

SPEED TECHNOLOGY

HUIZHOU SPEED WIRELESS TECHNOLOGY CO., LTD

Approval sheet of OS-R-DR02 antenna

Customer/Project	Orionstar/OS-R-DR02	Frequency Band			
SCT P/N		Version	R:A		
Date	2023-03-28				
HISPEED					
Checked by	RF		Designed by	RF	
	ME		by	ME	
	QC		Remark		
Customer					
Date					
Confirmed by	RF				
	ME				
Remark					

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1.Indication

This report summarizes the electrical performance results of the proposed Internal antenna to support the TCH-4G program. The antenna is an assembly

1.Main

700M-960M

1710M-2690M

2.DIV

700M-960M

1710M-2690M

3.WIFI

2400M-2500M

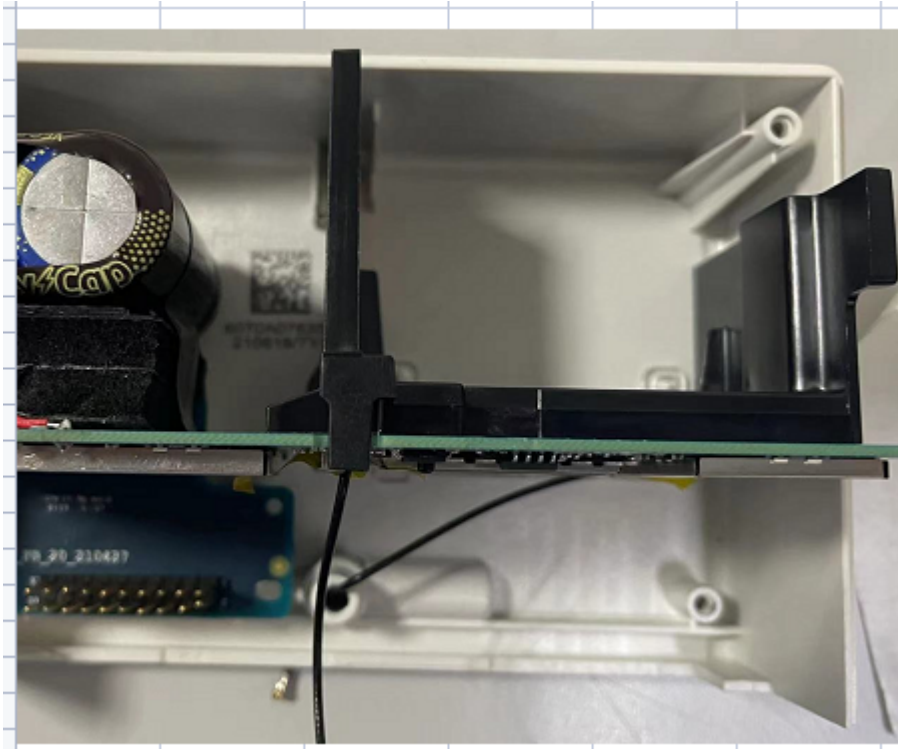
5150M-5850M

4,MIMO

2400M-2500M

5150M-5850M

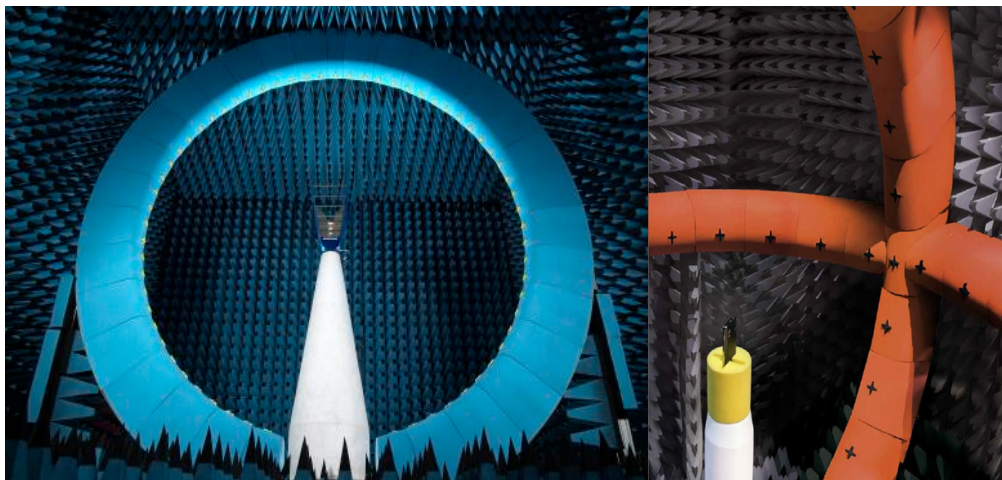
MHz antenna. (see Figure1).



1.1 Overall Performance

- Test Environment

- SATIMO SG24, 600MHz-6.0GHz
- ETS-LINDGREN, 400MHz-6.0GHz.



