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深圳顺达成科技有限公司

Antenna Test Report



客户名称：昱科

项目名称：DR158W

频段：WIFI

版本：A

制作日期：2023-8-21



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1. Test system

Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent 5071C & Agilent 5062A
OTA Test	TRP&TIS	Agilent 8960 E5515C& Agilent 4438C&CMW500 &CMW2 ETS&SATIMO
Gain & Efficiency	Gain & Efficiency	ETS&SATIMO Agilent 5071C

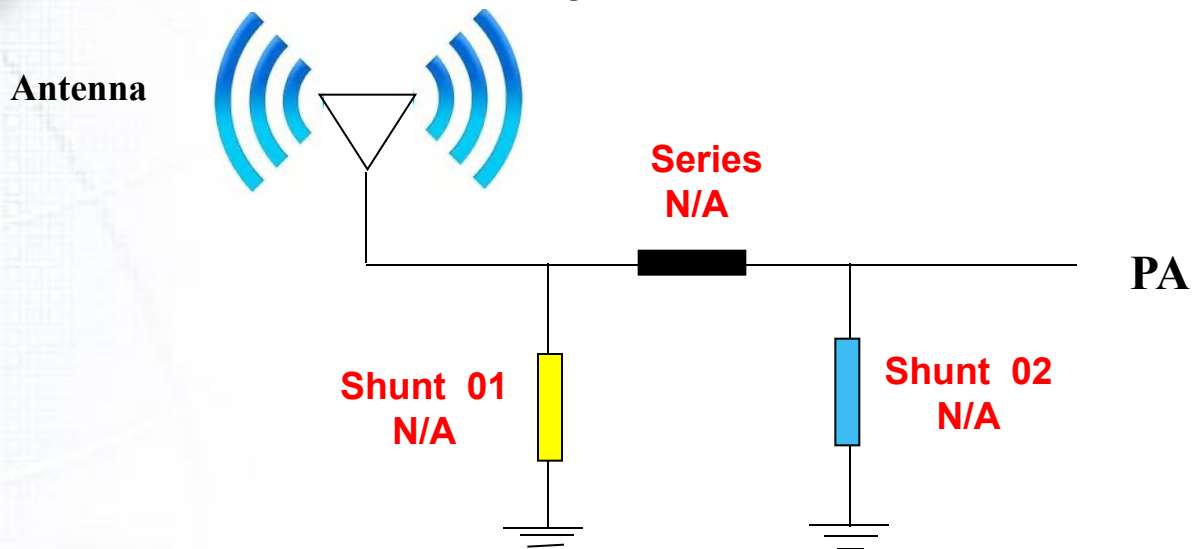




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2. Antenna Matching Network



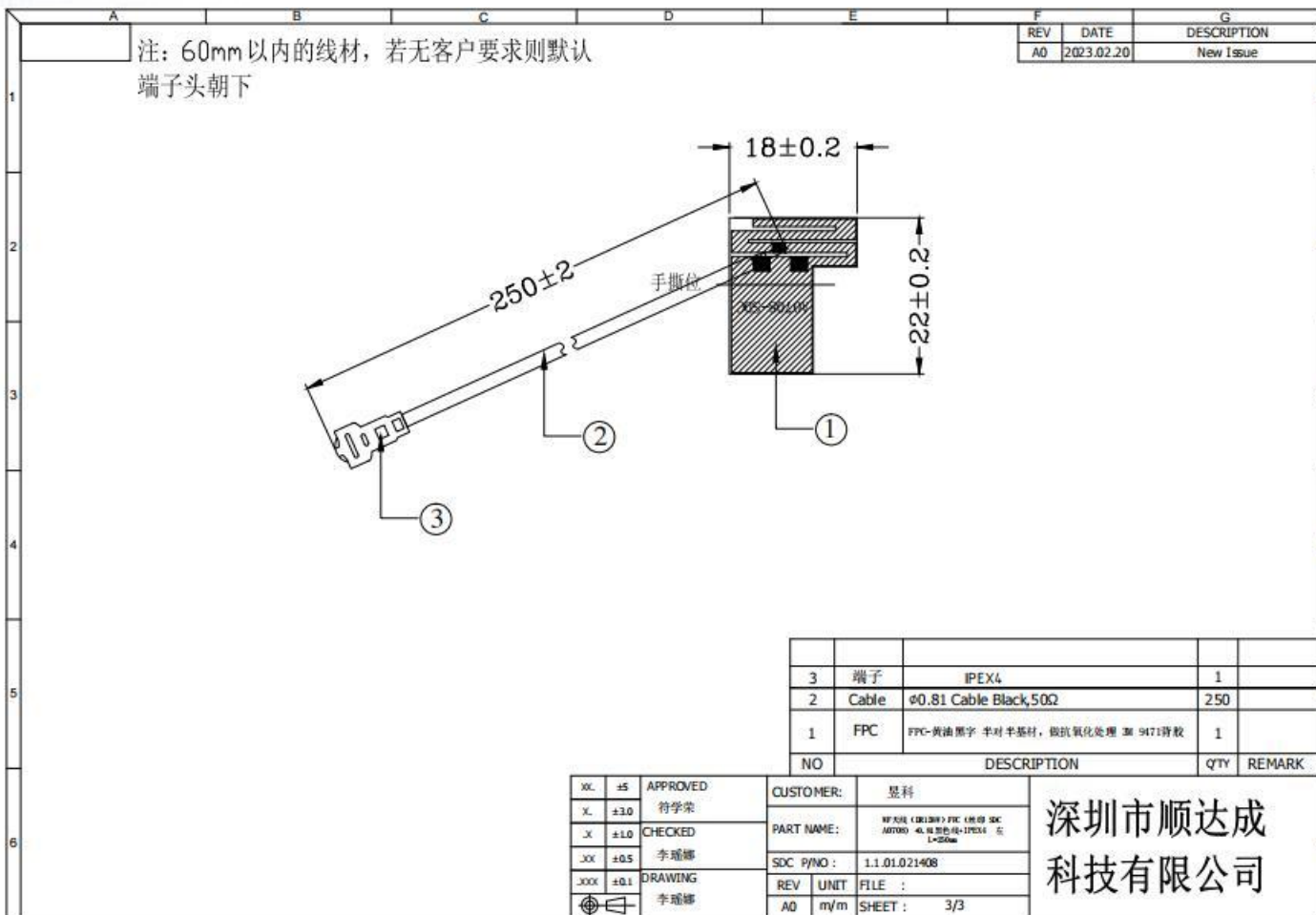
Location	Description	Vendor
Shunt 01	N/A	N/A
Series	N/A	N/A
Shunt 02	N/A	N/A

未改动主板
匹配电路



蓝牙天线

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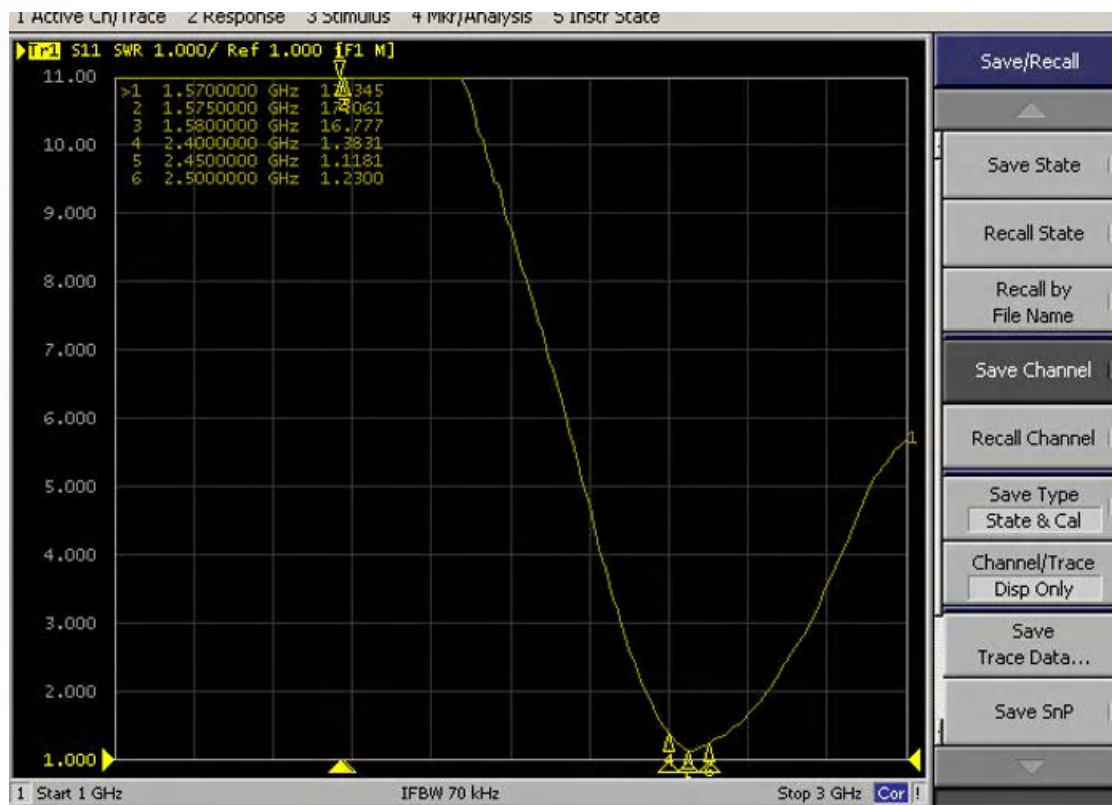




