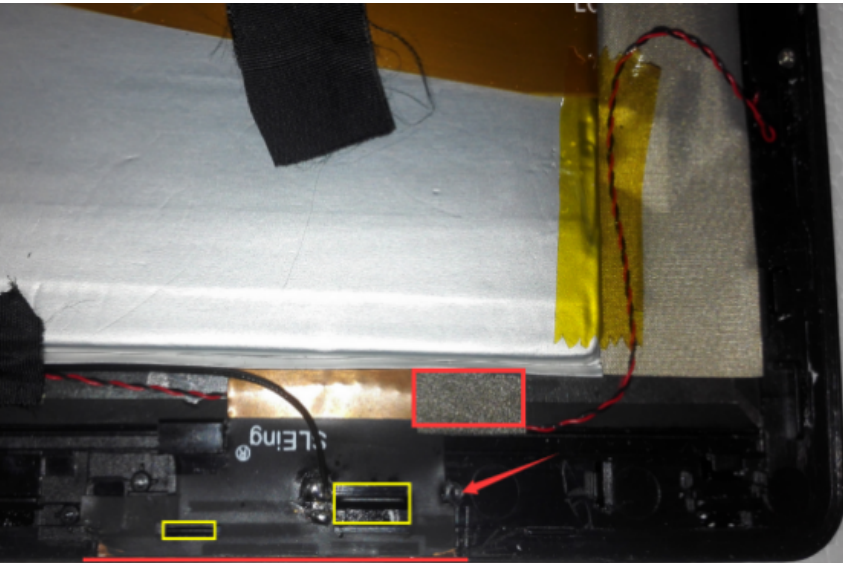
Physical Properties

Antenna Material	FPCB
Cable Type	Φ1.13mm Gray
Operating Temp.	-40~+85 °C
Storage Temp.	-40~+85 °C