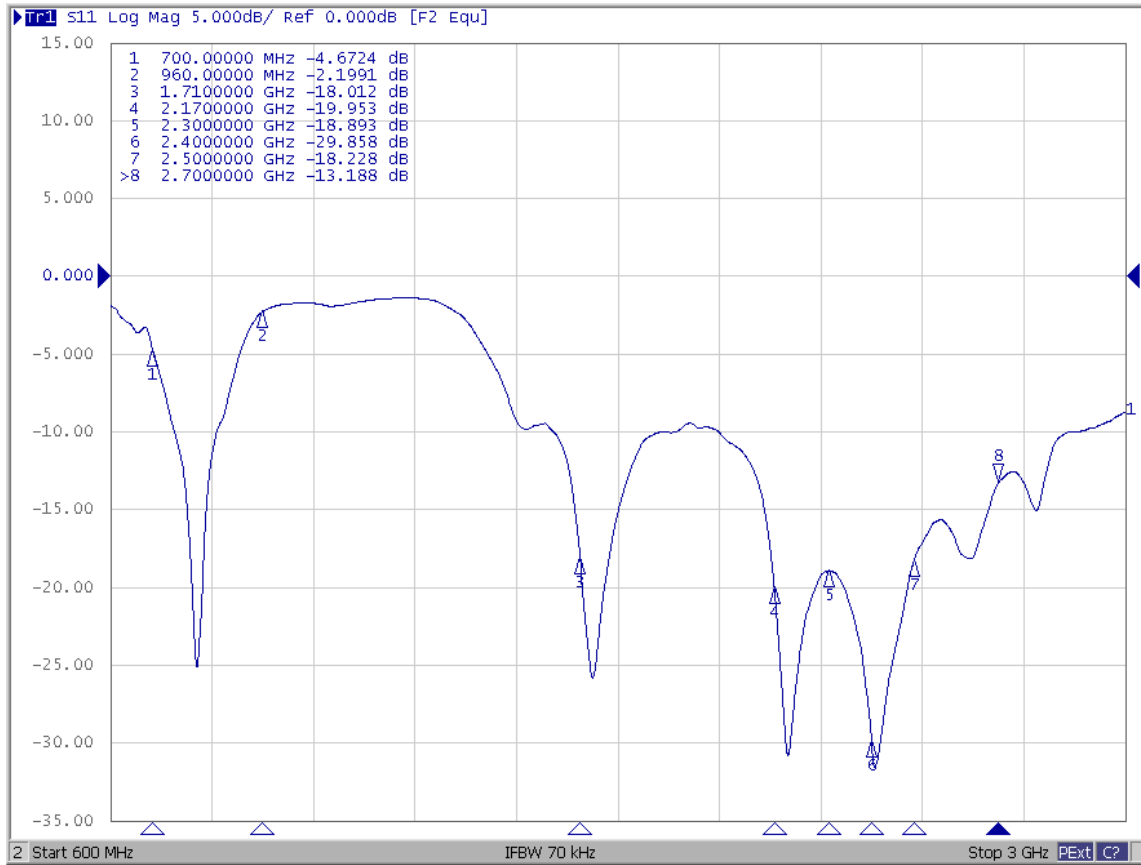
2. Electrical Performance