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S11 Parameter-SWR

蓝牙天线

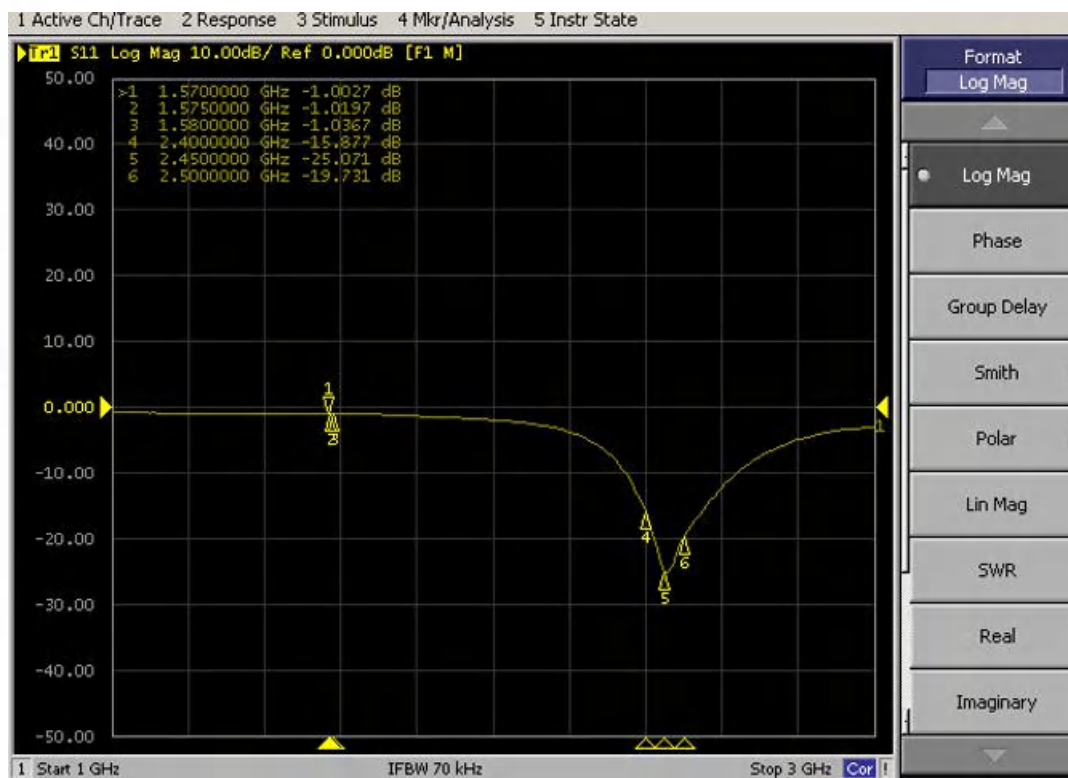




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S11 Parameter-Log Mag

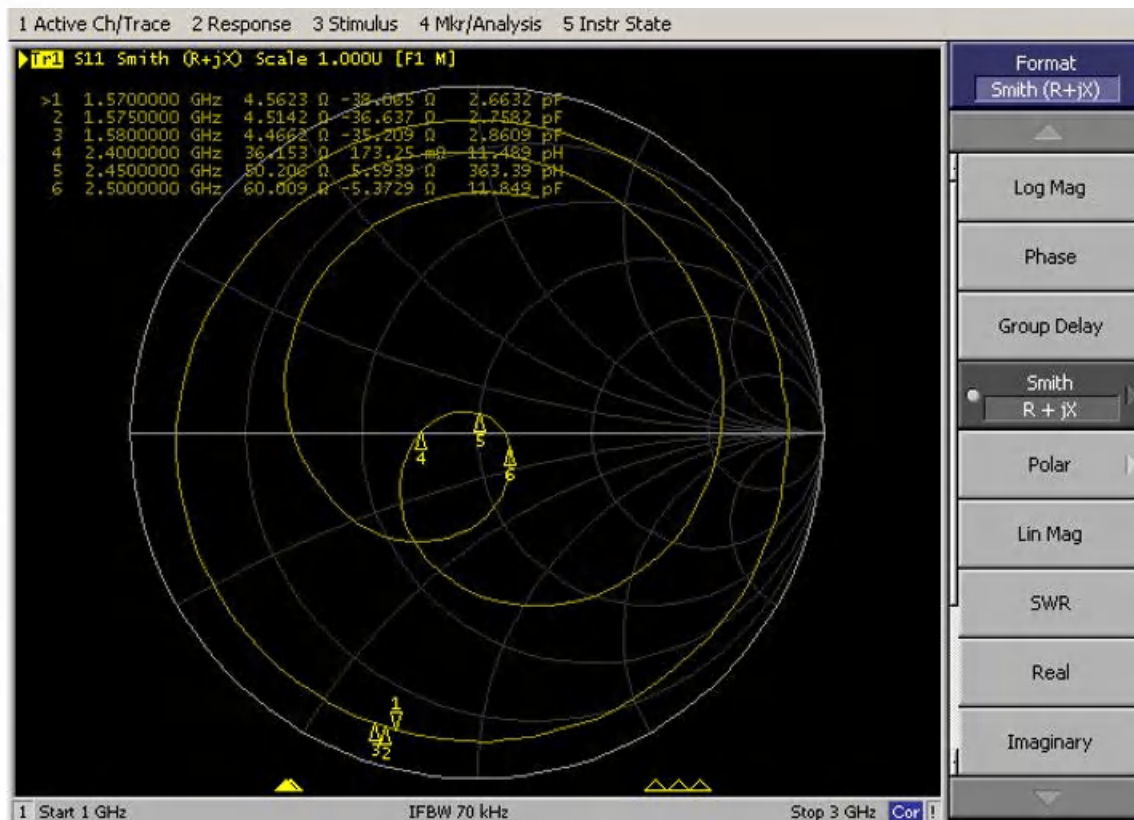
蓝牙天线





S11 Parameter-Smith

蓝牙天线





Gain & Efficiency

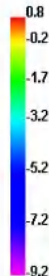
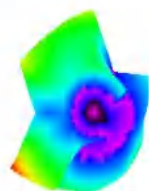
蓝牙天线

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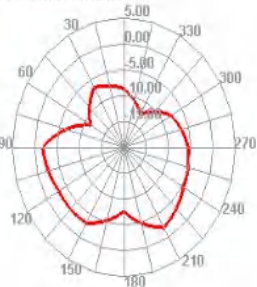
Passive Test For 2.4G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	38.44	-5.46	0.77	-1.38	12.679	15.766	0.77	-18.83	6.23	0	47.77	47.82
2425	39.79	-5.26	0.87	-1.28	13.617	16.17	0.87	-19.66	6.13	0	48.06	48.12
2450	42.31	-4.06	2.11	-0.04	18.48	20.826	2.11	-18.63	6.17	0	48.56	48.53
2475	43.22	-3.96	2.12	-0.03	18.982	21.237	2.12	-18.5	6.07	0	48.46	48.26
2500	42.7	-3.7	2.01	-0.14	20.32	22.382	2.01	-17.46	5.7	0	48.42	48.12

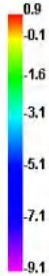
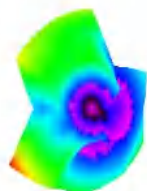
2400.000MHz



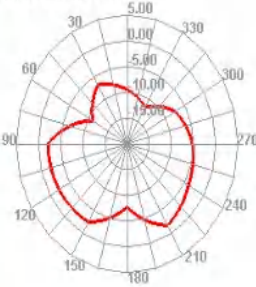
2400.000MHz H



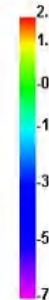
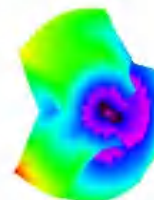
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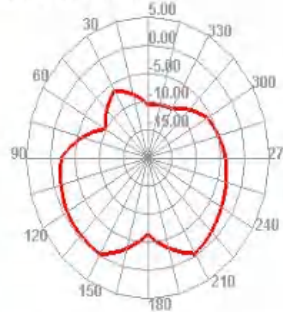
2425.000MHz H



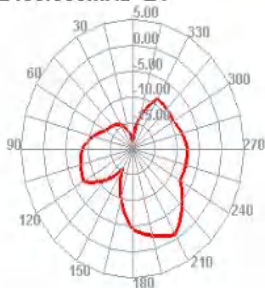
2450.000MHz



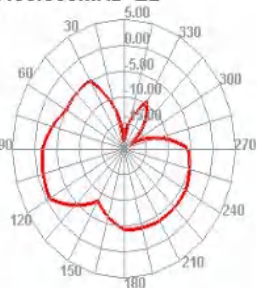
2450.000MHz H



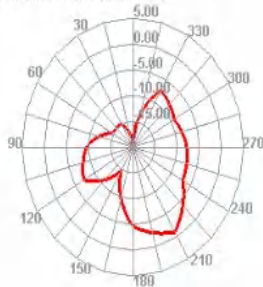
2400.000MHz E1



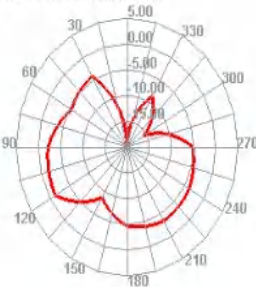
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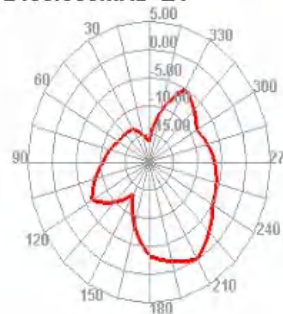
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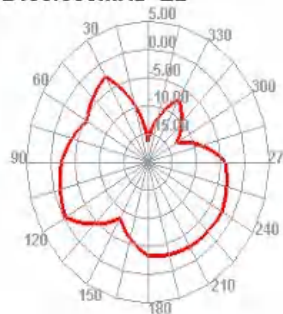
2425.000MHz E2



2450.000MHz E1



2450.000MHz E2





Gain & Efficiency

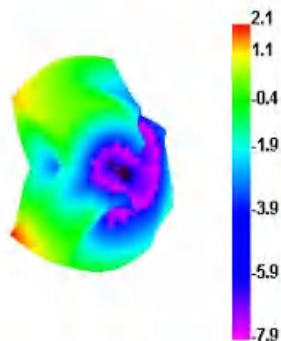
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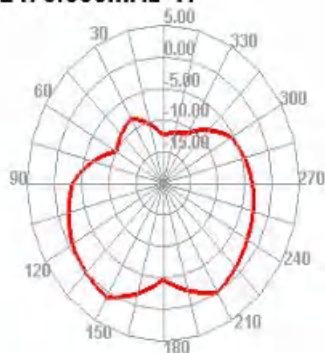
Passive Test For 2.4G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	38.44	-5.46	0.77	-1.38	12.679	15.766	0.77	-18.83	6.23	0	47.77	47.82
2425	39.79	-5.26	0.87	-1.28	13.617	16.17	0.87	-19.66	6.13	0	48.06	48.12
2450	42.31	-4.06	2.11	-0.04	18.48	20.826	2.11	-18.63	6.17	0	48.56	48.53
2475	43.22	-3.96	2.12	-0.03	18.982	21.237	2.12	-18.5	6.07	0	48.46	48.26
2500	42.7	-3.7	2.01	-0.14	20.32	22.382	2.01	-17.46	5.7	0	48.42	48.12

