

Antenna specification sheet

manufacturer: Shenzhen Shuodian Electronic Technology Co.,Ltd

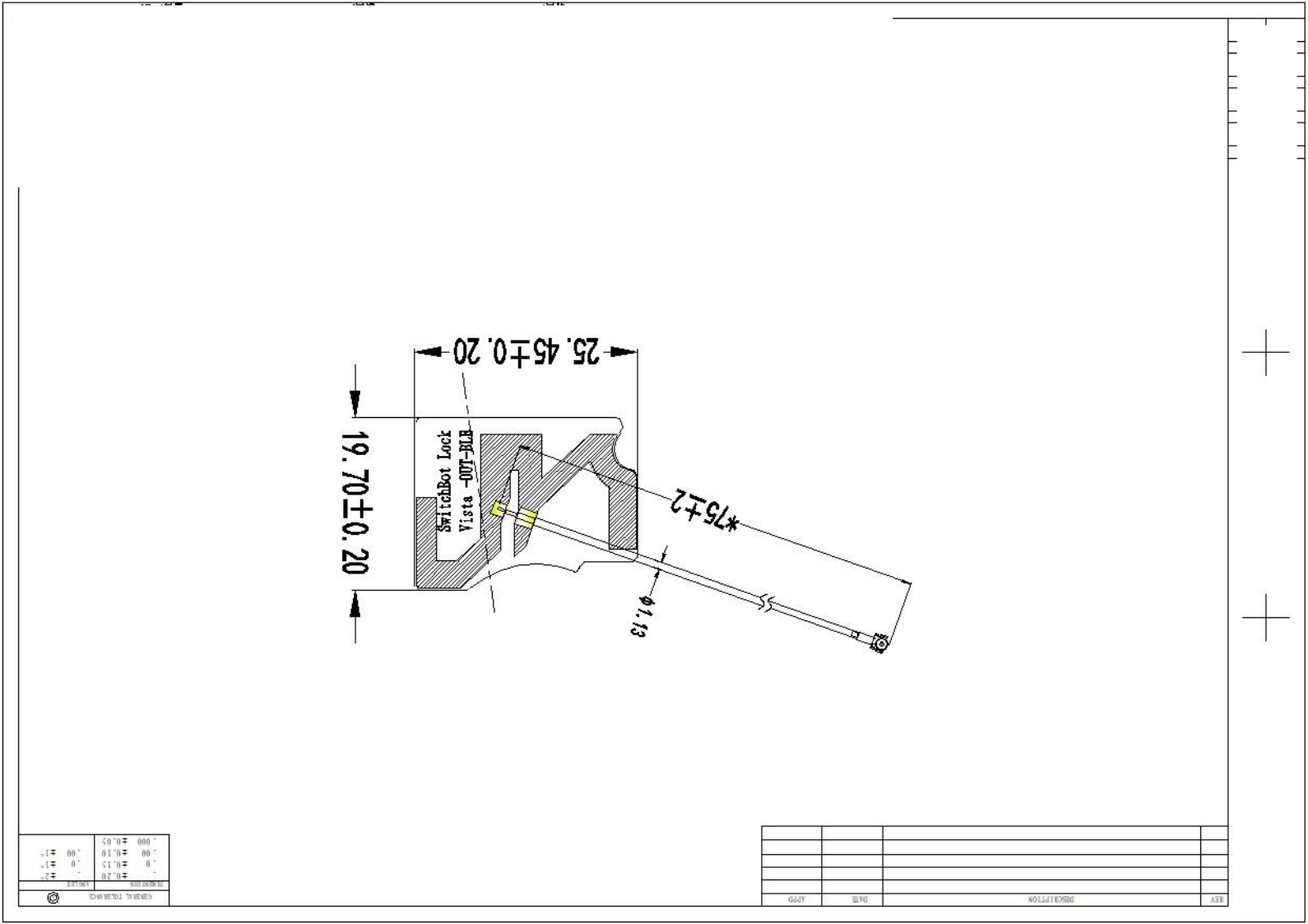
address: Room 201, Building 2, Nantaiyun Chuanggu Park, Tangwei Community, Fenghuang Street, Guangming District, Shenzhen City, Guangdong Province

rear lock-BLE:



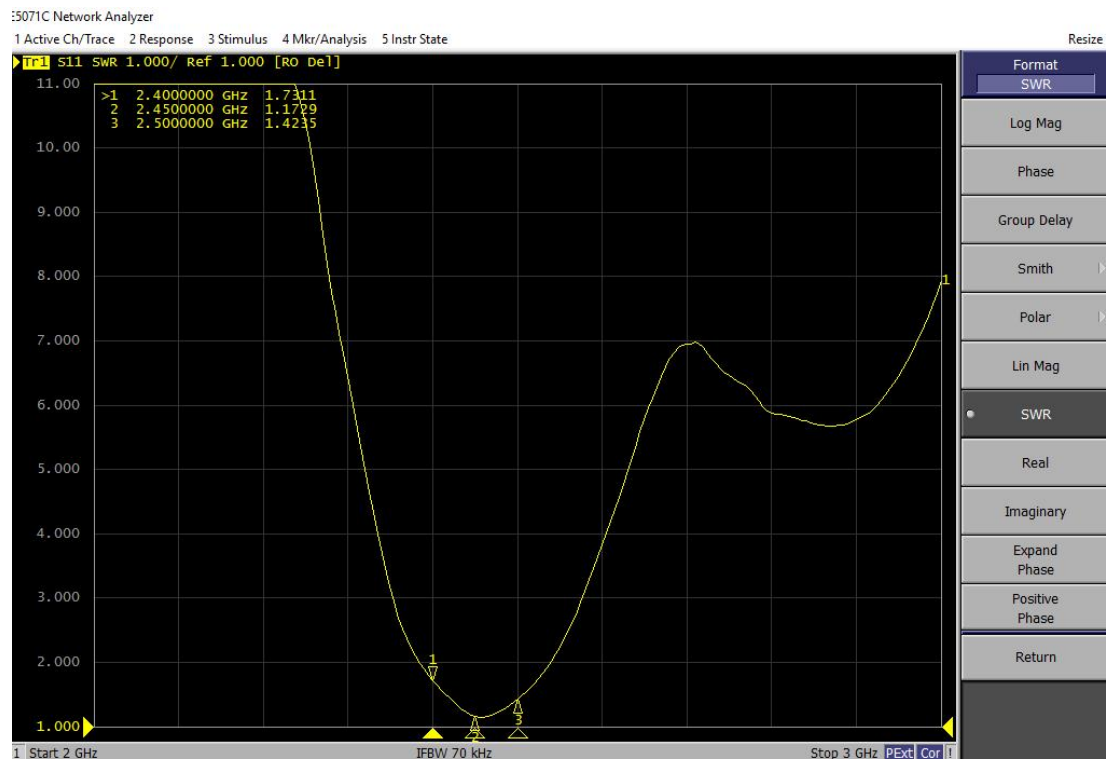
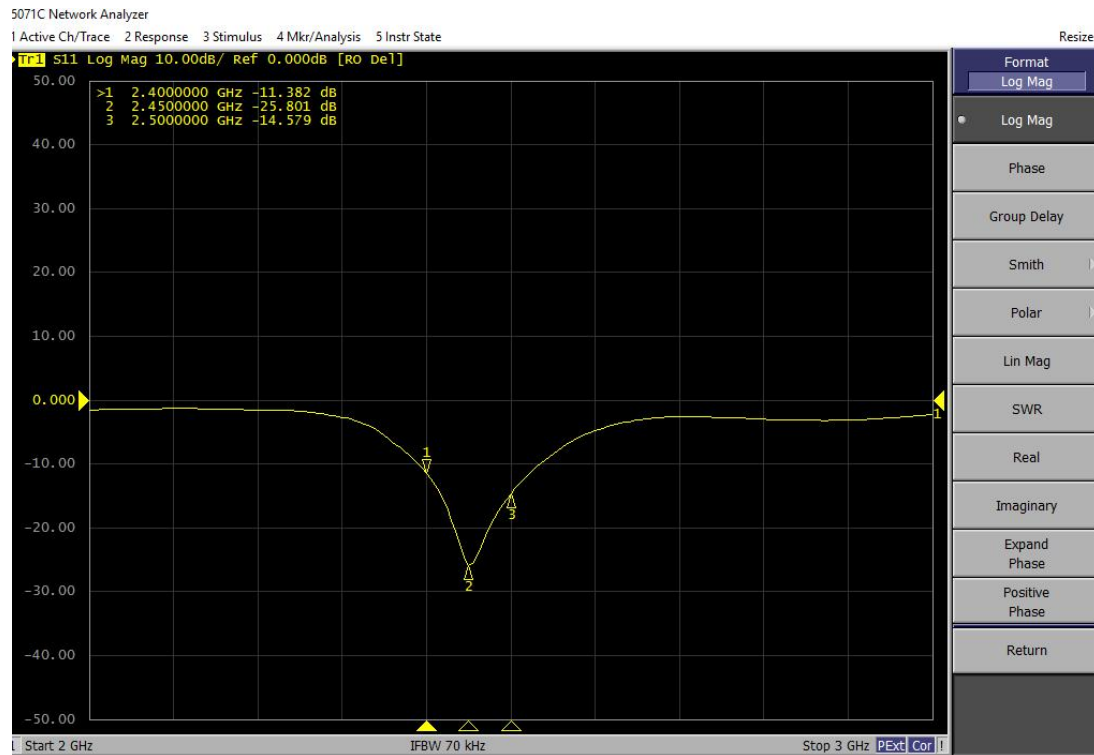
Shenzhen Shuodian Electronic Technology Co., Ltd

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(MHz)	2400	2450	2500
Return Loss	-11.38	-25.80	-14.57
VSWR	1.73	1.17	1.42

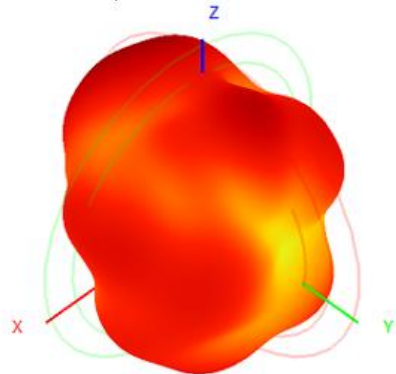




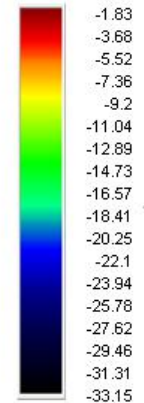
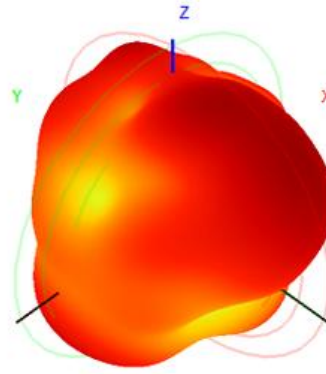
(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	-1.71	-1.63	-1.74	-1.75	-1.79	-1.83	-2.03	-2.13	-2.55	-2.98	-3.34
Efficienc (%)	17.1	16.9	16.2	16.0	15.8	15.5	14.9	14.5	13.5	13.0	12.3