天线组装图

Antenna Profile

<i>Devie</i>	
<i>Antenna</i>	

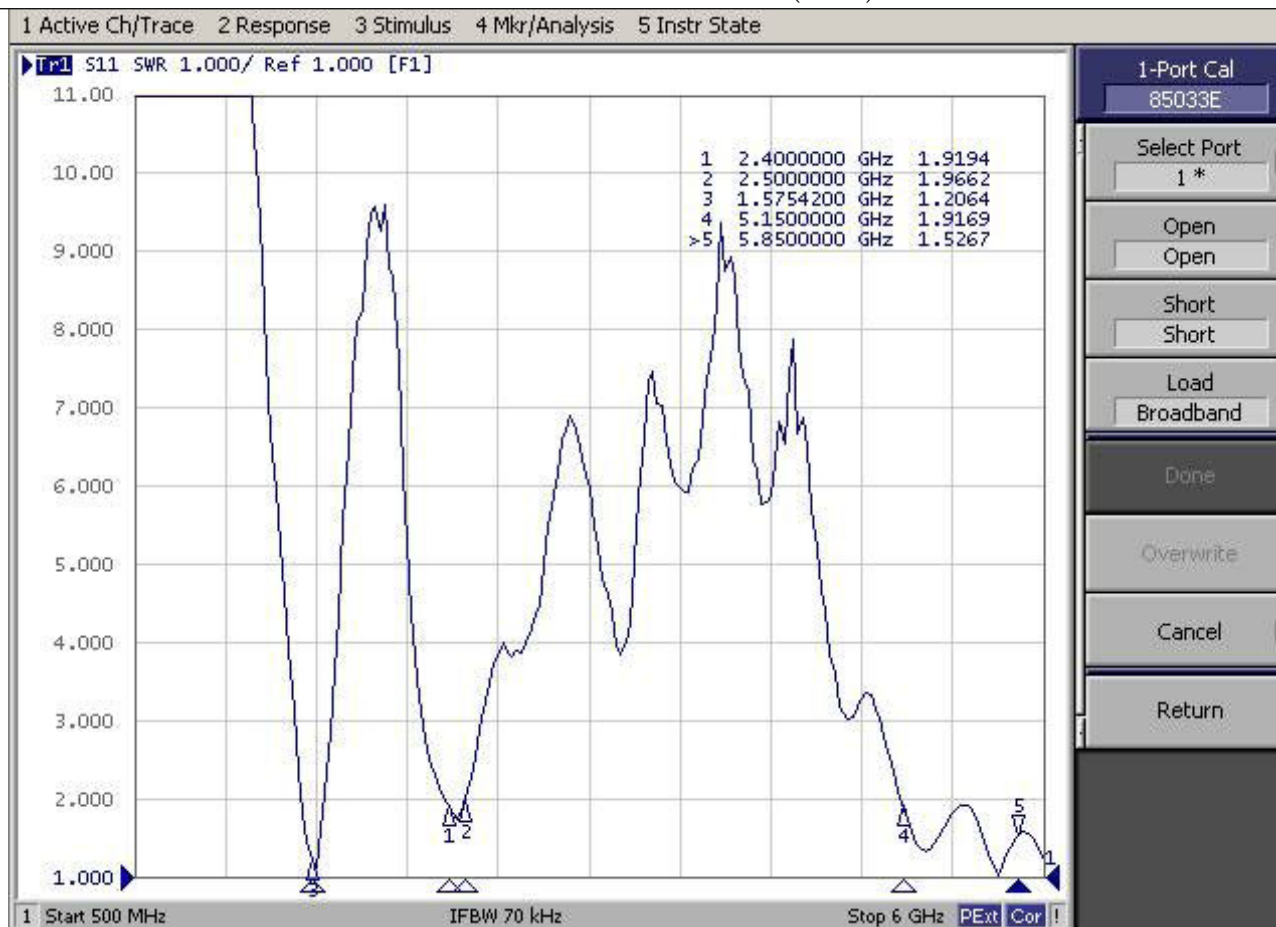
S 参数测试

S ParameterTest