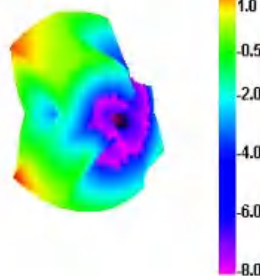
2475.000MHz



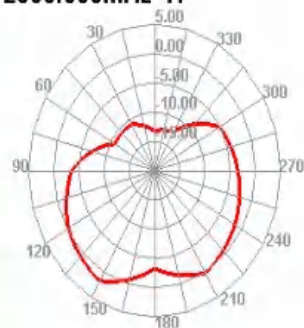
2475.000MHz H



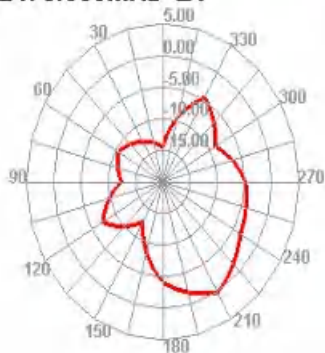
2500.000MHz



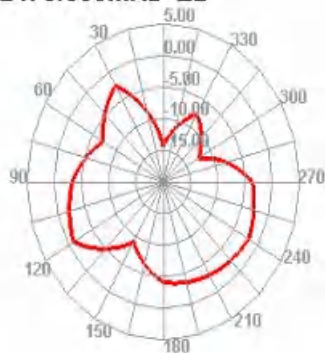
2500.000MHz H



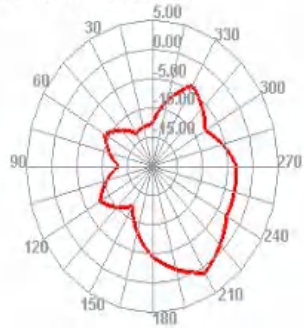
2475.000MHz E1



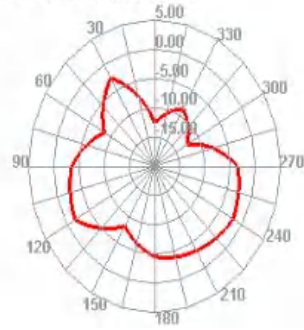
2475.000MHz E2



2500.000MHz E1



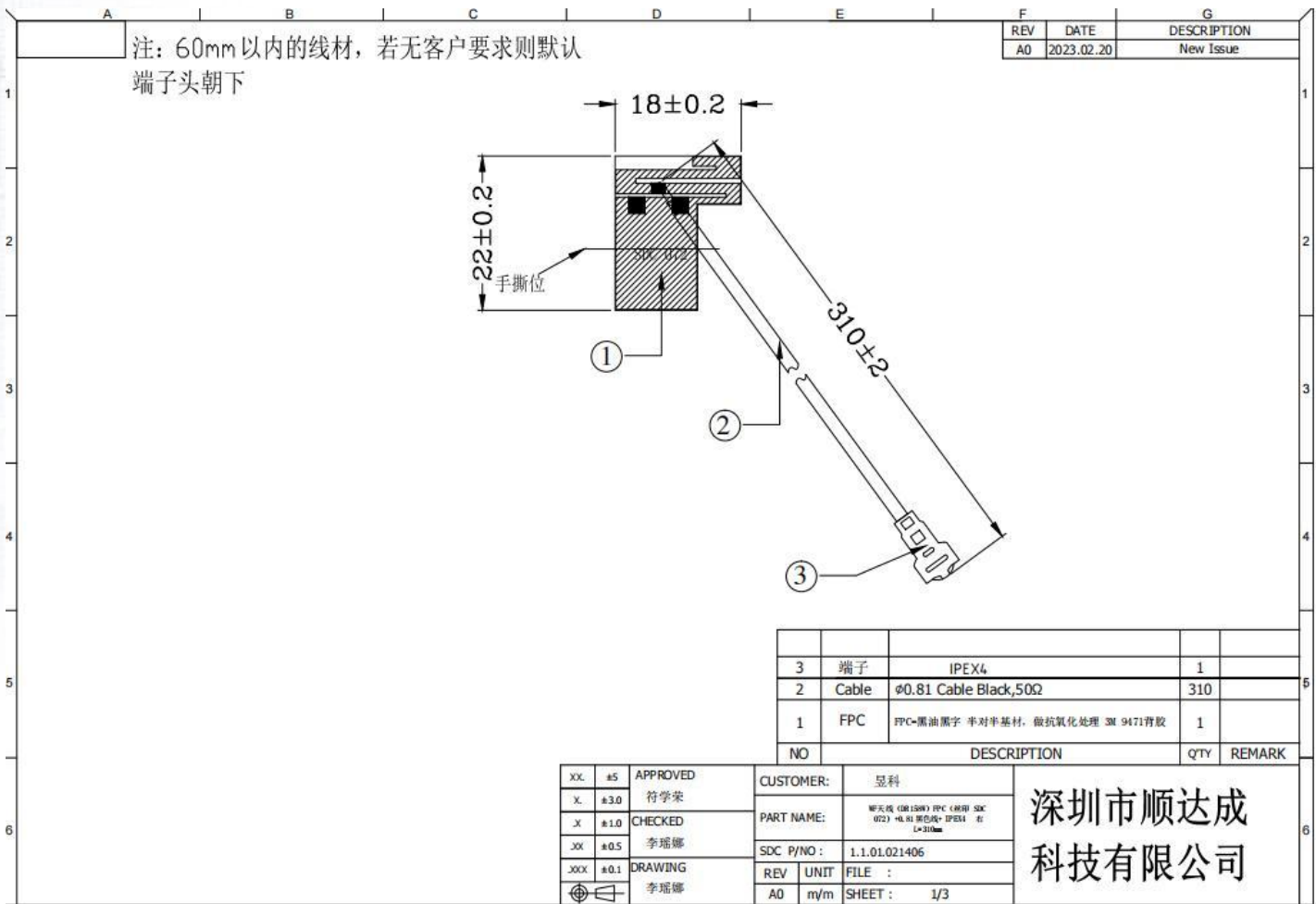
2500.000MHz E2





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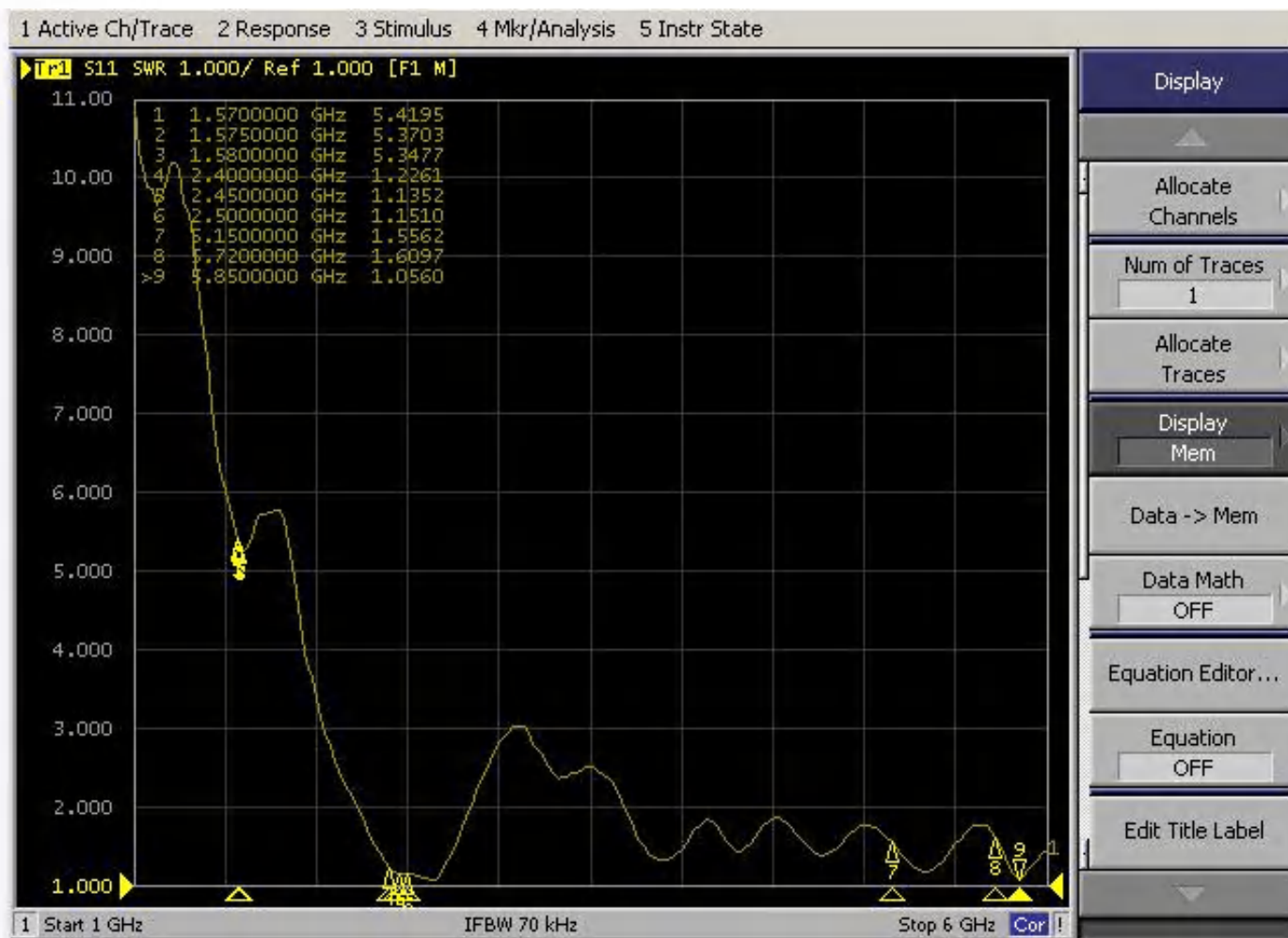