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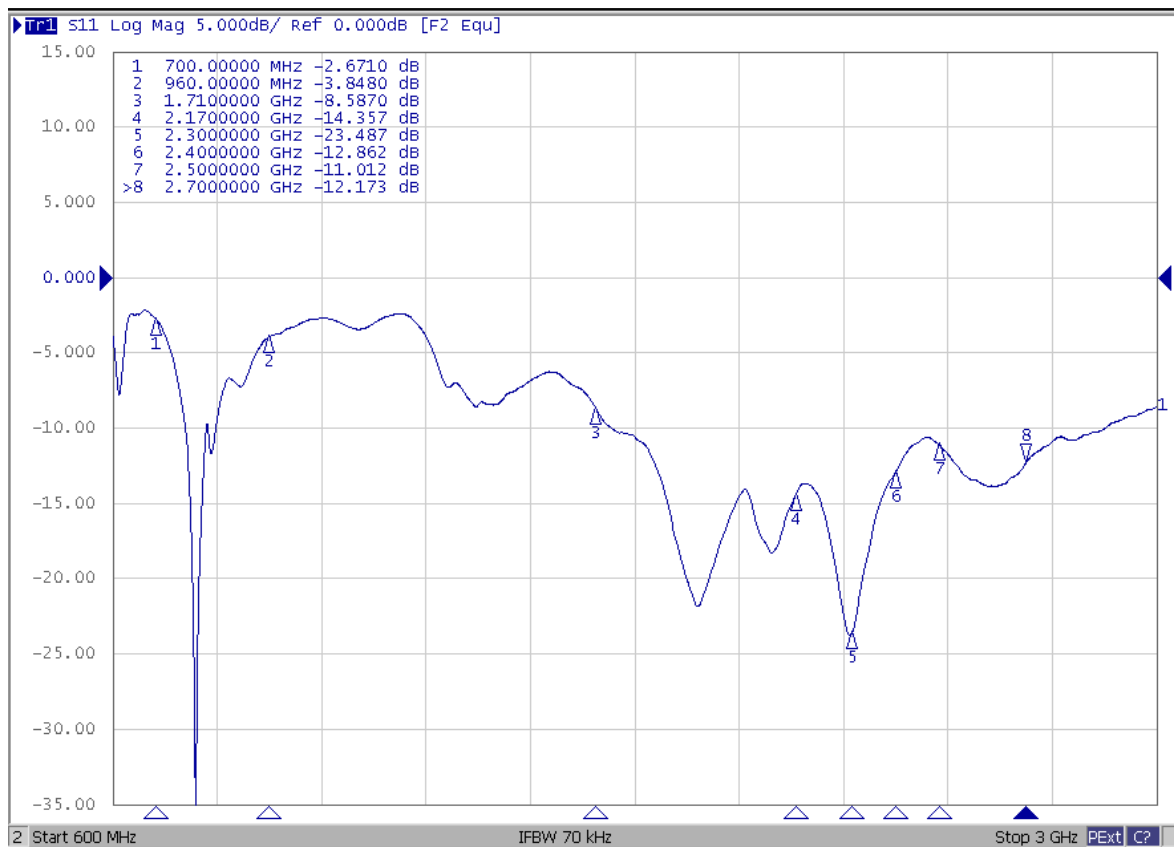
2.1 Measurement Data

