

Shenzhen Yishengbang Technology Co., Ltd

Shenzhen Yishengbang Technology Co., Ltd Antenna Test Report

Customer: MADIGI

Project: T16RA

Product: WIFI Antenna—FPC

Report date: 2023.12.22

Prepared by : Fan xin zhu

Checked by : Eason Huang

Approved by :

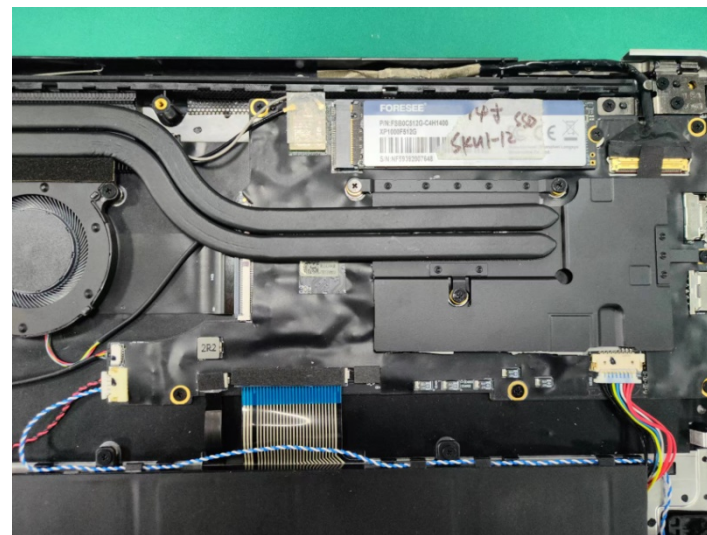
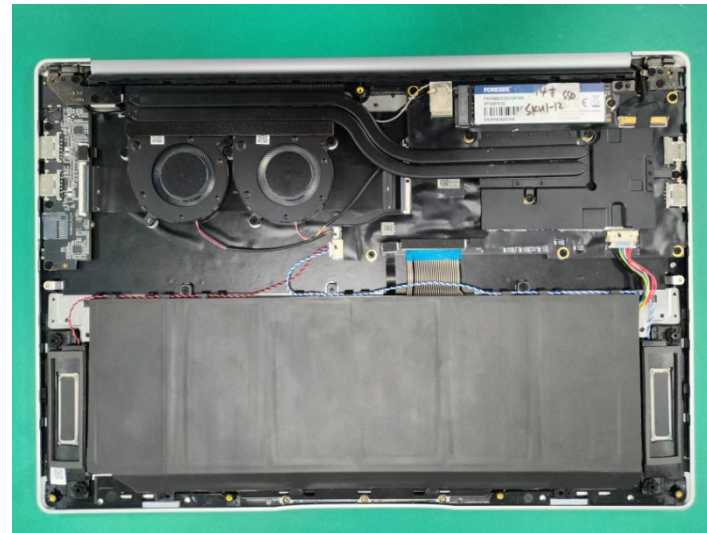
Purpose

This report is to measure the performance of SLK for Master Antenna on MADIGI. All measure data are showed below.