顺达成科技

S11 Parameter-SWR

WIFI 1天线

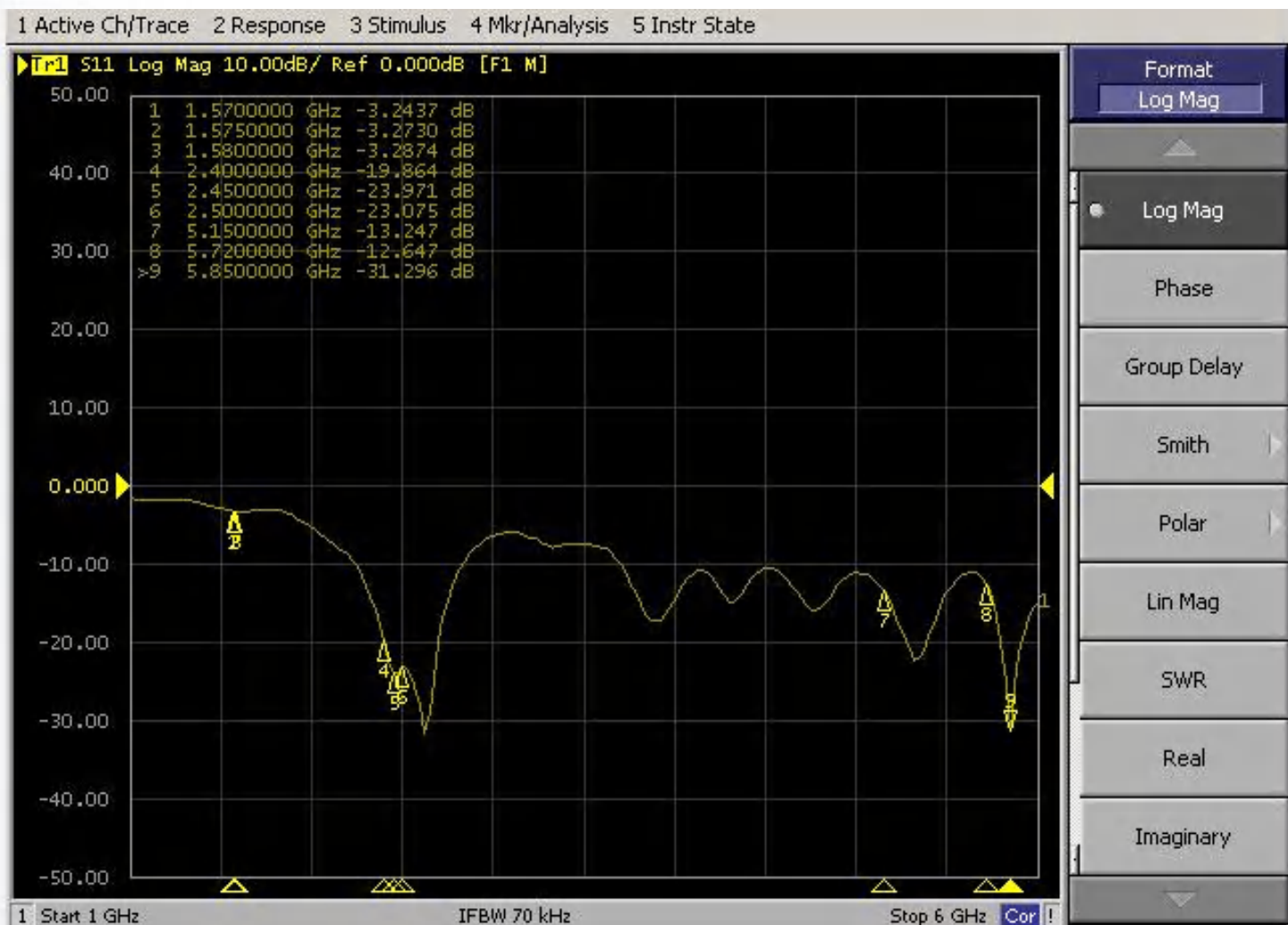




S11 Parameter-Log Mag

WIFI 1天线

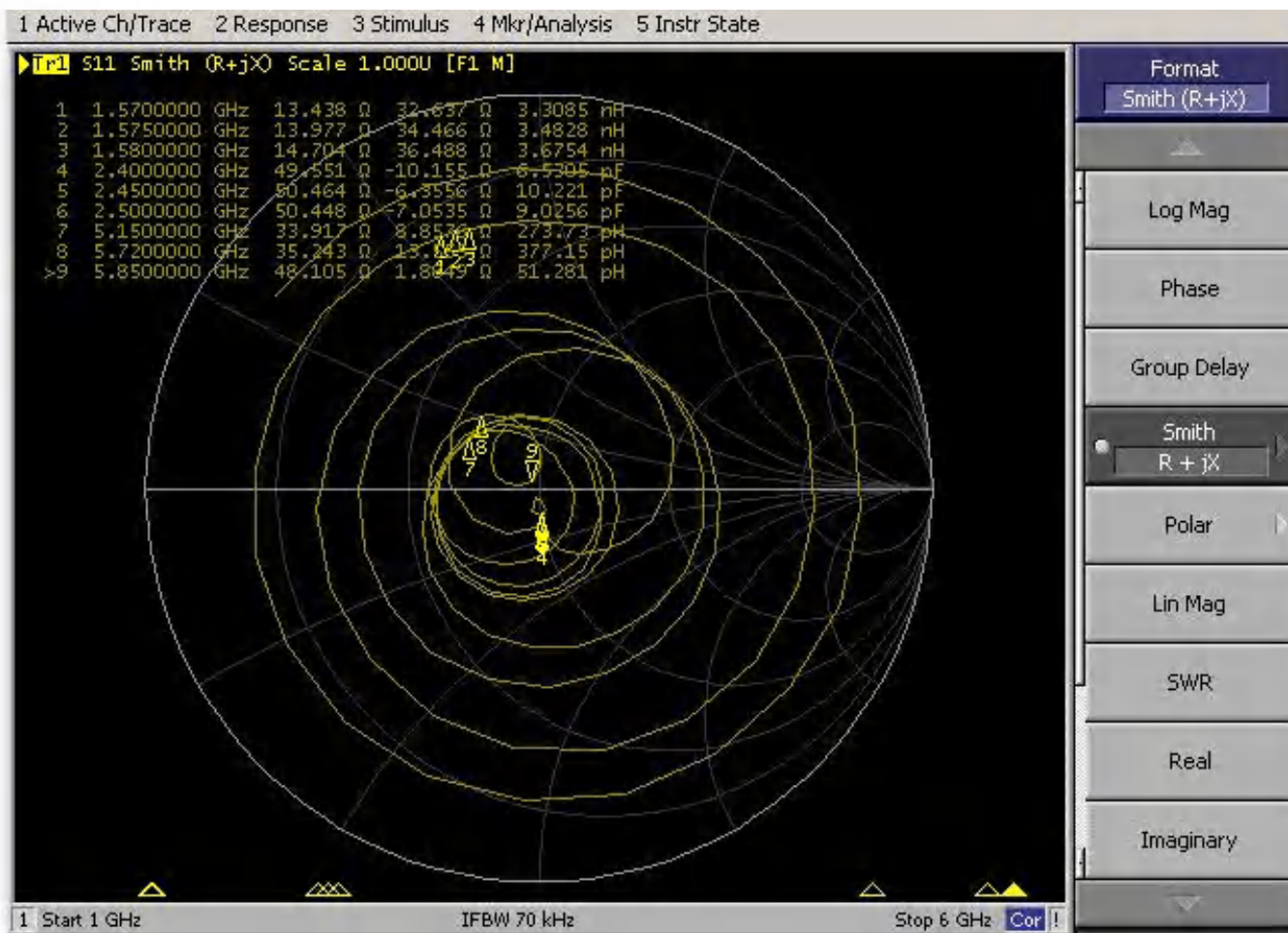
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S11 Parameter-Smith

WIFI 1天线





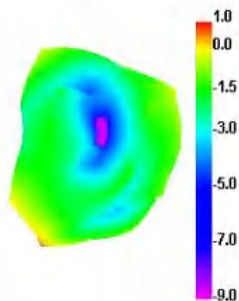
Gain & Efficiency

WIFI 1天线

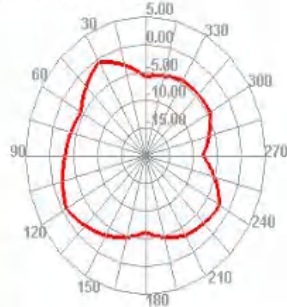
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Passive Test For 2.4G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	43.54	-3.61	1.03	-1.12	20.581	22.962	1.03	-15.9	4.64	15	48.93	49.09
2425	45.48	-2.97	1.96	-0.19	23.926	26.555	1.96	-16.48	4.93	15	49.09	49.22
2450	36.53	-4.37	0.87	-1.28	17.136	19.397	0.87	-19.74	5.24	15	49.25	49.27
2475	35.97	-4.44	0.52	-1.63	17.205	18.763	0.52	-23.22	4.96	75	49.98	49.91
2500	36.94	-4.32	0.32	-1.83	17.676	19.267	0.32	-18.36	4.64	75	49.71	49.62

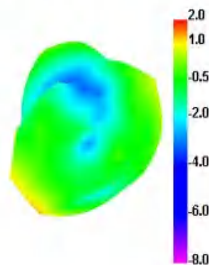
2400.000MHz



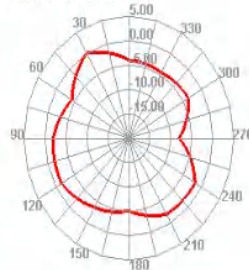
2400.000MHz H



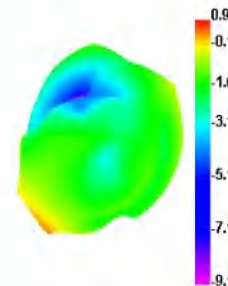
2425.000MHz



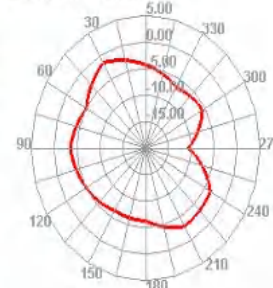
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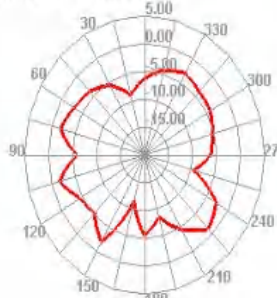
2450.000MHz



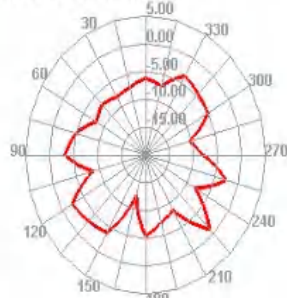
2450.000MHz H



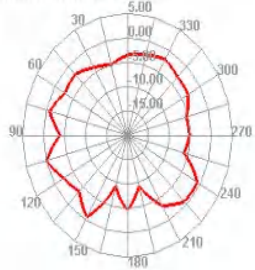
2400.000MHz E1



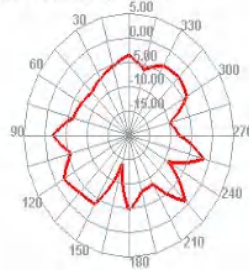
2400.000MHz E2



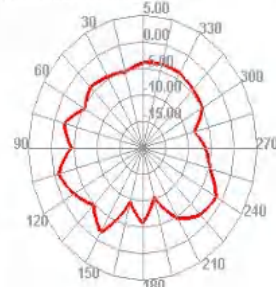
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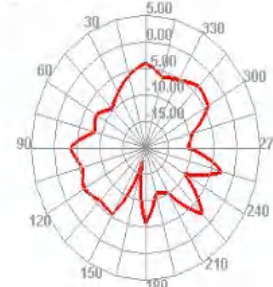
2425.000MHz E2



2450.000MHz E1



2450.000MHz E2





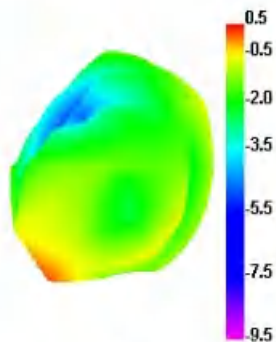
Gain & Efficiency

WIFI 1天线

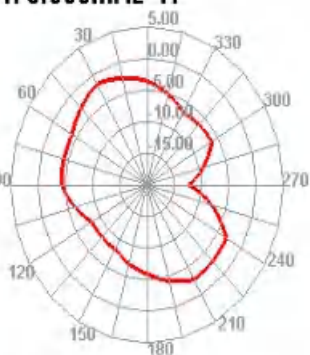
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Passive Test For 2.4G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	43.54	-3.61	1.03	-1.12	20.581	22.962	1.03	-15.9	4.64	15	48.93	49.09
2425	45.48	-2.97	1.96	-0.19	23.926	26.555	1.96	-16.48	4.93	15	49.09	49.22
2450	36.53	-4.37	0.87	-1.28	17.136	19.397	0.87	-19.74	5.24	15	49.25	49.27
2475	35.97	-4.44	0.52	-1.63	17.205	18.763	0.52	-23.22	4.96	75	49.98	49.91
2500	36.94	-4.32	0.32	-1.83	17.676	19.267	0.32	-18.36	4.64	75	49.71	49.62