2450MHz

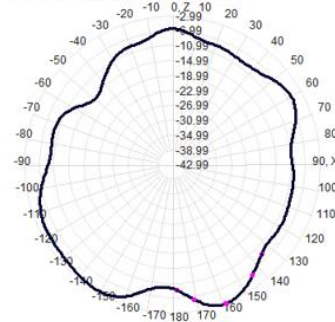
2450.0MHz H+V, Eff: 15.5%



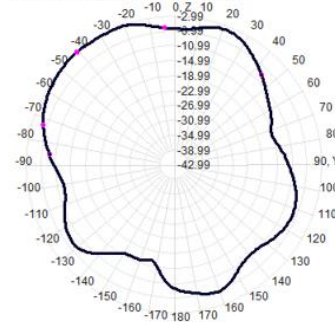
Back View



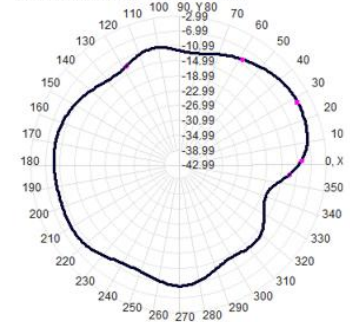
2450.0MHz Total(E1-XZ), Max=-3.13dBi



2450.0MHz Total(E2-YZ), Max=-2.99dBi



Total(H-XY), Max=-6.84dBi, CirD=11.30





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rear lock-NFC

for

SwitchBot Lock Vista-

NFC ANT

WA-SwitchBot Lock Vista-外机-NFC-FPC

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2. 一般事项

2.1 适用范围

SwitchBot Lock Vista-外机 NFC 天线

2.2 使用温度范围

本产品使用温度范围-20 ~ +65 ℃

2.3 保存温度范围

本产品保存于-30 ~ +75 ℃

3. 产品一般规格

NO.	ITEMS	DETAILS
1	机型	SwitchBot Lock Vista-外机 NFC 天线
2	频段	13.56±0.7MHz
3	天线谐振频率	13.56±1.0MHz
9	天线图片	



4. 产品规格明细

4.1 产品结构参数

4.11 产品物料组成:

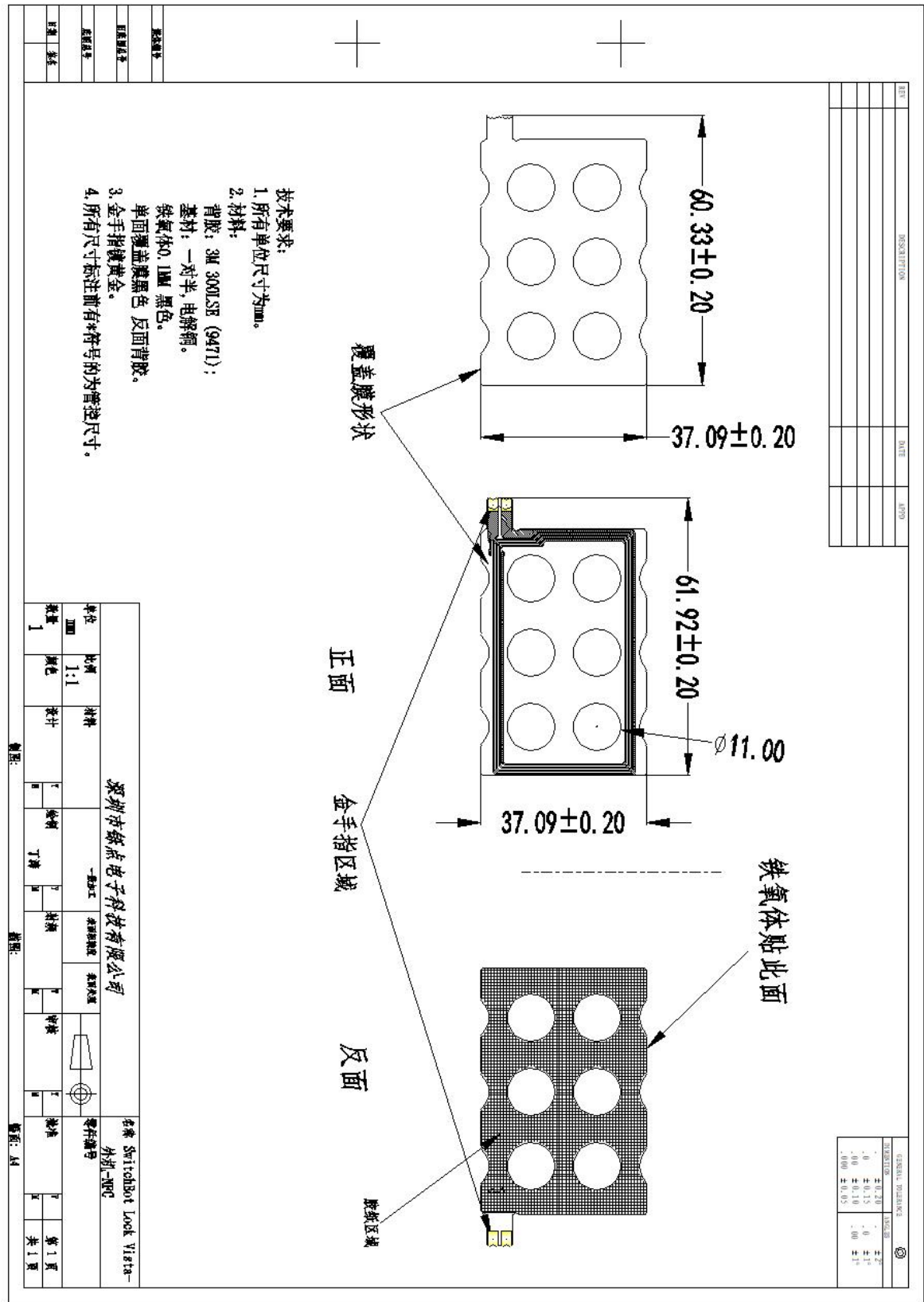
序号	材料	SPRC. (MM)	COLOR
1	FPC	61.92*37.09	BLACK