Agilent E5071C Network Analyzer

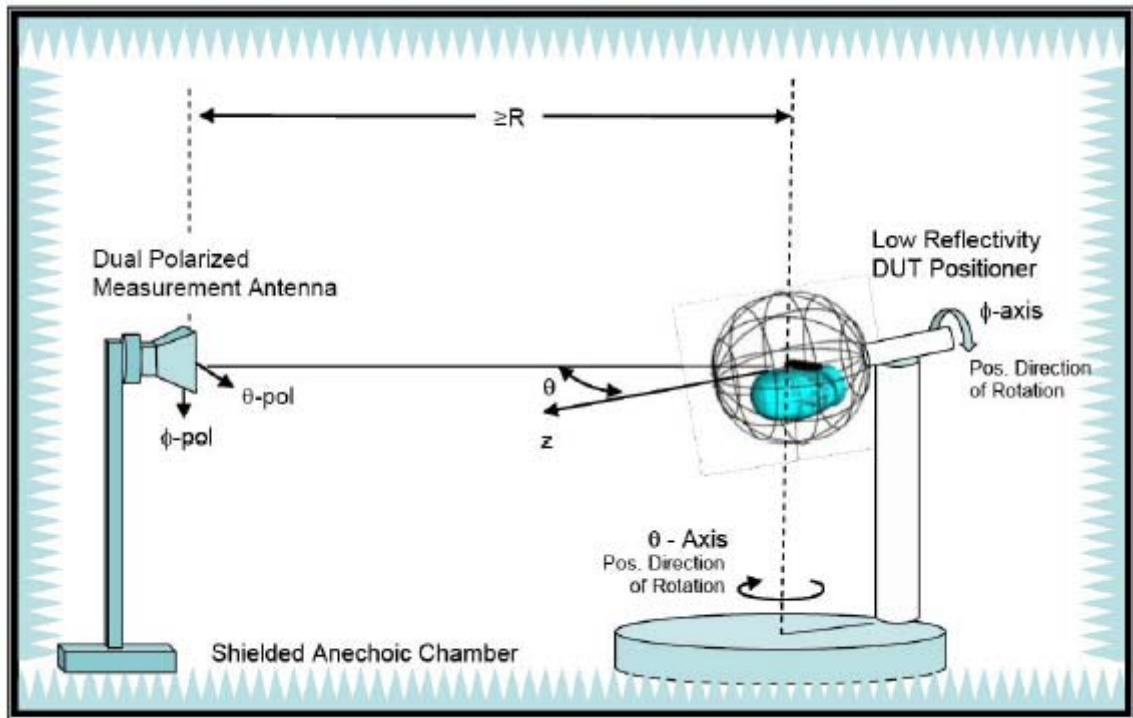
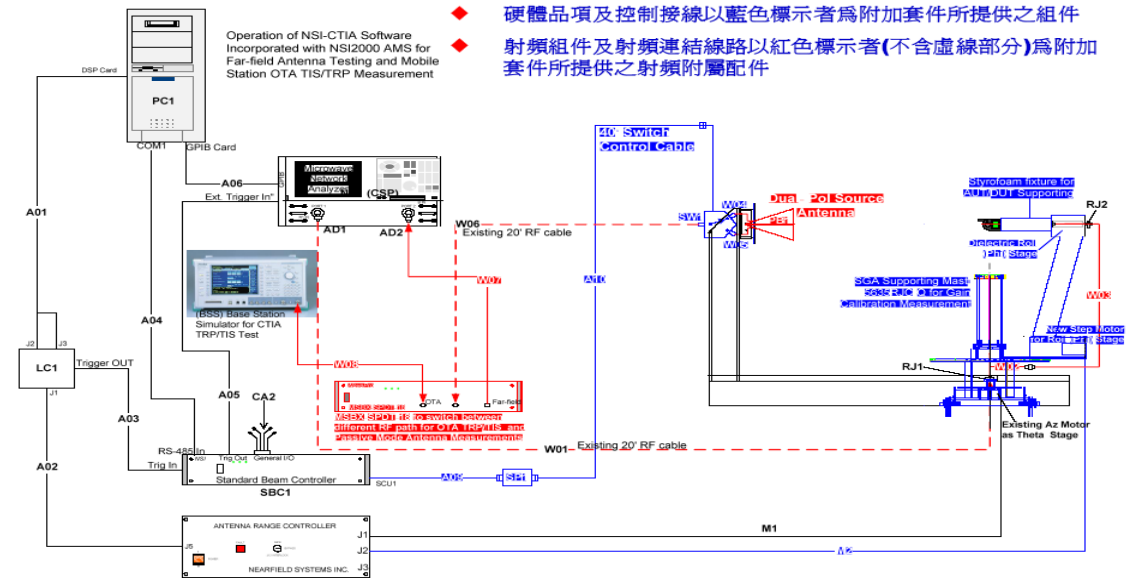


WiFi+BT+GPS Antenna (NO.1)