2.1.1 S11

Main

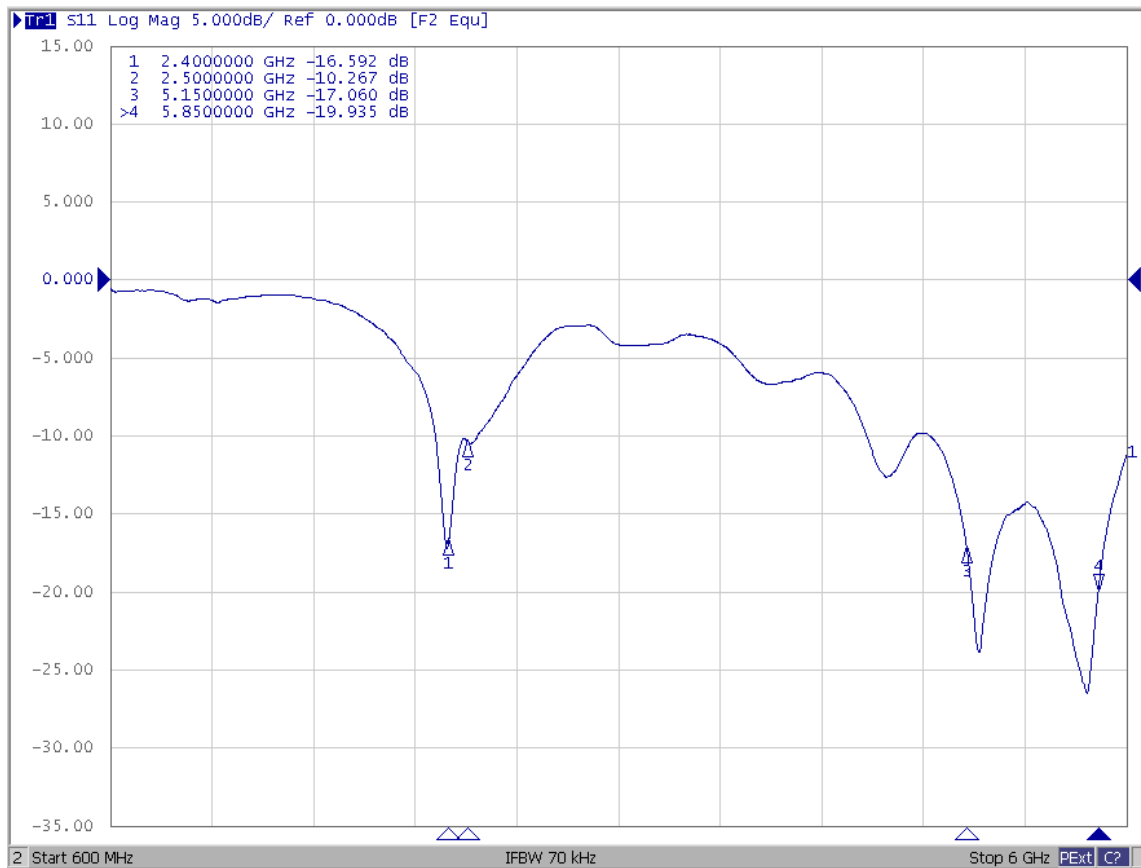


DIV



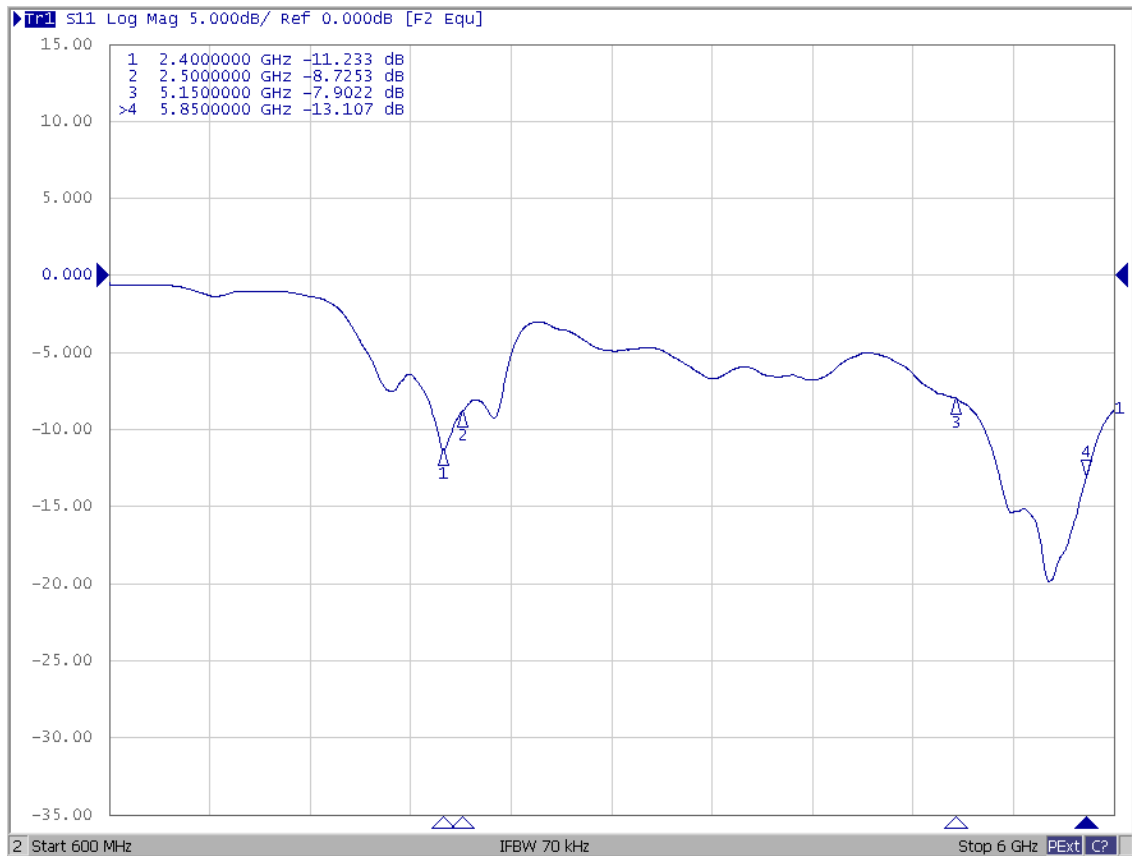
WIFI

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MIMO

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Return loss

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2.1.2 Average gain

CE

LTE Band1:2.33dBi
LTE Band3:2.58dBi
LTE Band5:-1.51dBi
LTE Band7:2.72dBi
LTE Band8:-0.64dBi
LTE Band20:1.11dBi
LTE Band28:1.11dBi
LTE Band38:3.82dBi
LTE Band40:3.82dBi

FCC

LTE Band2:3.79dBi
LTE Band4:4.13dBi
LTE Band5:-1.51dBi
LTE Band7:2.72dBi
LTE Band12:1.11dBi
LTE Band13:1.11dBi
LTE Band25:3.76dBi
LTE Band26:-1.51dBi
LTE Band38:3.82dBi
LTE Band41:3.82dBi