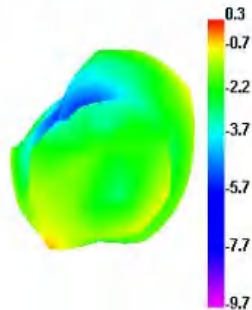
2475.000MHz



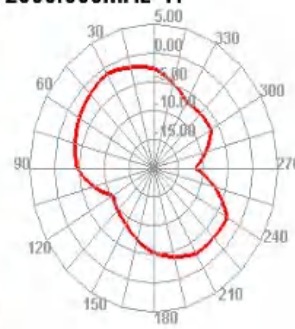
2475.000MHz H



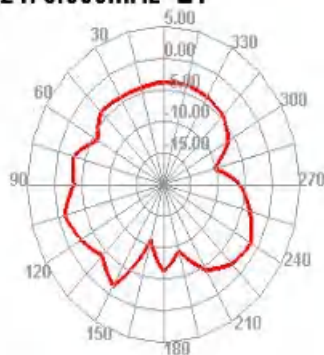
2500.000MHz



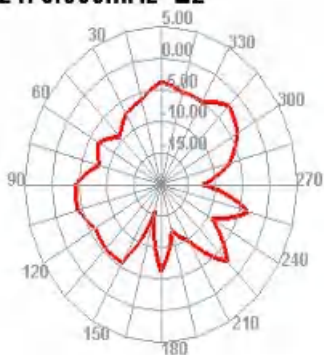
2500.000MHz H



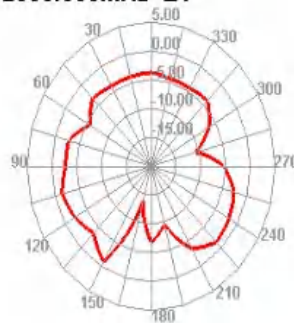
2475.000MHz E1



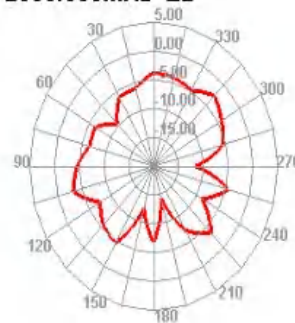
2475.000MHz E2



2500.000MHz E1



2500.000MHz E2





Gain & Efficiency

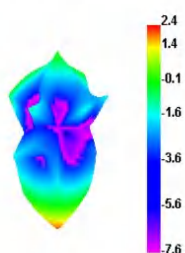
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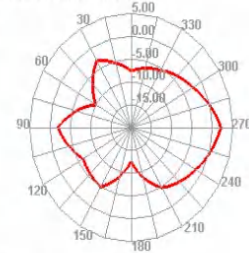
Passive Test For 5.8G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	42.13	-3.75	2.36	0.21	16.688	25.441	2.36	-12.69	6.11	0	58.6	58.01
5250	36.5	-4.38	1.37	-0.78	16.245	20.256	1.37	-11.52	5.75	30	58.53	57.74
5350	33.61	-4.73	1.07	-1.08	14.487	19.127	1.07	-15.18	5.81	60	57.99	57.08
5450	38.75	-4.12	2.03	-0.12	14.442	24.308	2.03	-15.14	6.15	0	59.19	57.9
5550	43.16	-3.65	2.14	-0.01	15.599	27.564	2.14	-19.43	5.79	60	60.21	58.81
5650	45.41	-3.43	2.1	-0.05	16.711	28.699	2.1	-20.47	5.53	0	60.31	59.42
5750	46.58	-3.32	2.17	0.02	17.996	28.581	2.17	-18	5.49	30	60.88	60.28
5850	44.83	-3.48	2.78	0.63	18.496	26.336	2.78	-23.77	6.27	30	61.09	60.41

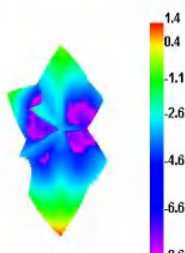
5150.000MHz



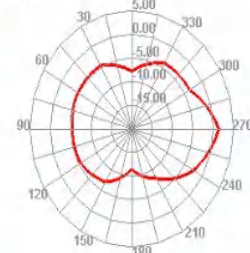
5150.000MHz H



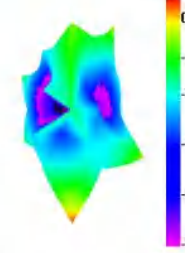
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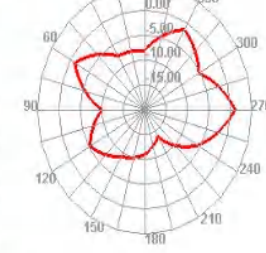
5250.000MHz H



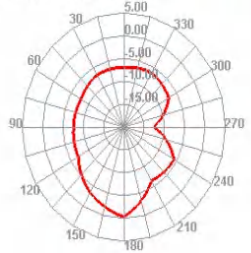
5350.000MHz



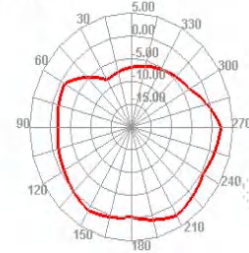
5350.000MHz H



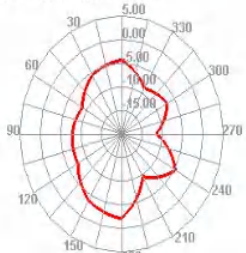
5150.000MHz E1



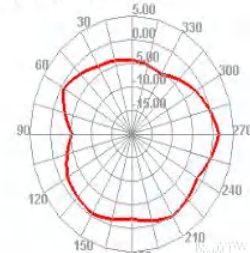
5150.000MHz E2



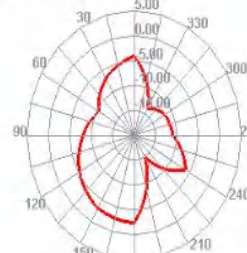
5250.000MHz E1



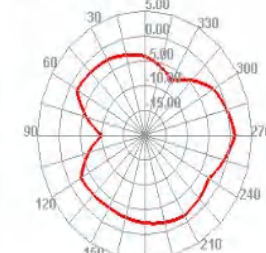
5250.000MHz E2



5350.000MHz E1



5350.000MHz E2





Gain & Efficiency

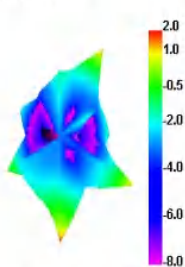
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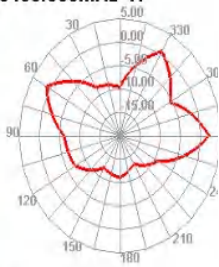
Passive Test For 5.8G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBD)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	42.13	-3.75	2.36	0.21	16.688	25.441	2.36	-12.69	6.11	0	58.6	58.01
5250	36.5	-4.38	1.37	-0.78	16.245	20.256	1.37	-11.52	5.75	30	58.53	57.74
5350	33.61	-4.73	1.07	-1.08	14.487	19.127	1.07	-15.18	5.81	60	57.99	57.08
5450	38.75	-4.12	2.03	-0.12	14.442	24.308	2.03	-15.14	6.15	0	59.19	57.9
5550	43.16	-3.65	2.14	-0.01	15.599	27.564	2.14	-19.43	5.79	60	60.21	58.81
5650	45.41	-3.43	2.1	-0.05	16.711	28.699	2.1	-20.47	5.53	0	60.31	59.42
5750	46.58	-3.32	2.17	0.02	17.996	28.581	2.17	-18	5.49	30	60.88	60.28
5850	44.83	-3.48	2.78	0.63	18.496	26.336	2.78	-23.77	6.27	30	61.09	60.41

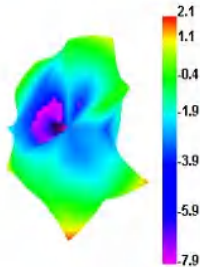
5450.000MHz



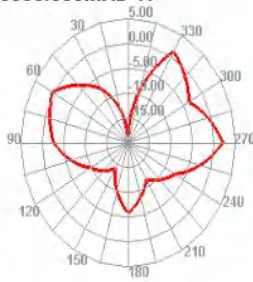
5450.000MHz H



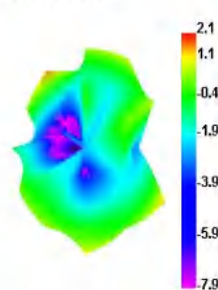
5550.000MHz



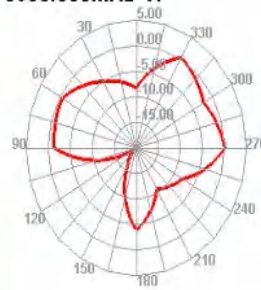
5550.000MHz H



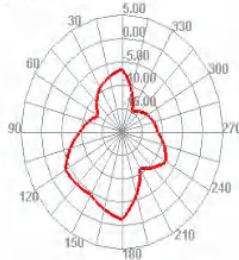
5650.000MHz



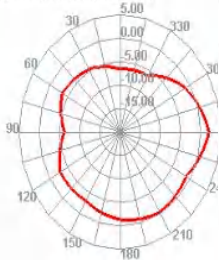
5650.000MHz H



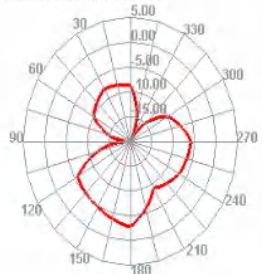
5450.000MHz E1



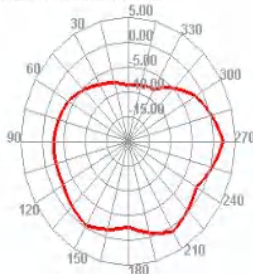
5450.000MHz E2



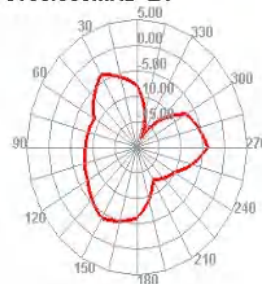
5550.000MHz E1



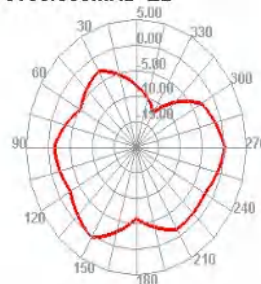
5550.000MHz E2



5650.000MHz E1



5650.000MHz E2





Gain & Efficiency

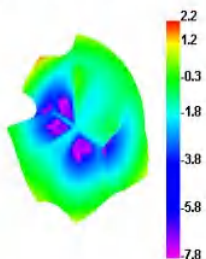
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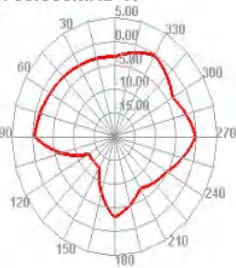
Passive Test For 5.8G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	42.13	-3.75	2.36	0.21	16.688	25.441	2.36	-12.69	6.11	0	58.6	58.01
5250	36.5	-4.38	1.37	-0.78	16.245	20.256	1.37	-11.52	5.75	30	58.53	57.74
5350	33.61	-4.73	1.07	-1.08	14.487	19.127	1.07	-15.18	5.81	60	57.99	57.08
5450	38.75	-4.12	2.03	-0.12	14.442	24.308	2.03	-15.14	6.15	0	59.19	57.9
5550	43.16	-3.65	2.14	-0.01	15.599	27.564	2.14	-19.43	5.79	60	60.21	58.81
5650	45.41	-3.43	2.1	-0.05	16.711	28.699	2.1	-20.47	5.53	0	60.31	59.42
5750	46.58	-3.32	2.17	0.02	17.996	28.581	2.17	-18	5.49	30	60.88	60.28
5850	44.83	-3.48	2.78	0.63	18.496	26.336	2.78	-23.77	6.27	30	61.09	60.41