测试设备 Test Setup

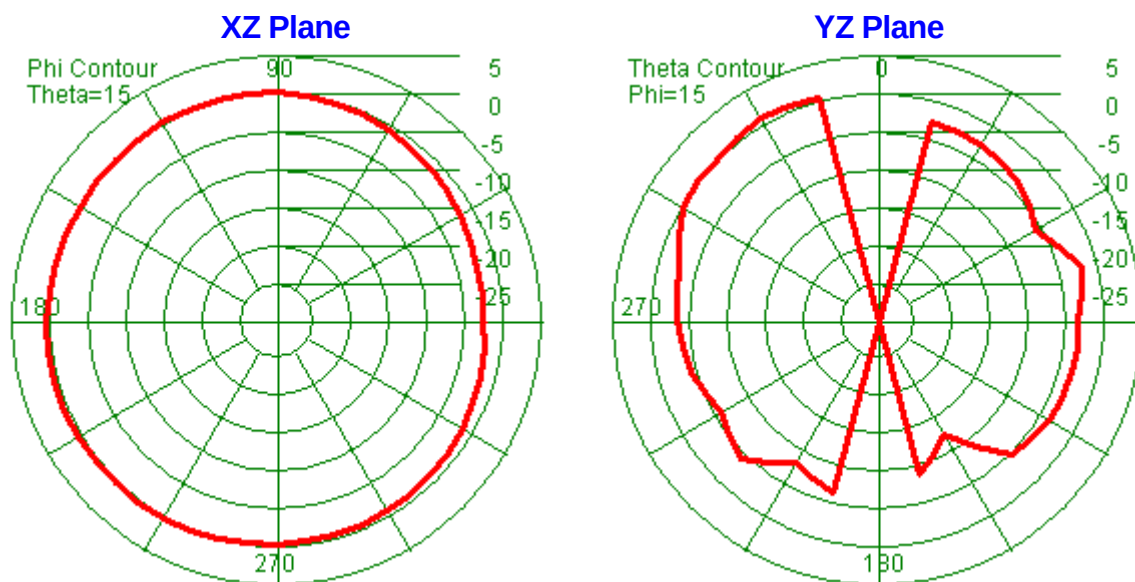
NFC-500S 3D Chamber Coordinate System Definition



Configuration of 3D Chamber

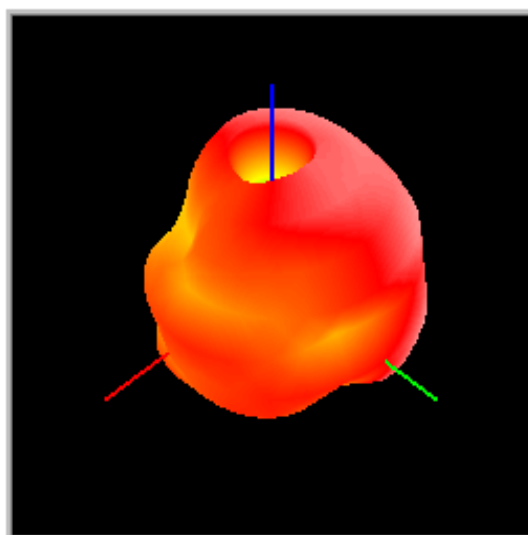
方向图（2.4G） Patten

1.3 2D Radiation patterns test results (Passive Antenna)



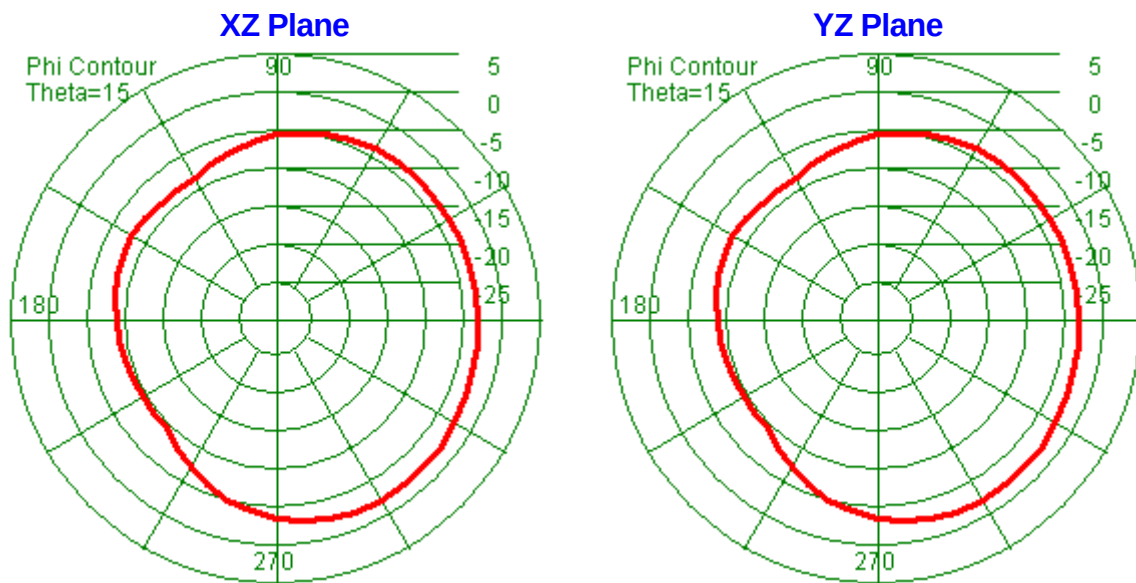
1.5 3D Radiation patterns test results (Passive Antenna)