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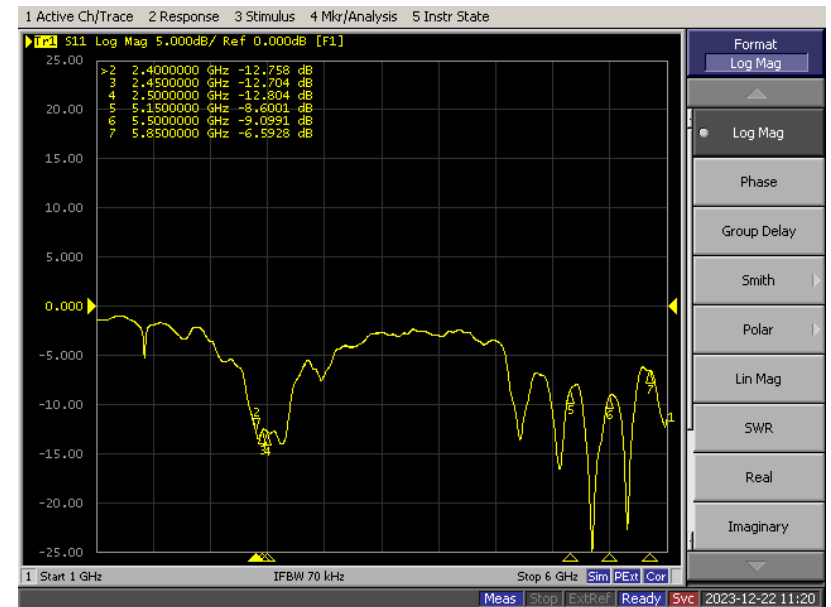
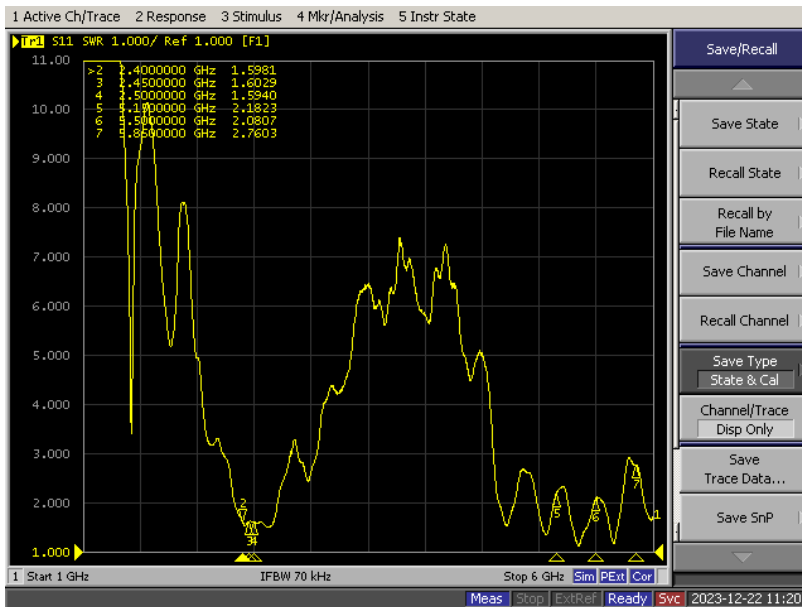
1. Product Overview