4.12 外观

产品外观良好，无伤痕、汗迹、突起等严重影响外观缺陷。

4.13 结构尺寸

产品图纸:





4.2 产品电性能测试数据

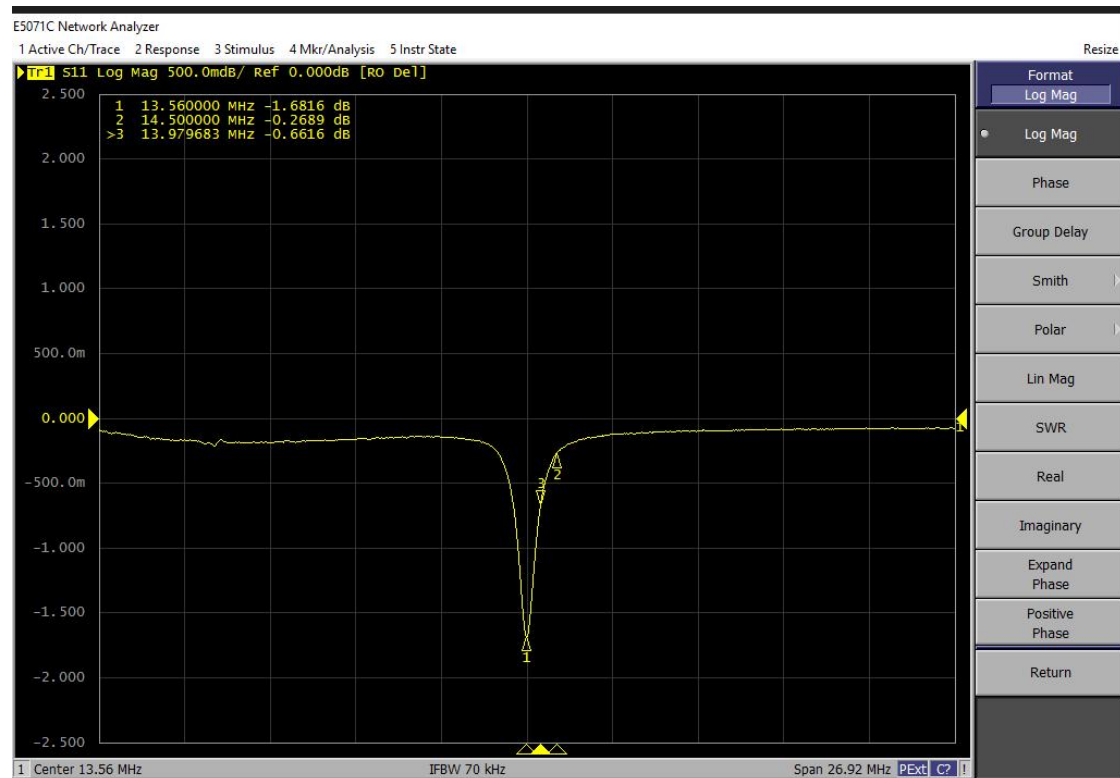
4.21 测试环境及仪器设备

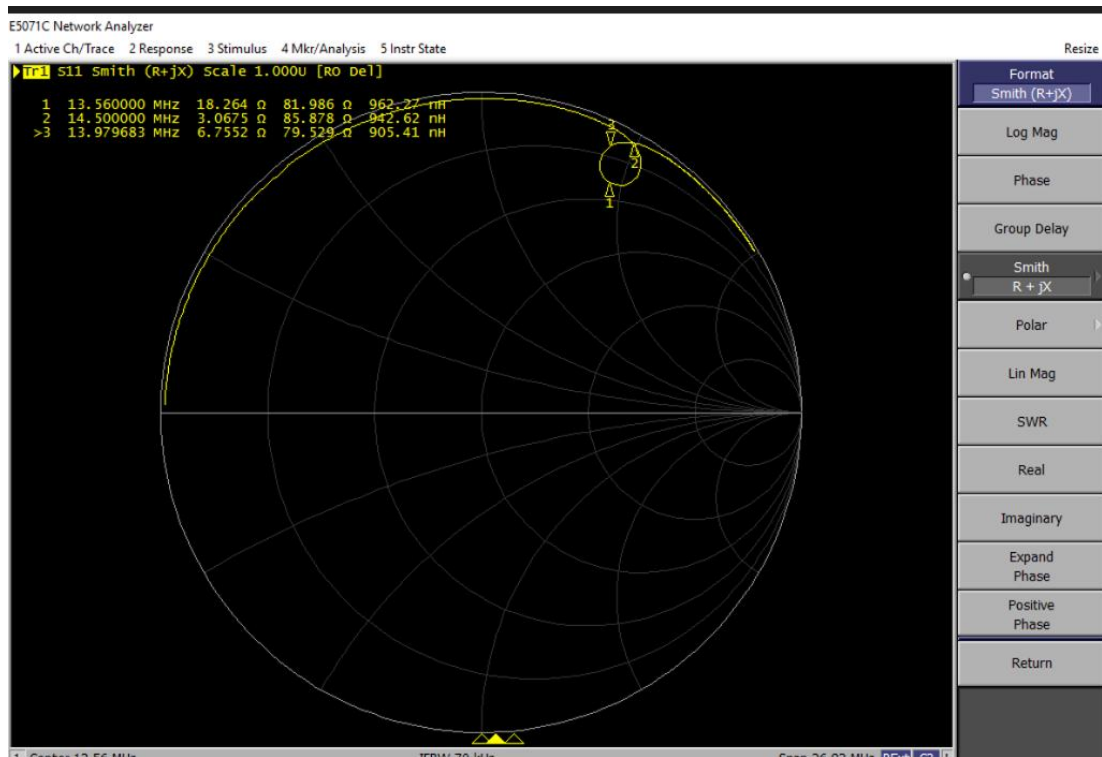
测试环境:	测试设备:
温度: 10℃——+30℃	网络分析仪
相对湿度: ≤80% (+40℃)	KEYSIGHT E5071C
大气压力: 750mmkg±30mmkg	多探头微波暗室