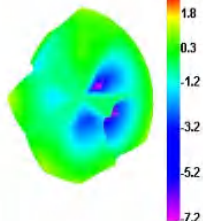
5750.000MHz



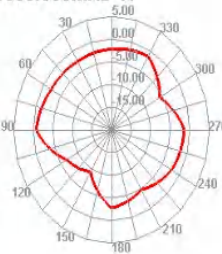
5750.000MHz H



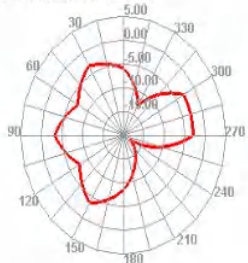
5850.000MHz



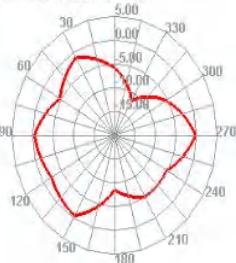
5850.000MHz H



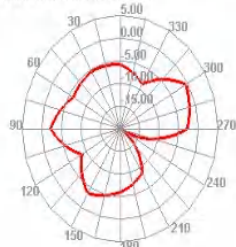
5750.000MHz E1



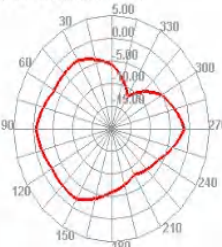
5750.000MHz E2



5850.000MHz E1



5850.000MHz E2

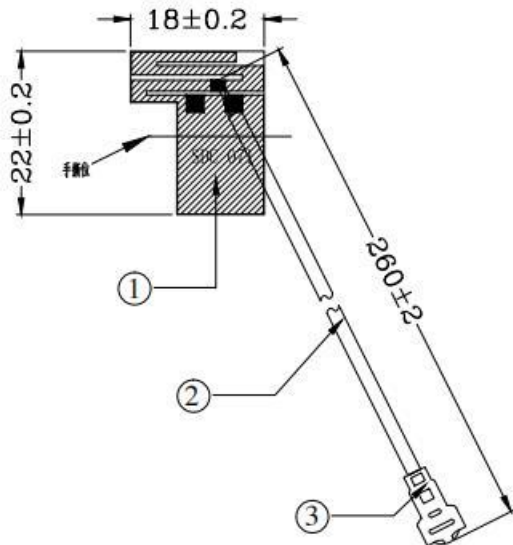




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注：60mm 以内的线材，若无客户要求则默认
端子头朝下



NO	DESCRIPTION	QTY	REMARK
3	端子 IPEX4	1	
2	Cable $\phi 0.81$ Cable Gray, 50 Ω	260	
1	FPC FPC-黑油黑字 半对半基材，做抗氧化处理 3M 9471背胶	1	

XL	±5	APPROVED
X	±3.0	符学荣
.X	±1.0	CHECKED
.XX	±0.5	李瑶娜
.XXX	±0.1	DRAWING
		李瑶娜

CUSTOMER:		昱科	
PART NAME:		WiFi天线 (GND) FPC (GND) SDC (GND) 40.81K Cable IPEX4 4 L=200mm	
SDC P/NO :		1.1.01.021407	
REV	UNIT	FILE :	
A0	m/m	SHEET : 2/3	

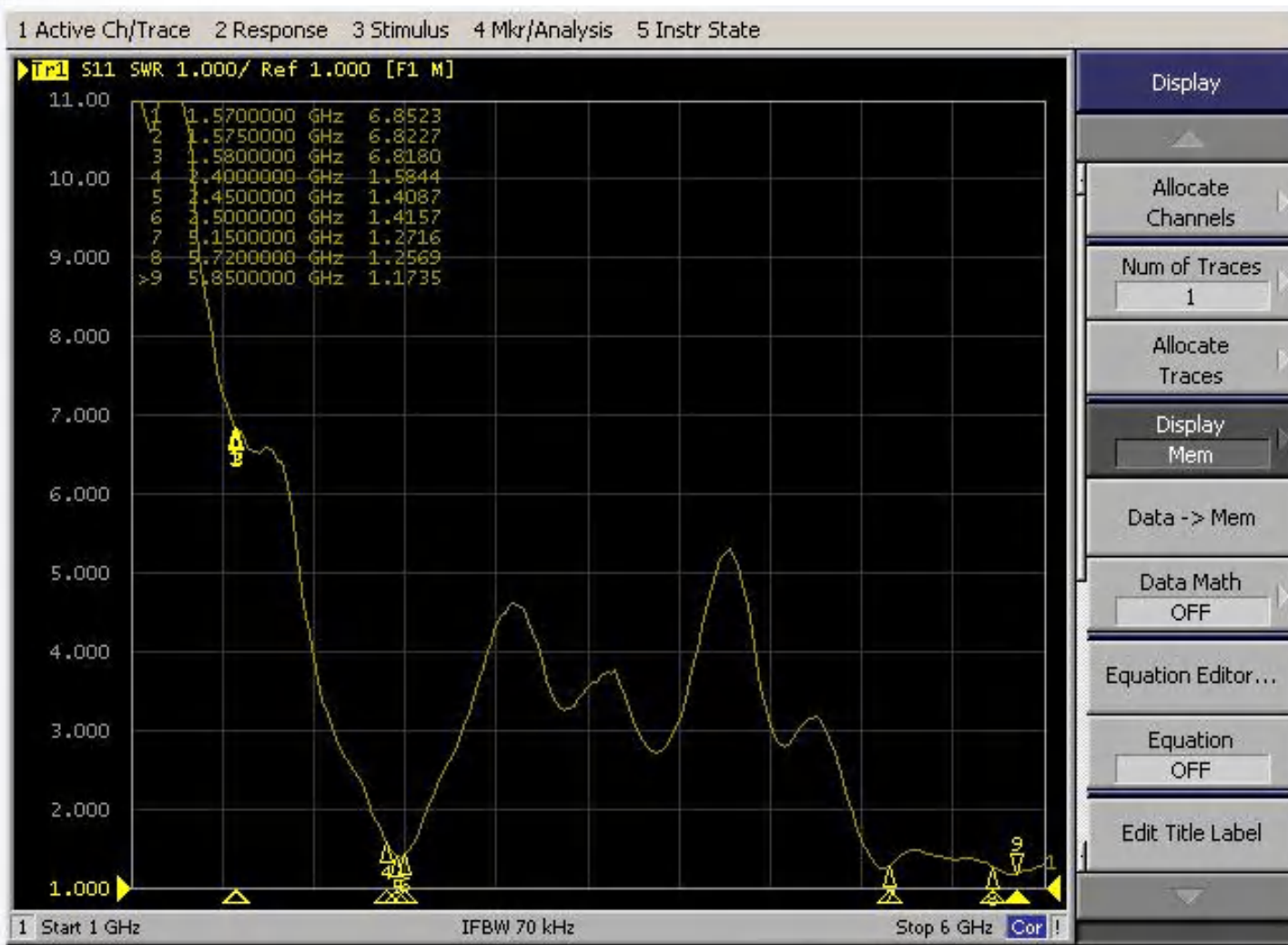
深圳市顺达成
科技有限公司



S11 Parameter-SWR

WIFI 2天线

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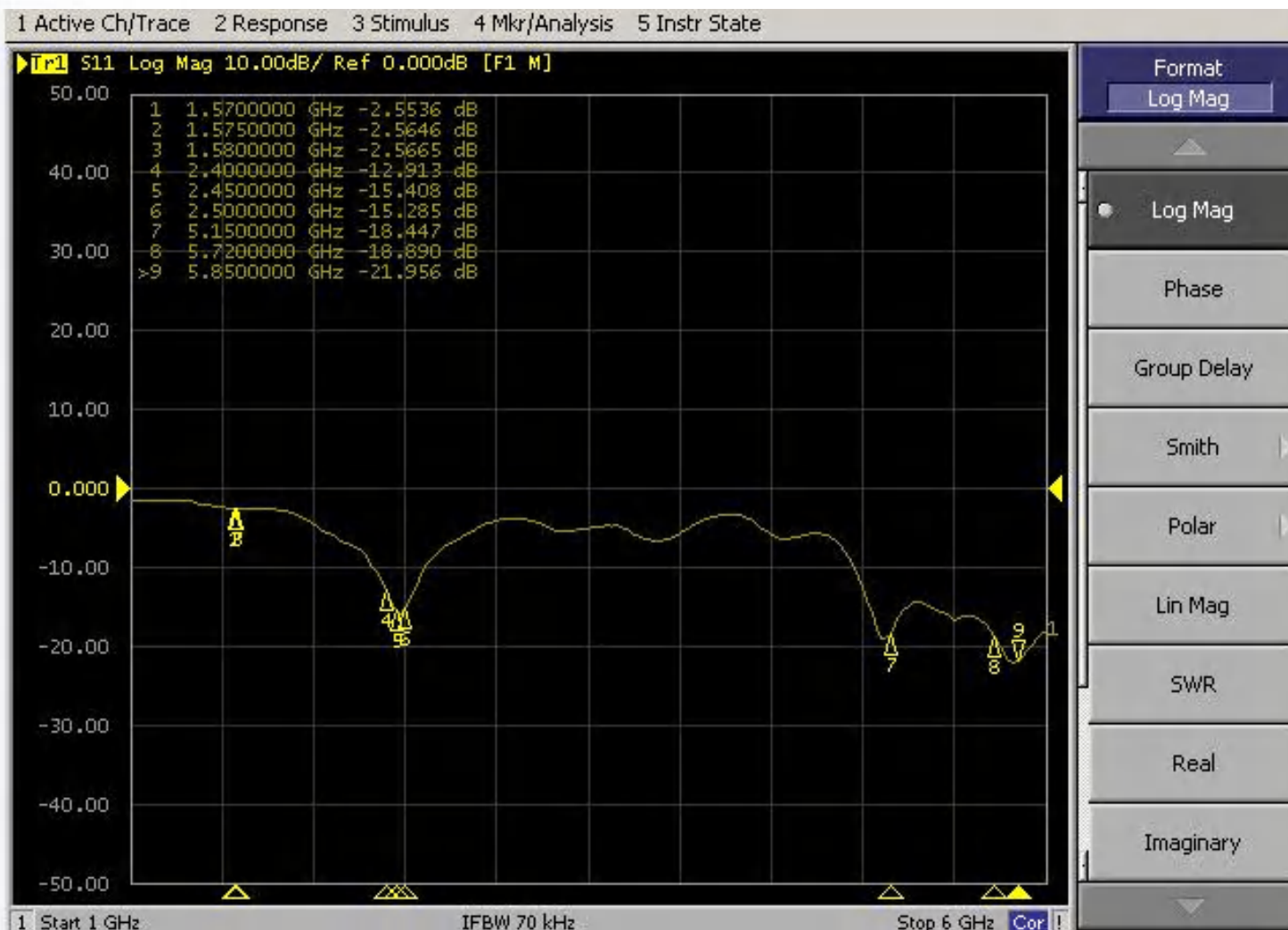