2. Test Result

2.1 VSWR/S11

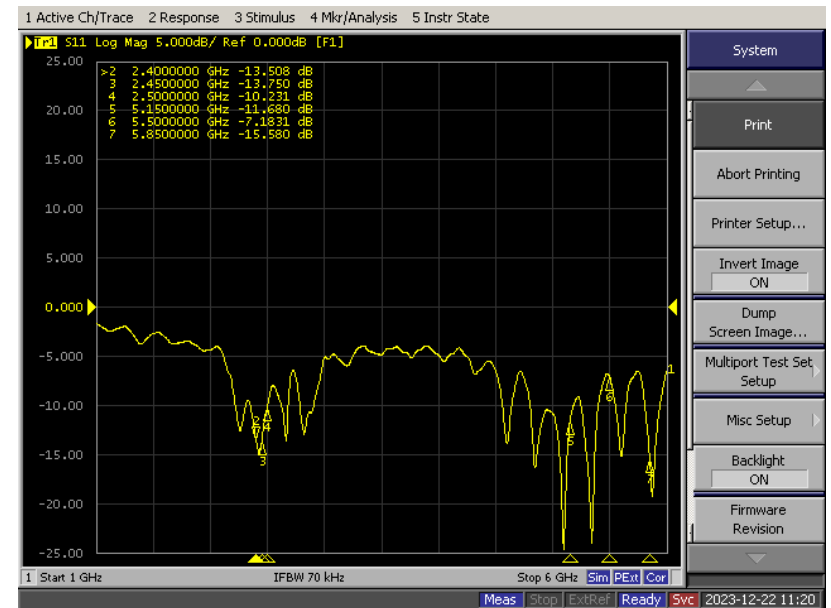
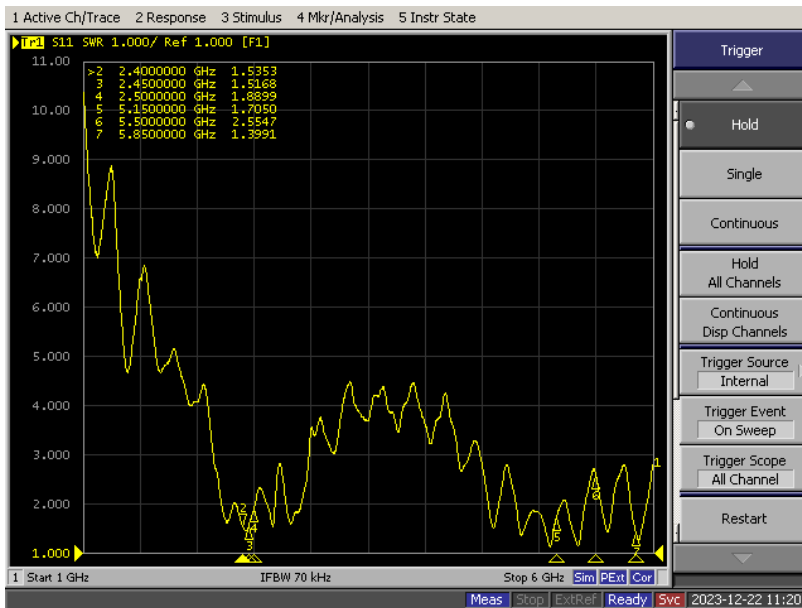
MAIN



2. Test Result

2.1 VSWR/S11

AUX



2. Test Result

2.2 Antenna Parameters



2. Test Result

2.3 WIFI Antenna TRP/TIS

WIFI	CH	TRP(54M)	TIS(54M)	WIFI	CH	TRP(11M)	TIS(11M)	WIFI	CH	TRP(54M)	TIS(54M)
802.11a	36	9.69	-71.42	802.11b	1	12.07	-83.19	802.11g	1	11.32	-71.01
	149	9.71	-71.35		7	11.83	-83.92		7	11.02	-71.31
	165	9.42	-72.71		13	10.49	-83.46		13	6.01	-70.6

WIFI	CH	TRP(MCS7)	TIS(MCS7)	WIFI	CH	TRP(MCS7)	TIS(MCS7)	WIFI	CH	TRP(MCS7)	TIS(MCS7)
802.11ac	36	9.23	-67.25	802.11an	36	9.8	-68.36	802.11n	1	10.72	-66.13
	149	9.65	-68.13		149	10.37	-68.41		7	11.12	-67.19
	165	9.47	-67.52		165	9.22	-67.64		13	5.97	-66.75

Note: The conduction power of G-mode and N-mode 13 channel is slightly lower.

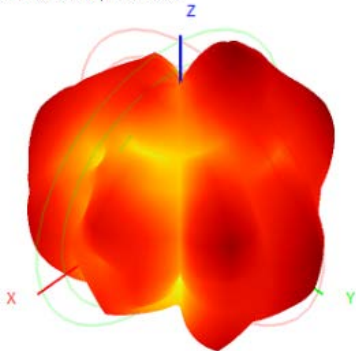
2. Test Result

2.4 WIFI Antenna Gain/Efficiency/3D DATA

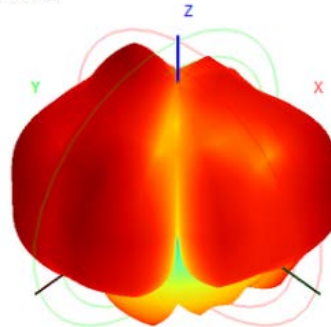
MAIN

Frequency (MHz)	2400.0	2450.0	2500.0	5150.0	5500.0	5850.0
Efficiency (dBi)	-3.74	-3.82	-3.97	-4.42	-4.65	-4.32
Gain (dBi)	2.11	1.74	2.40	0.64	0.62	2.02
Efficiency (%)	42.23	41.48	40.05	36.10	34.25	36.92