4.22 产品电性能测试数据:

4.22.1 天线的 S11 图:

频率 (MHz)	13.56MHz
天线谐振点	13.56MHz





附：谐振频率测试方法：

1. 连接设备，设置网络分析仪，配置 Smith，S11 参数。
2. 将 NFC 天线置于测试治具天线板上。
3. 读取 S11 曲线上 Min Marker 点，其频率为天线谐振频率。

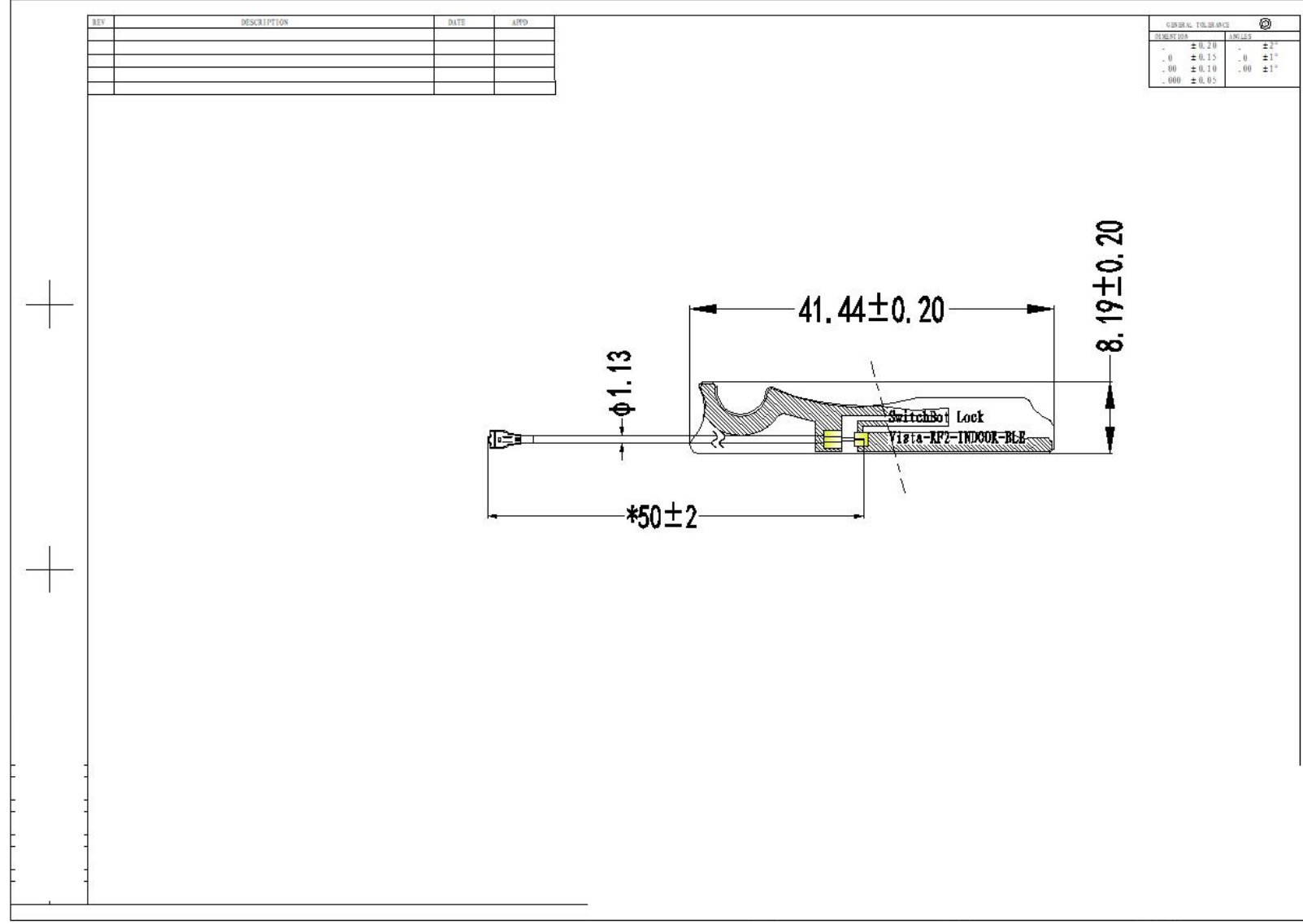
4.22.2 读卡距离测试：

D8 读卡器测试

天线	读卡器	测试卡	测试距离（单位 mm）