3D



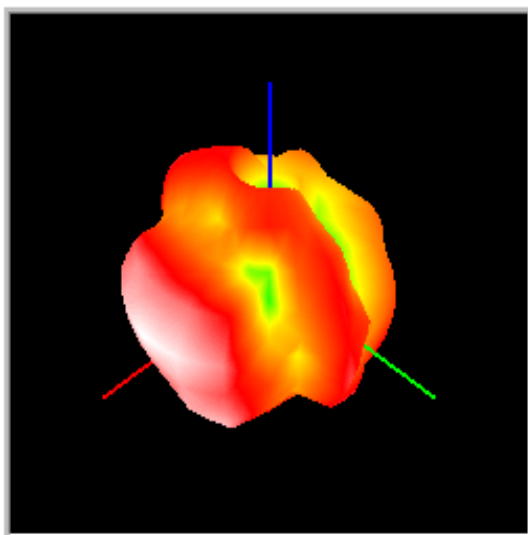
方向图 (5.8G)
Patten

1.3 2D Radiation patterns test results (Passive Antenna)



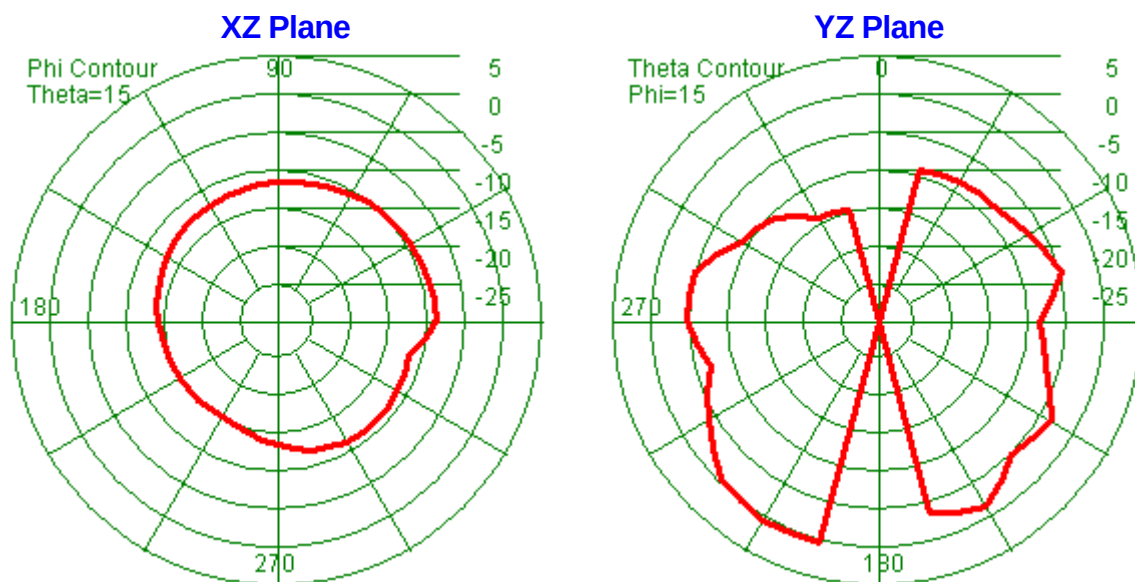
1.5 3D Radiation patterns test results (Passive Antenna)