S11 Parameter-Log Mag

WIFI 2天线

顺达成科技

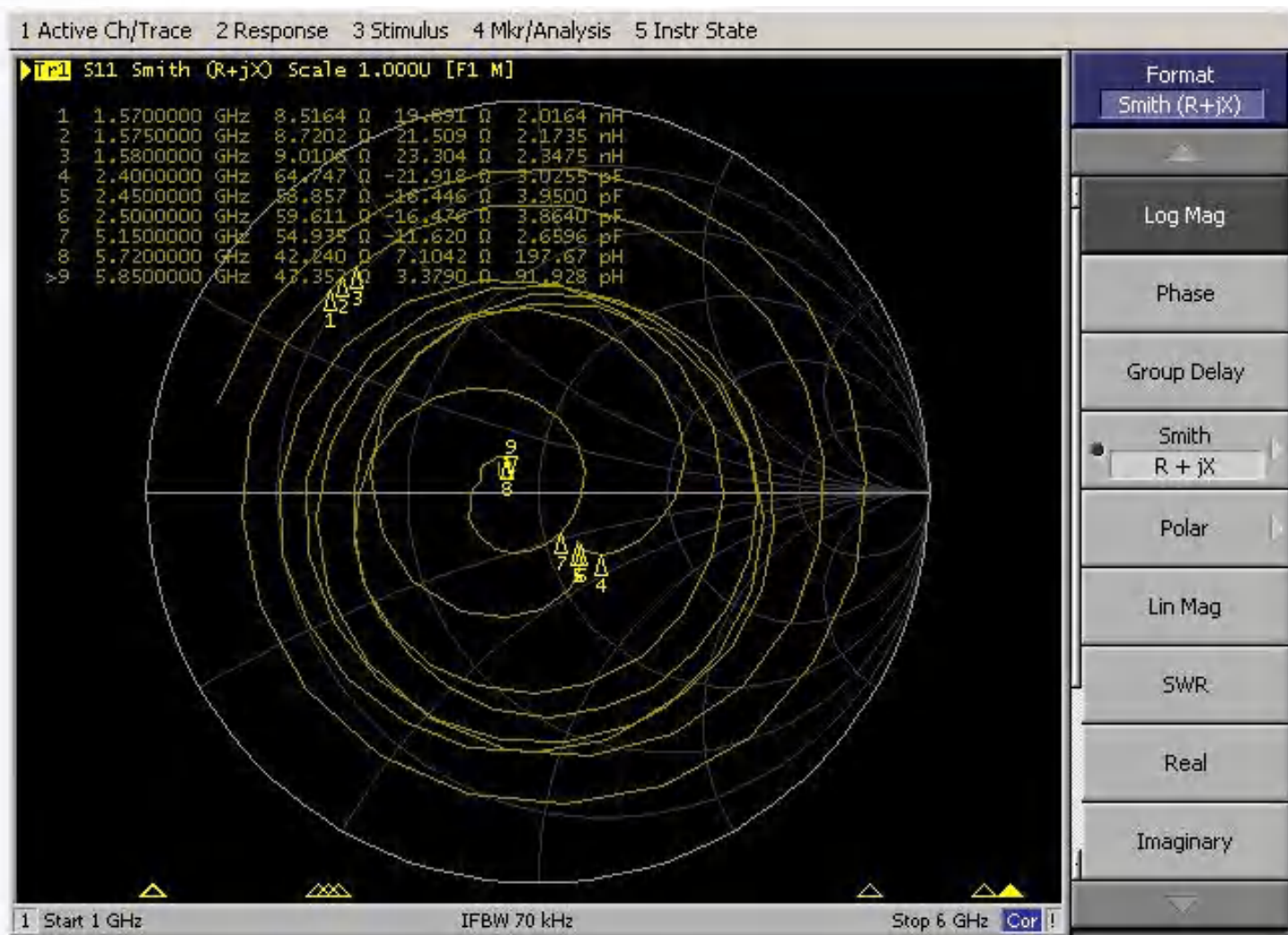




S11 Parameter-Smith

WIFI 2天线

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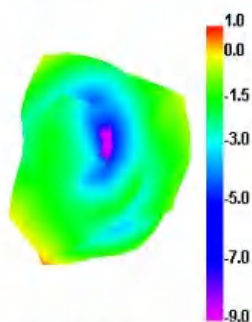
Gain & Efficiency

WIFI 2天线

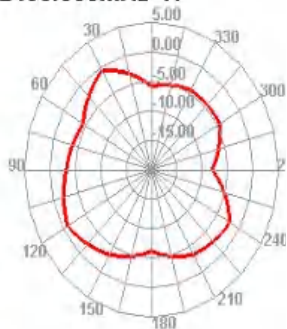
顺达成科技

Passive Test For 2.4G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	43.54	-3.61	1.03	-1.12	20.581	22.962	1.03	-15.9	4.64	15	48.93	49.09
2425	47.48	-2.97	1.96	-0.19	23.926	26.555	1.96	-16.48	4.93	15	49.09	49.22
2450	36.53	-4.37	0.87	-1.28	17.136	19.397	0.87	-19.74	5.24	15	49.25	49.27
2475	35.97	-4.44	0.52	-1.63	17.205	18.763	0.52	-23.22	4.96	75	49.98	49.91
2500	36.94	-4.32	0.32	-1.83	17.676	19.267	0.32	-18.36	4.64	75	49.71	49.62

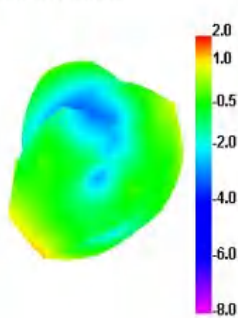
2400.000MHz



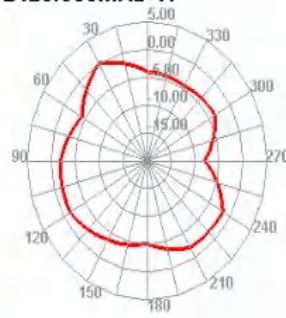
2400.000MHz H



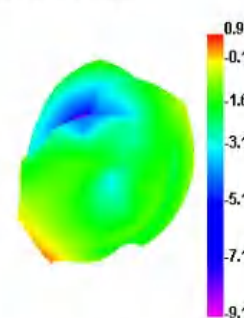
2425.000MHz



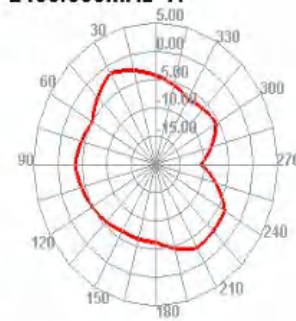
2425.000MHz H



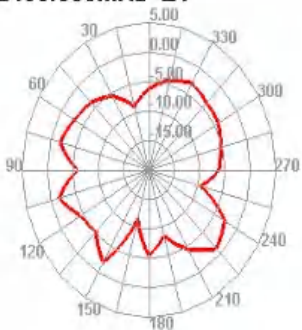
2450.000MHz



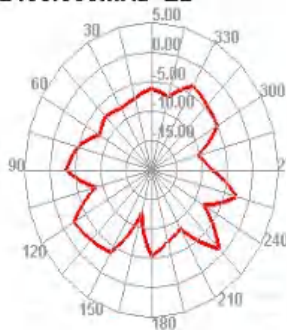
2450.000MHz H



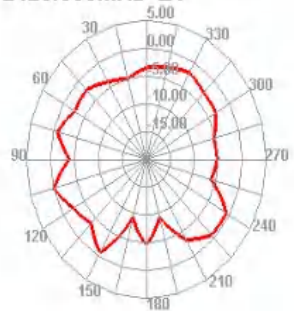
2400.000MHz E1



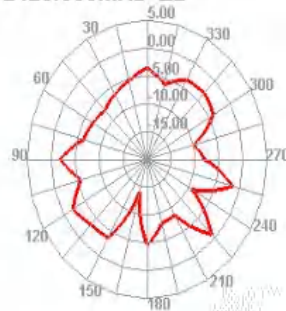
2400.000MHz E2



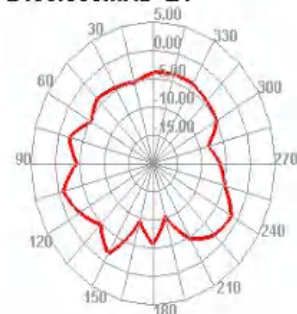
2425.000MHz E1



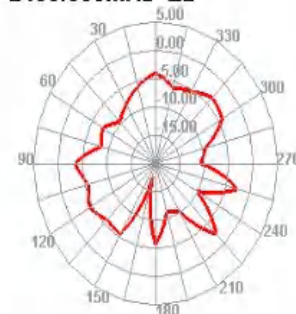
2425.000MHz E2



2450.000MHz E1



2450.000MHz E2





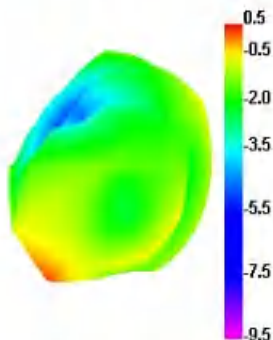
Gain & Efficiency

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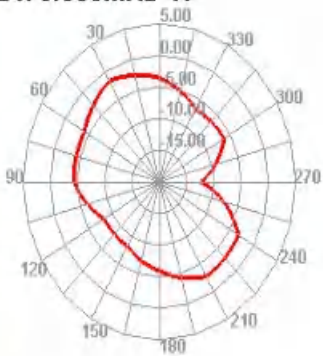
顺达成科技

Passive Test For 2.4G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	43.54	-3.61	1.03	-1.12	20.581	22.962	1.03	-15.9	4.64	15	48.93	49.09
2425	47.48	-2.97	1.96	-0.19	23.926	26.555	1.96	-16.48	4.93	15	49.09	49.22
2450	36.53	-4.37	0.87	-1.28	17.136	19.397	0.87	-19.74	5.24	15	49.25	49.27
2475	35.97	-4.44	0.52	-1.63	17.205	18.763	0.52	-23.22	4.96	75	49.98	49.91
2500	36.94	-4.32	0.32	-1.83	17.676	19.267	0.32	-18.36	4.64	75	49.71	49.62