WiFi

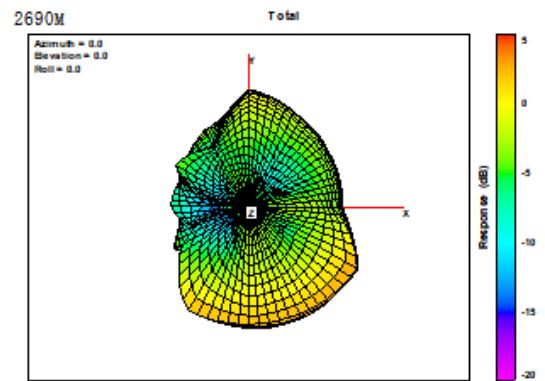
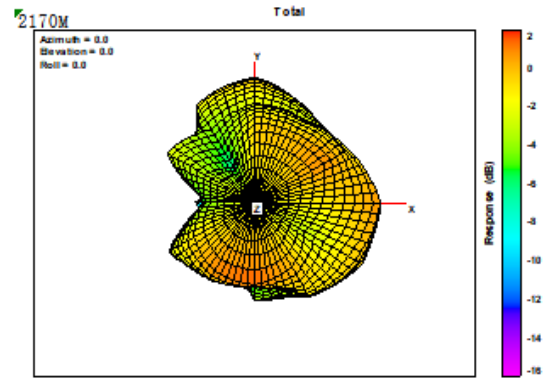
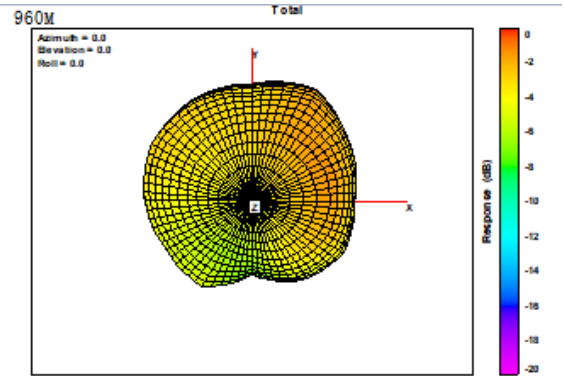
2.4G:0.37
5.15G:0.98
5.85G:1.55

WiFi-MIMO

2.4G:1.32
5.15G:2.88
5.85G:0.35

MAIN

RX

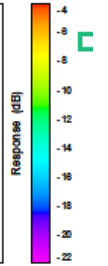
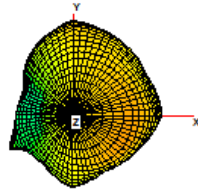


TX

3D
700M

Azimuth = 0.0
Elevation = 0.0
Roll = 0.0

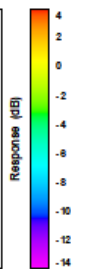
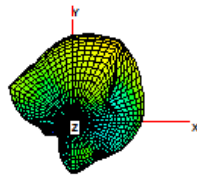
Total



1.710M

Azimuth = 0.0
Elevation = 0.0
Roll = 0.0

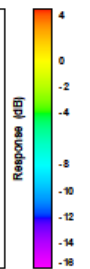
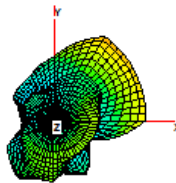
Total