SwitchBot Lock Vista-外 机 NFC 天线	D8	M1 白卡	30

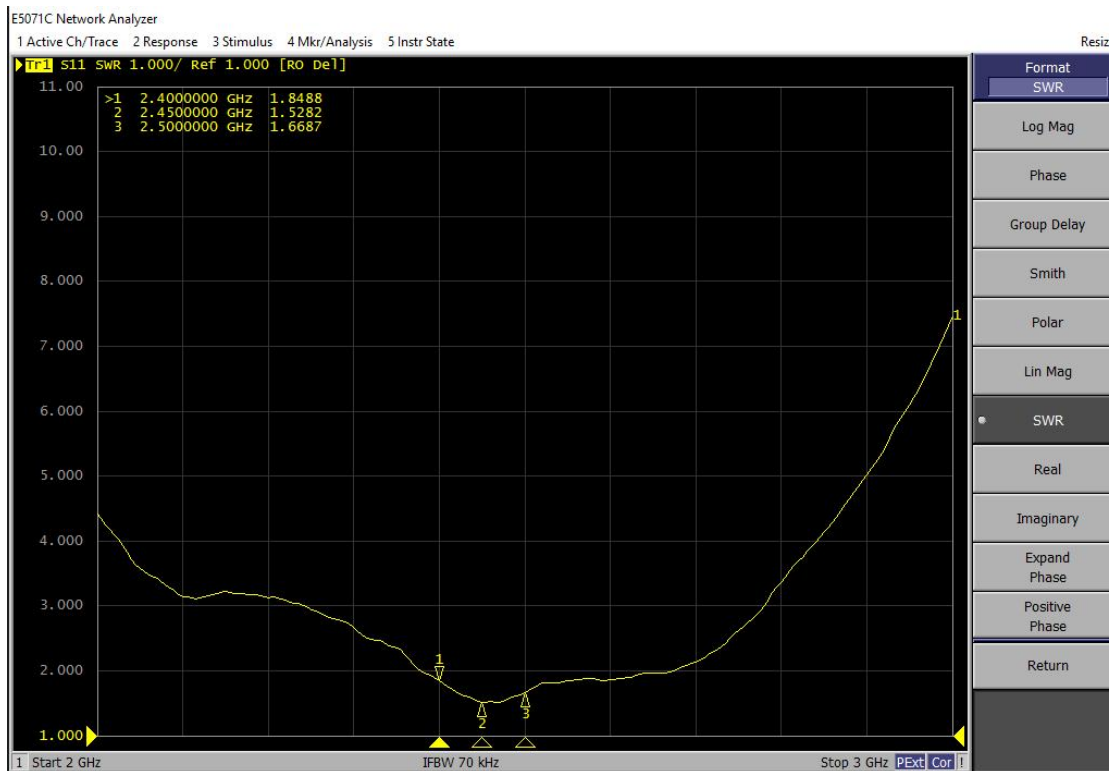
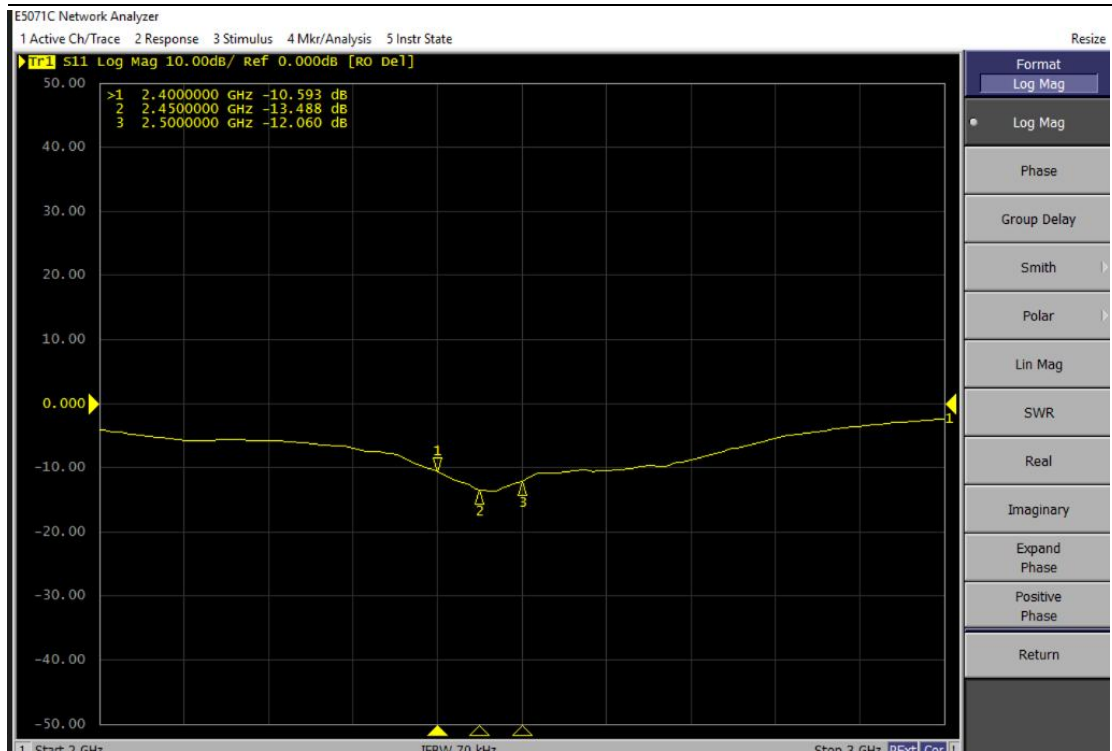


front lock-BLE:





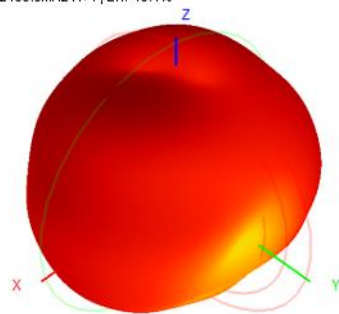
(MHz)	2400	2450	2500
Return Loss	-10.59	-13.48	-12.06
VSWR	1.84	1.52	1.66