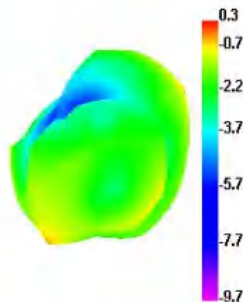
2475.000MHz



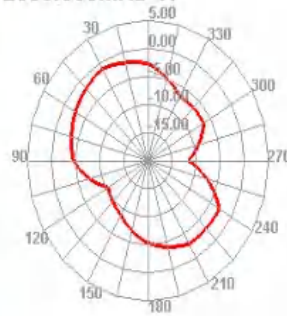
2475.000MHz H



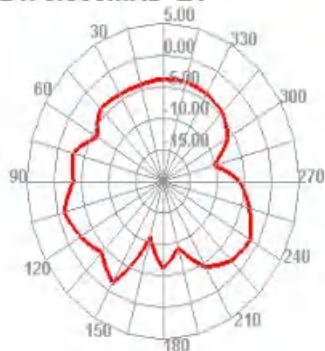
2500.000MHz



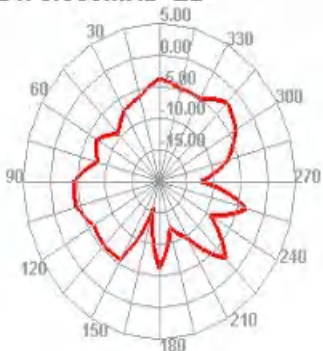
2500.000MHz H



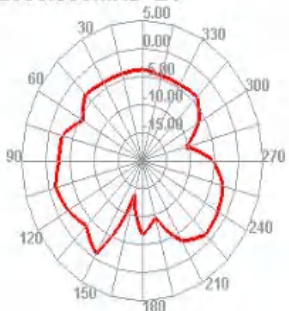
2475.000MHz E1



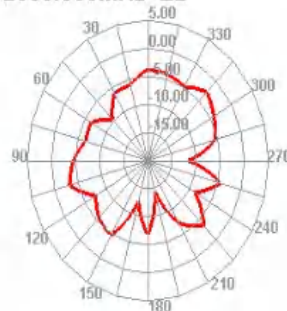
2475.000MHz E2



2500.000MHz E1



2500.000MHz E2





Gain & Efficiency

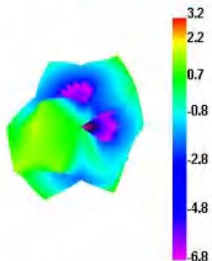
WIFI 2天线

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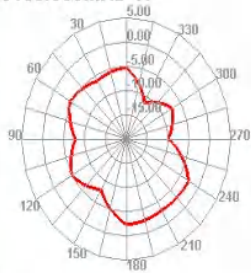
Passive Test For 5.8G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	40.29	-3.95	3.22	1.07	13.819	26.475	3.22	-21.65	7.17	30	58.6	58.01
5250	39.81	-4.84	2.89	0.74	10.959	21.849	2.89	-16.2	7.73	0	58.53	57.74
5350	37.08	-5.67	1.66	-0.49	8.676	18.408	1.66	-16.08	7.33	0	57.99	57.08
5450	38.77	-5.41	0.68	-1.47	11.252	17.523	0.68	-16.09	6.09	0	59.19	57.9
5550	39.05	-5.08	0.93	-1.22	13.257	17.792	0.93	-18.73	6.01	0	60.21	58.81
5650	40.99	-4.44	1.25	-0.9	14.61	21.381	1.25	-14.34	5.69	30	60.31	59.42
5750	39.86	-3.99	1.17	-0.98	17.494	22.366	1.17	-16.91	5.17	0	60.88	60.28
5850	40.32	-3.94	1.96	-0.19	19.19	21.132	1.96	-16.4	5.91	0	61.09	60.41

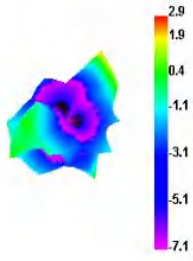
5150.000MHz



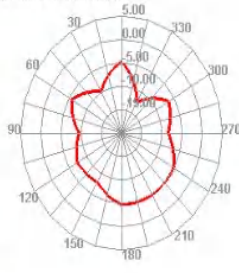
5150.000MHz H



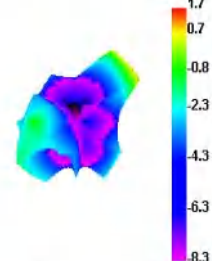
5250.000MHz



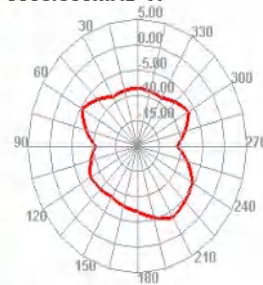
5250.000MHz H



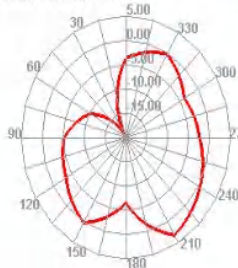
5350.000MHz



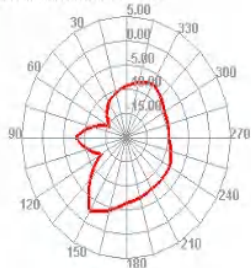
5350.000MHz H



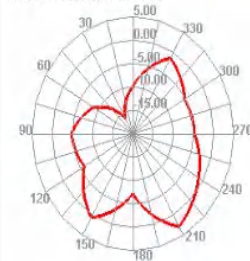
5150.000MHz E1



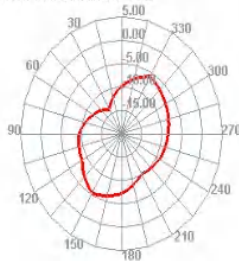
5150.000MHz E2



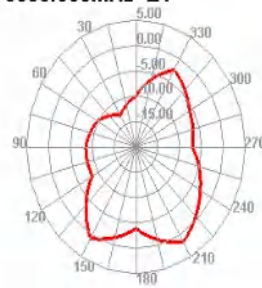
5250.000MHz E1



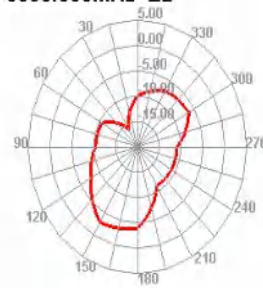
5250.000MHz E2



5350.000MHz E1



5350.000MHz E2





Gain & Efficiency

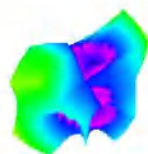
WIFI 2天线

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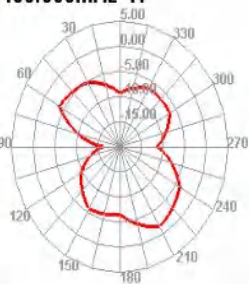
Passive Test For 5.8G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	40.29	-3.95	3.22	1.07	13.819	26.475	3.22	-21.65	7.17	30	58.6	58.01
5250	39.81	-4.84	2.89	0.74	10.959	21.849	2.89	-16.2	7.73	0	58.53	57.74
5350	37.08	-5.67	1.66	-0.49	8.676	18.408	1.66	-16.08	7.33	0	57.99	57.08
5450	38.77	-5.41	0.68	-1.47	11.252	17.523	0.68	-16.09	6.09	0	59.19	57.9
5550	39.05	-5.08	0.93	-1.22	13.257	17.792	0.93	-18.73	6.01	0	60.21	58.81
5650	40.99	-4.44	1.25	-0.9	14.61	21.381	1.25	-14.34	5.69	30	60.31	59.42
5750	39.86	-3.99	1.17	-0.98	17.494	22.366	1.17	-16.91	5.17	0	60.88	60.28
5850	40.32	-3.94	1.96	-0.19	19.19	21.132	1.96	-16.4	5.91	0	61.09	60.41

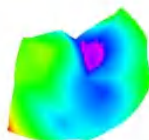
5450.000MHz



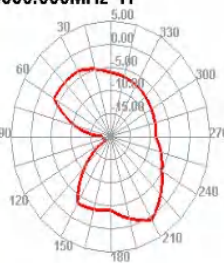
5450.000MHz H



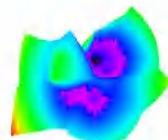
5550.000MHz



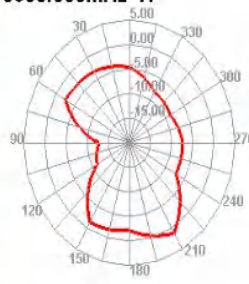
5550.000MHz H



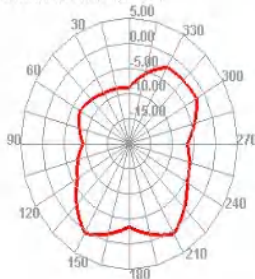
5650.000MHz



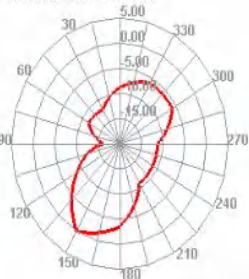
5650.000MHz H



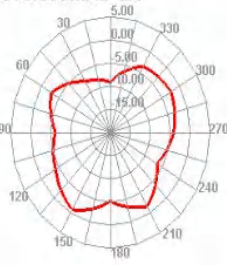
5450.000MHz E1



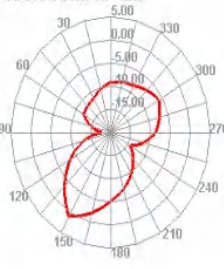
5450.000MHz E2



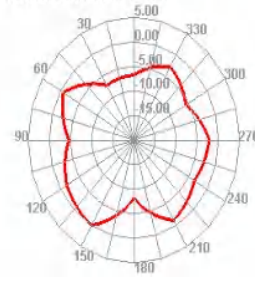
5550.000MHz E1



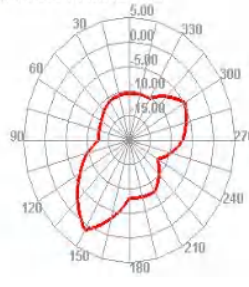
5550.000MHz E2



5650.000MHz E1



5650.000MHz E2





Gain & Efficiency

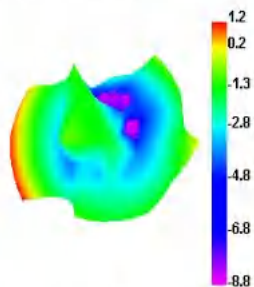
WIFI 2天线

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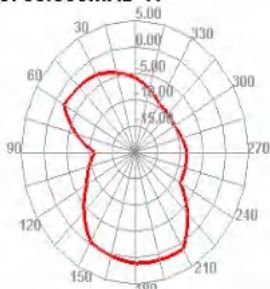
Passive Test For 5.8G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
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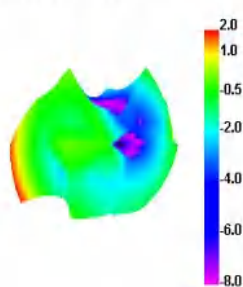
5750.000MHz



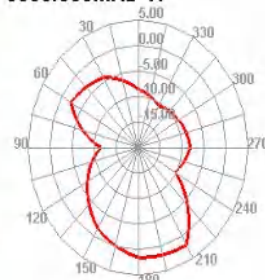
5750.000MHz H



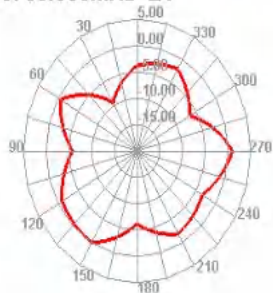
5850.000MHz



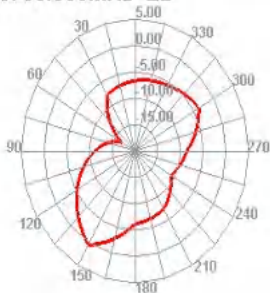
5850.000MHz H



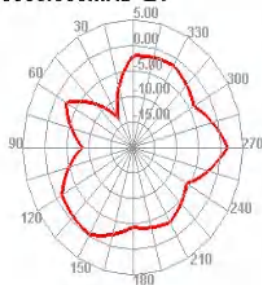
5750.000MHz E1



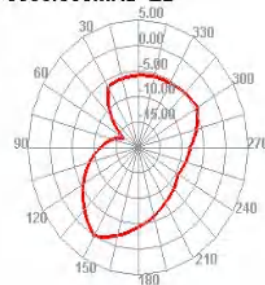
5750.000MHz E2



5850.000MHz E1



5850.000MHz E2





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