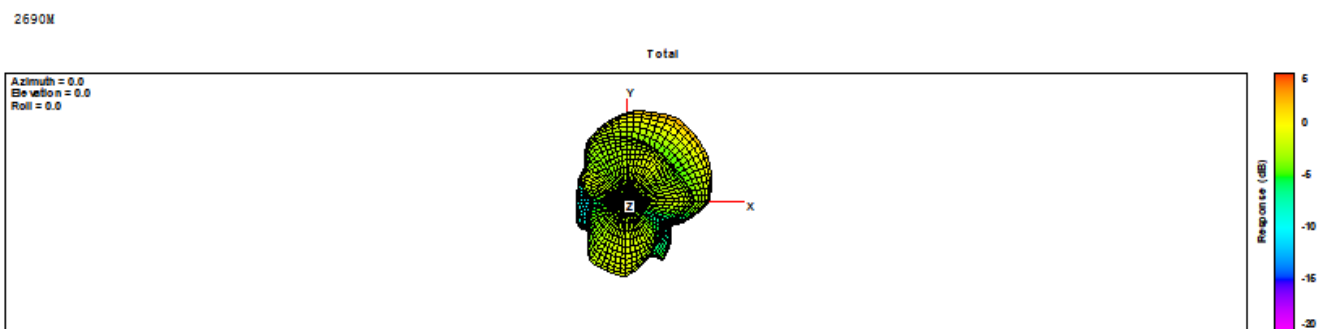
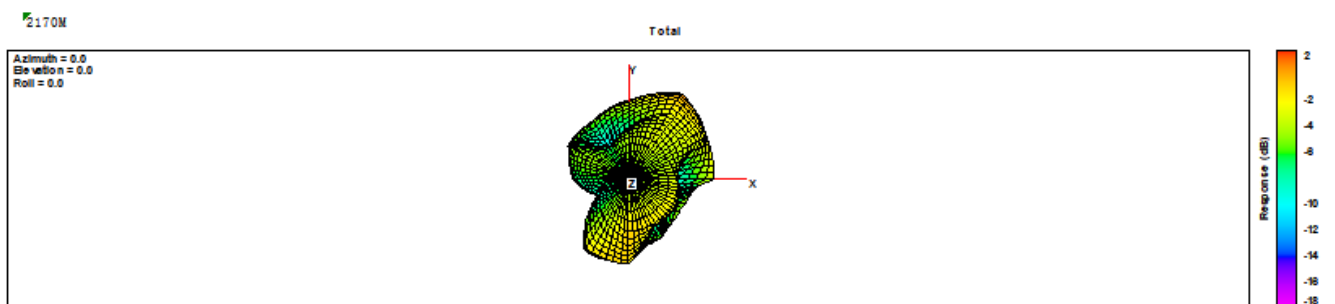
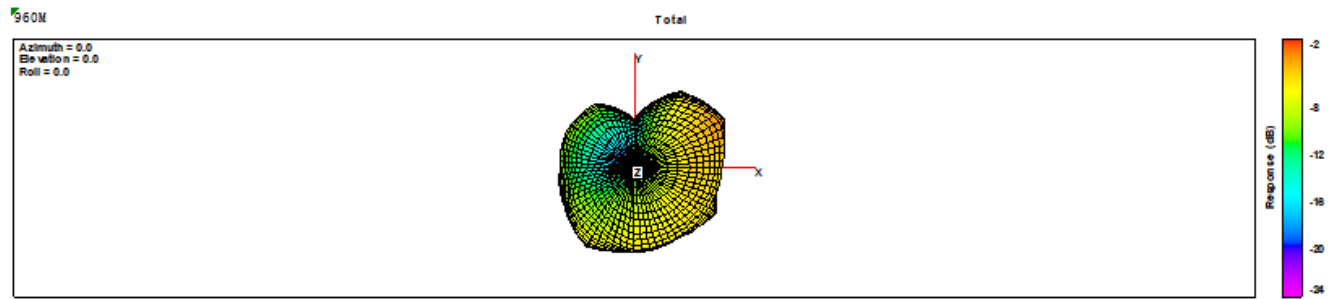
2.500M

Azimuth = 0.0
Elevation = 0.0
Roll = 0.0

Total



RX



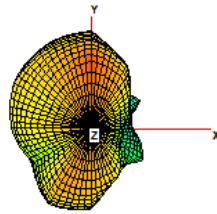
WIFI

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3D
2400M

Azimuth = 0.0
Elevation = 0.0
Roll = 0.0

Total



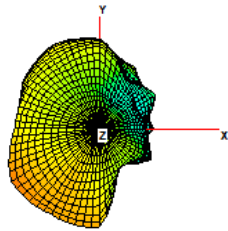
Response (dB)

4
0
-2
-4
-6
-8
-10
-12
-14
-16

5150M

Azimuth = 0.0
Elevation = 0.0
Roll = 0.0

Total



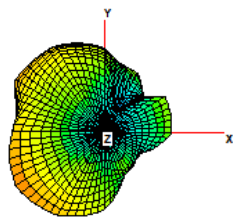
Response (dB)