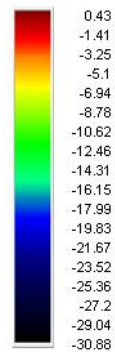
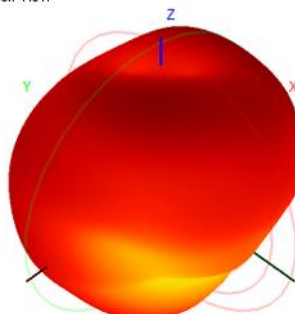


MHz	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	0.62	0.58	0.37	0.29	0.33	0.43	0.51	0.59	0.49	0.51	0.56
Efficienc (%)	40.6	41.2	40.7	40.9	40.8	40.4	39.5	38.9	37.1	36.9	36.2

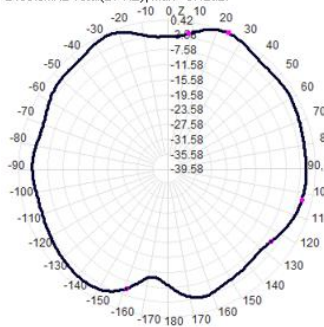
2450.0MHz H+V, Eff: 40.4%



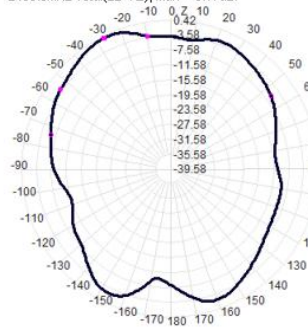
Back View



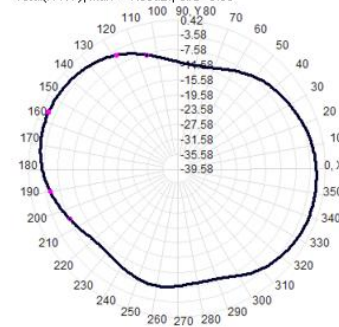
2450.0MHz Total(E1-XZ), Max= 0.42dBi