3D



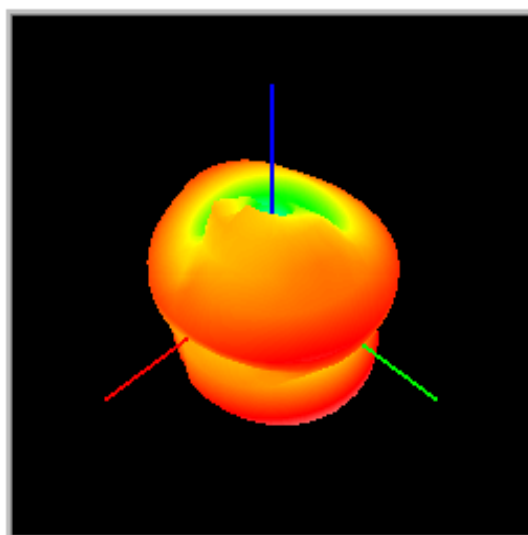
方向图（GPS） Patten

1.3 2D Radiation patterns test results (Passive Antenna)



1.5 3D Radiation patterns test results (Passive Antenna)

3D



测试效率 Test Efficiency

2.4G

Test Point ID	Freq. (MHz)	TRP (dBm)	Gain (dBi)	Directivity (dBi)	Efficiency (%)	Efficiency (dB)	Max (dBm)	Theta of Max	Phi of Max	Min (dBm)	Theta of Min	Phi of Min	AVG (dBm)	Max/Min (dB)	Max/AVG (dB)	Min/AVG (dB)
1	2412.0	2412.00	1.47	3.43	53.6%	-1.97	1.47	90	210	-24.44	0	120	-3.11	25.90	4.57	-21.33
2	2417.0	2417.00	1.39	3.35	53.7%	-1.96	1.39	90	210	-21.20	0	150	-2.99	22.59	4.38	-18.21
3	2422.0	2422.00	1.47	3.81	58.4%	-2.33	1.47	90	150	-22.83	0	120	-3.36	24.30	4.84	-19.46
4	2427.0	2427.00	1.33	3.73	57.7%	-2.39	1.33	90	150	-20.51	0	90	-3.51	21.84	4.85	-16.99
5	2432.0	2432.00	1.71	3.96	59.5%	-2.25	1.71	90	150	-19.78	0	60	-3.42	21.49	5.13	-16.36
6	2437.0	2437.00	1.31	3.70	57.7%	-2.39	1.31	90	150	-22.81	0	90	-3.48	24.12	4.79	-19.33
7	2442.0	2442.00	1.06	3.55	56.4%	-2.49	1.06	90	150	-18.25	0	30	-3.60	19.32	4.66	-14.66
8	2447.0	2447.00	1.02	3.43	57.5%	-2.41	1.02	90	150	-16.70	0	120	-3.65	17.72	4.67	-13.05
9	2452.0	2452.00	0.95	3.42	56.6%	-2.47	0.95	90	210	-18.81	150	0	-3.74	19.76	4.68	-15.07
10	2457.0	2457.00	1.57	3.88	58.8%	-2.31	1.57	90	150	-20.05	0	30	-3.43	21.61	5.00	-16.62
11	2462.0	2462.00	1.82	4.17	60.7%	-2.17	1.82	90	150	-18.55	0	60	-3.23	20.56	5.23	-15.32
12	2467.0	2467.00	1.16	3.47	58.7%	-2.31	1.16	90	150	-17.56	0	90	-3.54	18.72	4.70	-14.02
13	2472.0	2472.00	1.10	3.51	57.3%	-2.42	1.10	90	330	-19.15	0	0	-3.76	20.25	4.86	-15.39
14	2484.0	2484.00	0.94	3.24	58.8%	-2.30	0.94	90	30	-18.52	0	120	-3.54	19.46	4.48	-14.98