5
0
-5
-10
-15
-20

5850M

Azimuth = 0.0
Elevation = 0.0
Roll = 0.0

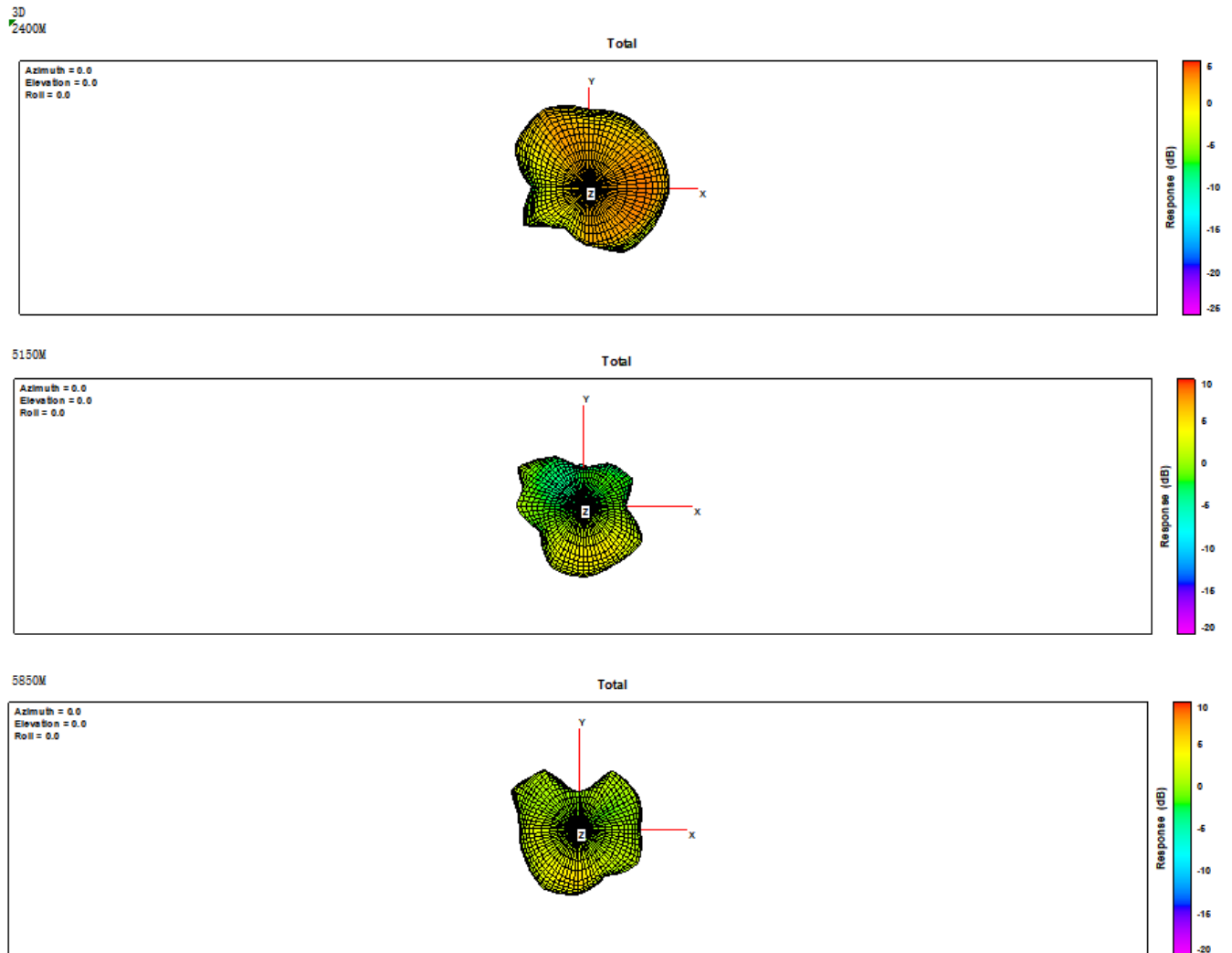
Total



Response (dB)

5
0
-5
-10
-15
-20

MIMO



3. Suggestions and Conclusion

This report summarizes the electrical performance of internal antenna for TCH-4G The antenna

Antenna size

176.09*31.01*66.11MM