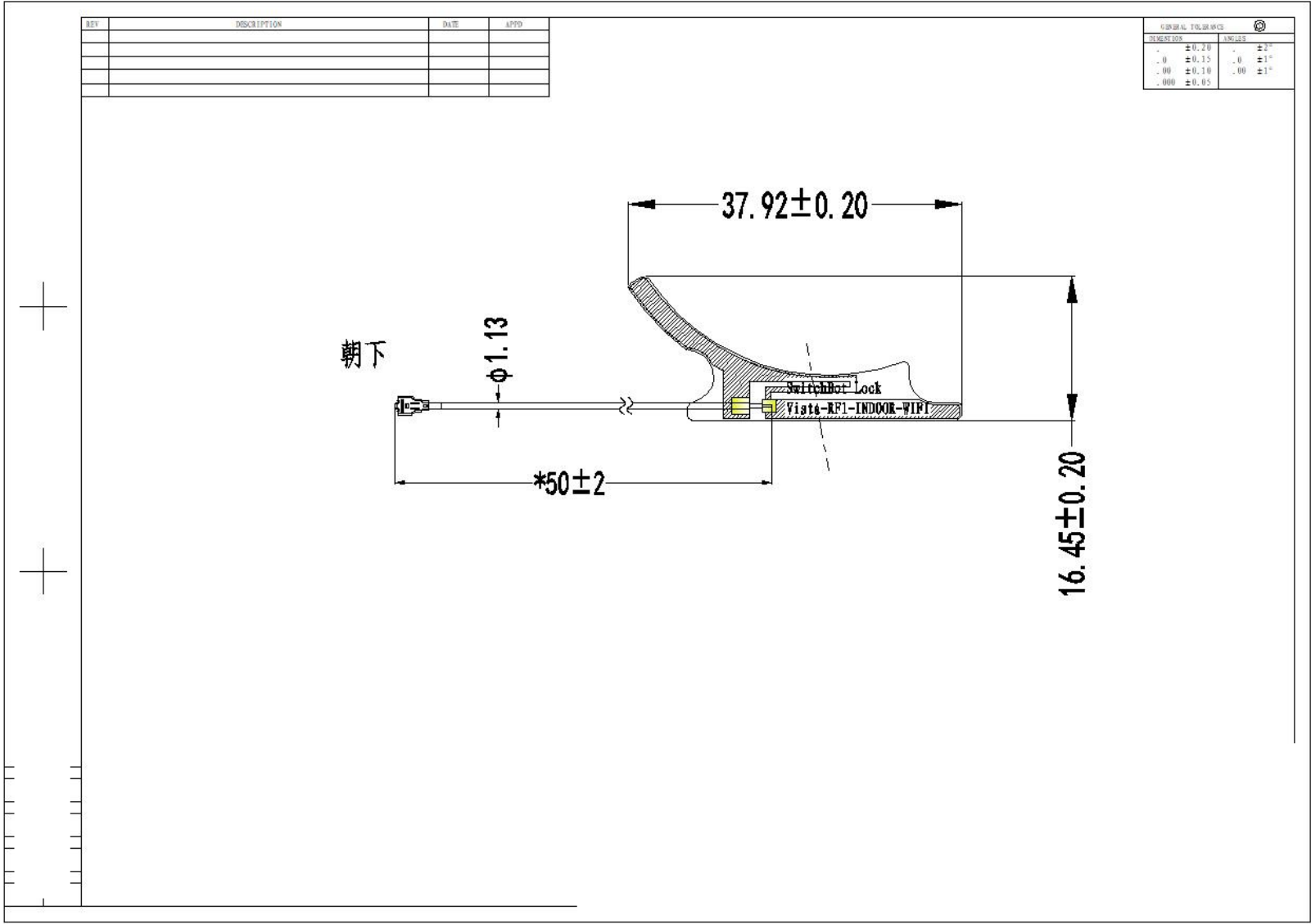


2450.0MHz Total(E2-YZ), Max= -0.17dBi



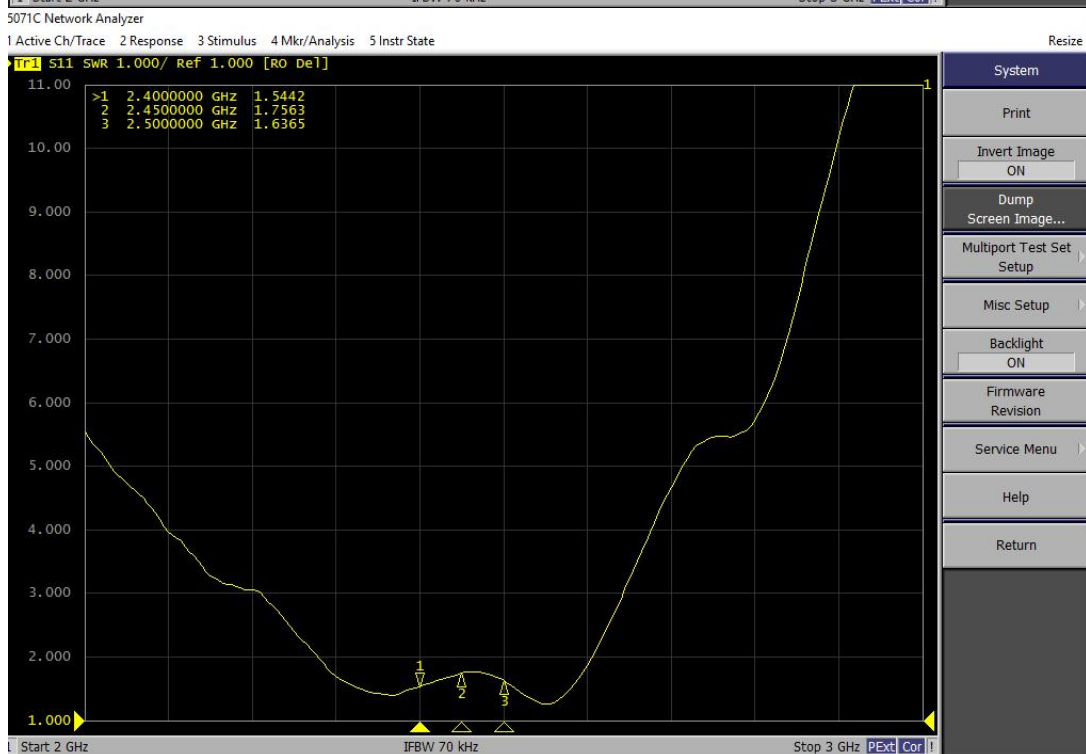
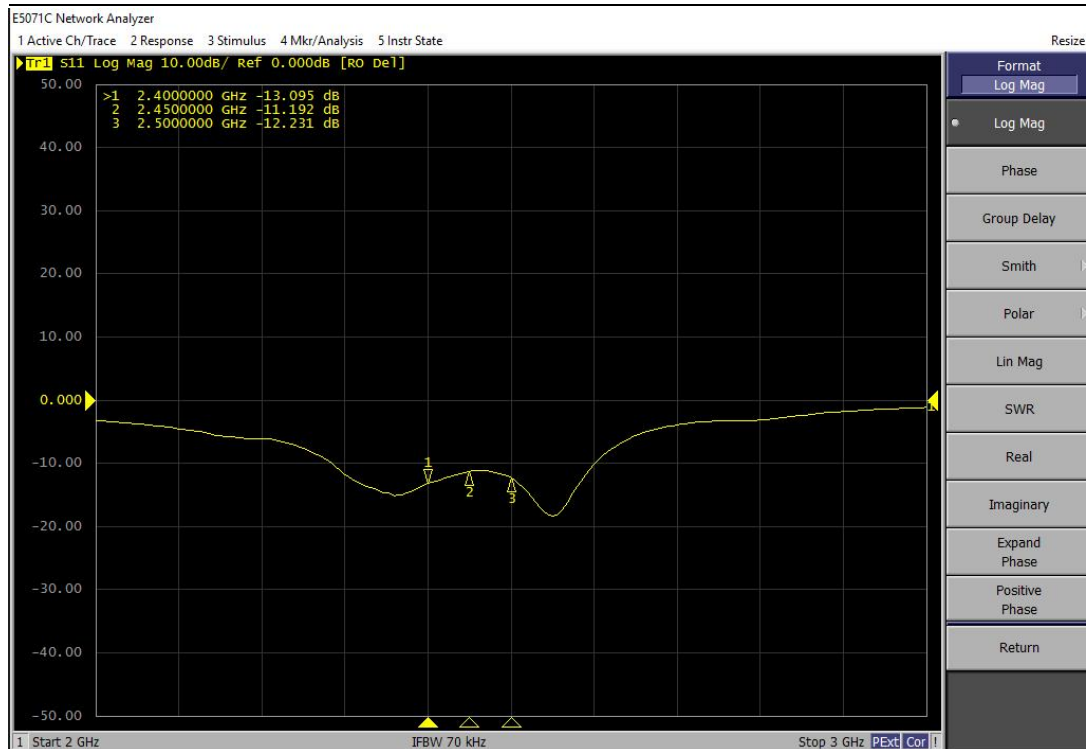
Total(H+XY), Max=- 1.80dBi, CirD=9.55







MHz	2400	2450	2500
Return Loss	-13.09	-11.19	-12.23
VSWR	1.54	1.75	1.63





MHz	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	1.17	0.86	0.45	0.08	-0.24	-0.43	-0.42	-0.23	0.04	0.35	0.50
Efficienc (%)	31.6	31.4	30.6	30.5	30.6	31.1	31.4	32.1	31.6	32.3	32.1