5.8G

Test Point ID	Freq. (MHz)	TRP (dBm)	Gain (dBi)	Directivity (dBi)	Efficiency (%)	Efficiency (dB)	Max (dBm)	Theta of Max	Phi of Max	Min (dBm)	Theta of Min	Phi of Min	AVG (dBm)	Max/Min (dB)	Max/AVG (dB)	Min/AVG (dB)
1	5150.0	5150.00	1.38	6.00	44.5%	-4.62	1.38	75	0	-95.99	0	0	-5.77	97.37	7.15	-90.22
2	5220.0	5220.00	1.18	5.53	46.8%	-4.35	1.18	75	0	-95.99	0	0	-5.45	97.17	6.63	-90.54
3	5290.0	5290.00	1.06	4.73	43.2%	-4.78	1.06	75	0	-95.99	0	0	-6.09	95.93	6.03	-89.90
4	5360.0	5360.00	1.07	4.07	40.6%	-5.14	1.07	75	345	-95.99	0	0	-6.64	94.92	5.57	-89.35
5	5430.0	5430.00	1.07	3.82	42.5%	-4.89	1.07	150	135	-95.99	0	0	-6.53	94.92	5.47	-89.46
6	5500.0	5500.00	1.52	3.95	45.7%	-4.47	1.52	75	345	-95.99	0	0	-5.73	95.47	5.21	-90.26
7	5570.0	5570.00	1.01	4.01	49.6%	-4.02	1.01	150	135	-95.99	0	0	-5.11	95.98	5.10	-90.88
8	5640.0	5640.00	1.81	3.73	45.1%	-4.54	1.81	150	135	-95.99	0	0	-6.10	95.18	5.29	-89.89
9	5710.0	5710.00	1.10	4.33	46.1%	-4.43	1.10	150	135	-95.99	0	0	-5.89	95.89	5.79	-90.10
10	5780.0	5780.00	1.32	4.79	40.8%	-5.11	1.32	150	300	-95.99	0	0	-6.35	95.67	6.03	-89.64
11	5850.0	5850.00	1.20	5.07	42.6%	-4.87	1.20	150	150	-95.99	0	0	-6.16	96.19	6.36	-89.83
12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

GPS

Test Point ID	Freq. (MHz)	TRP (dBm)	Gain (dBi)	Directivity (dBi)	Efficiency (%)	Efficiency (dB)	Max (dBm)	Theta of Max	Phi of Max	Min (dBm)	Theta of Min	Phi of Min	AVG (dBm)	Max/Min (dB)	Max/AVG (dB)	Min/AVG (dB)
1	1570.0	1570.00	1.62	4.16	44.2%	-3.54	1.62	150	210	-95.99	0	0	-5.09	96.61	5.71	-90.90
2	1571.0	1571.00	1.54	4.19	43.1%	-3.65	1.54	150	225	-95.99	0	0	-5.19	96.53	5.72	-90.80
3	1572.0	1572.00	1.43	4.20	42.0%	-3.77	1.43	150	210	-95.99	0	0	-5.29	96.42	5.73	-90.70
4	1573.0	1573.00	1.34	4.22	40.9%	-3.88	1.34	150	225	-95.99	0	0	-5.40	96.33	5.74	-90.59
5	1574.0	1574.00	1.25	4.24	39.9%	-3.99	1.25	150	210	-95.99	0	0	-5.49	96.24	5.75	-90.49
6	1575.0	1575.00	1.17	4.27	38.9%	-4.10	1.17	150	225	-95.99	0	0	-5.59	96.16	5.76	-90.39
7	1576.0	1576.00	1.20	4.28	39.1%	-4.08	1.20	150	210	-95.99	0	0	-5.56	96.19	5.77	-90.43
8	1577.0	1577.00	1.26	4.30	39.4%	-4.04	1.26	150	210	-95.99	0	0	-5.52	96.25	5.78	-90.47
9	1578.0	1578.00	1.30	4.31	39.7%	-4.01	1.30	150	210	-95.99	0	0	-5.48	96.29	5.78	-90.50
10	1579.0	1579.00	1.36	4.34	40.0%	-3.98	1.36	150	210	-95.99	0	0	-5.44	96.35	5.80	-90.55
11	1580.0	1580.00	1.42	4.36	40.4%	-3.94	1.42	150	210	-95.99	0	0	-5.40	96.41	5.82	-90.59
12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--