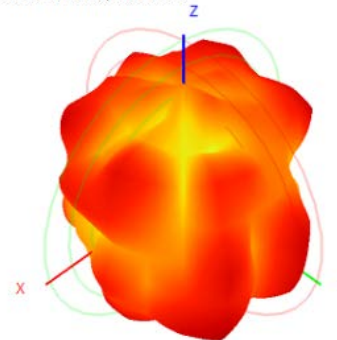
2450.0MHz H+V, Eff: 41.5%



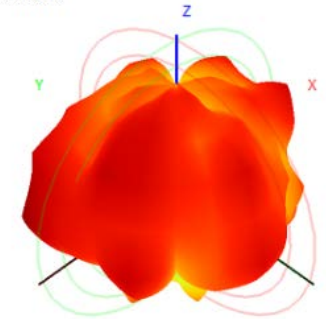
Back View



5850.0MHz H+V, Eff: 36.9%



Back View



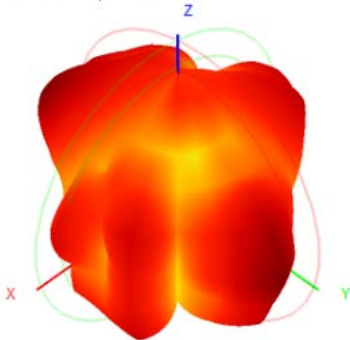
2. Test Result

2.4 WIFI Antenna Gain/Efficiency/3D DATA

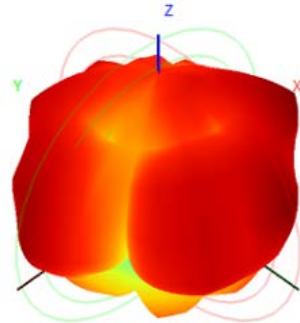
AUX

Frequency (MHz)	2400.0	2450.0	2500.0	5150.0	5500.0	5850.0
Efficiency (dBi)	-4.14	-4.49	-4.95	-4.40	-4.42	-4.41
Gain (dBi)	2.70	2.01	1.76	2.91	2.26	1.22
Efficiency (%)	38.54	35.53	32.01	36.29	36.11	36.22

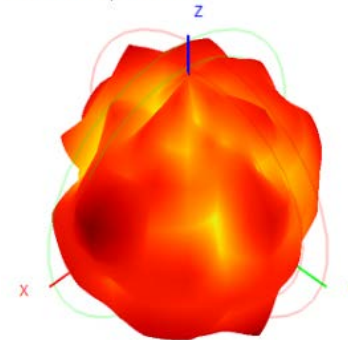
2450.0MHz H+V, Eff: 35.5%



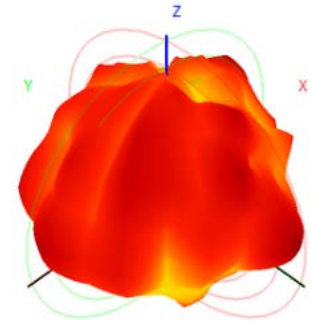
Back View



5850.0MHz H+V, Eff: 36.2%



Back View



2. Test Result

2.5 WIFI Antenna Throughput

2.4TX	2.4RX	5.8TX	5.8RX
194M	235M	929M	937M

**Test environment: Office 5M (router model: NETGERA RAX50);
Bluetooth 10 meters for playing music without stuttering.**

2. Test Result

2.6 BT Throughput

BT TX	BT RX
1.12M	1.29M

Test environment: Indoor 1M.

3. Conclusions



The position of the RF cable routing is fixed with EVA to prevent the RF cable from warping and affecting the antenna.