

# Mobile Station Over-The-Air Summation Test Report.

## On the 2G/3G/4G/WiFi/Bluetooth/GPS Mode

Report No.:

HW Version:

Testing Performed at Guangping OTA Lab

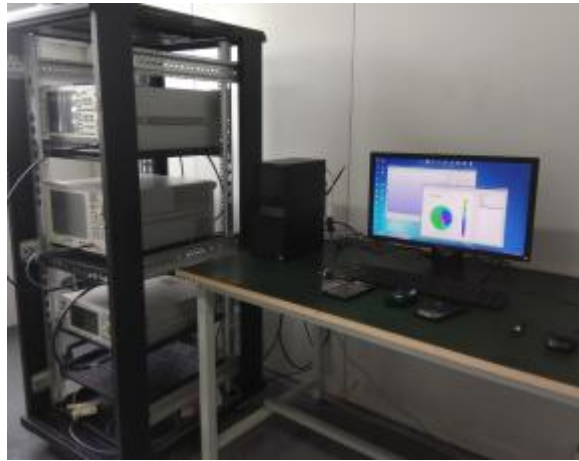
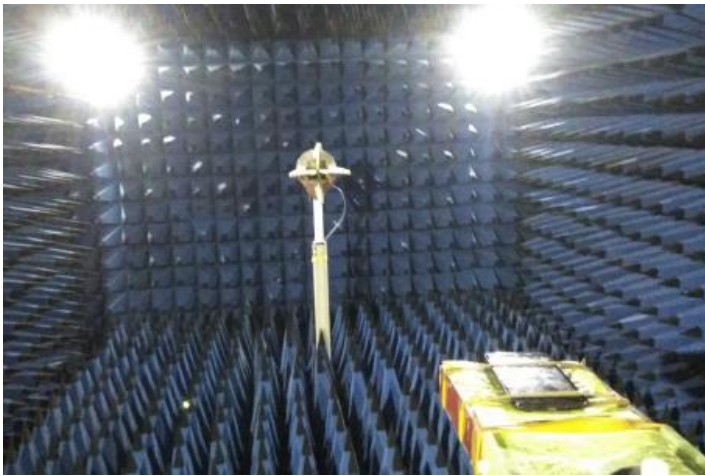
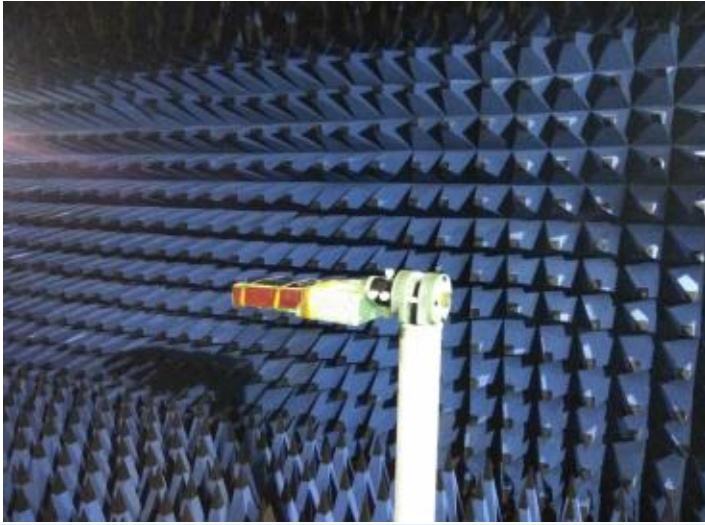
[CoolRuijie R & D Center]

[Date] 12/07/2023

[Shenzhen Guangming District Huaqiang Creative Industrial Park]

	Name	Function	Date	Signature
<i>Test performed by:</i>	[宋祖义]	Antenna RF engineer	[12/07/2023]	
<i>Report created by:</i>	[安增侠]	RF Leader ODM China or PM	[12/07/2023]	

# 1. Test System General Information.



## 2. Antenna types and locations

GPS/WIFI/BT(PIFA)

4G Diversity(PIFA)

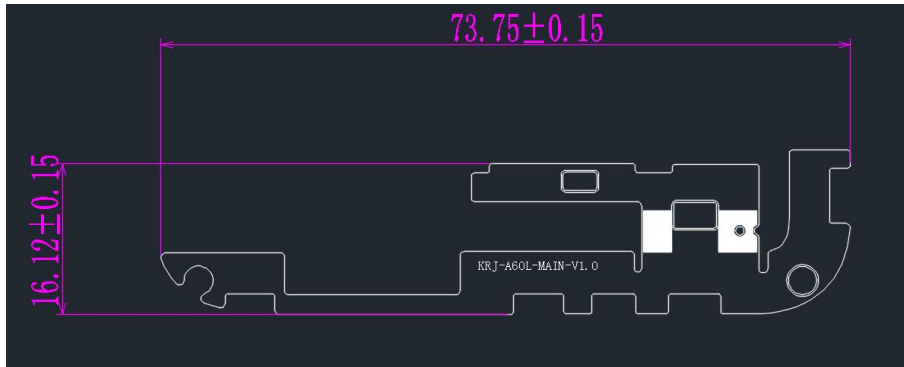


2G/3G/4G Main Antenna(PIFA)

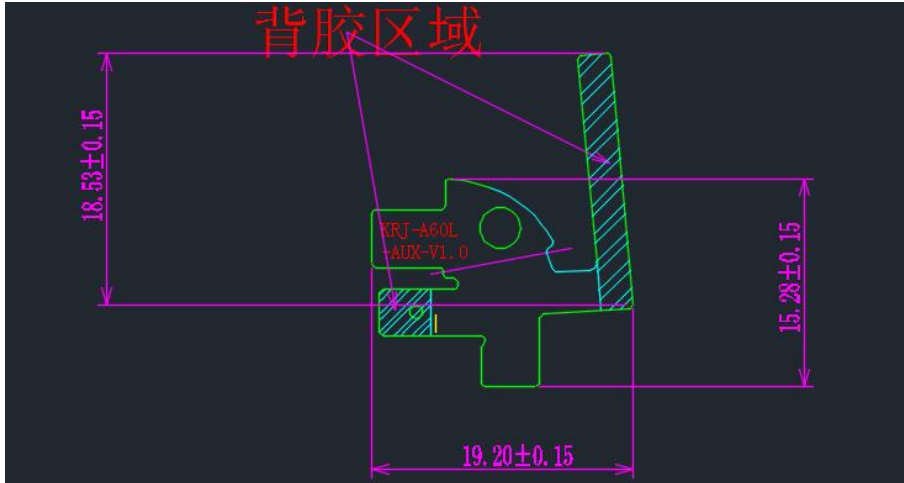


### 3. Design and printed pattern

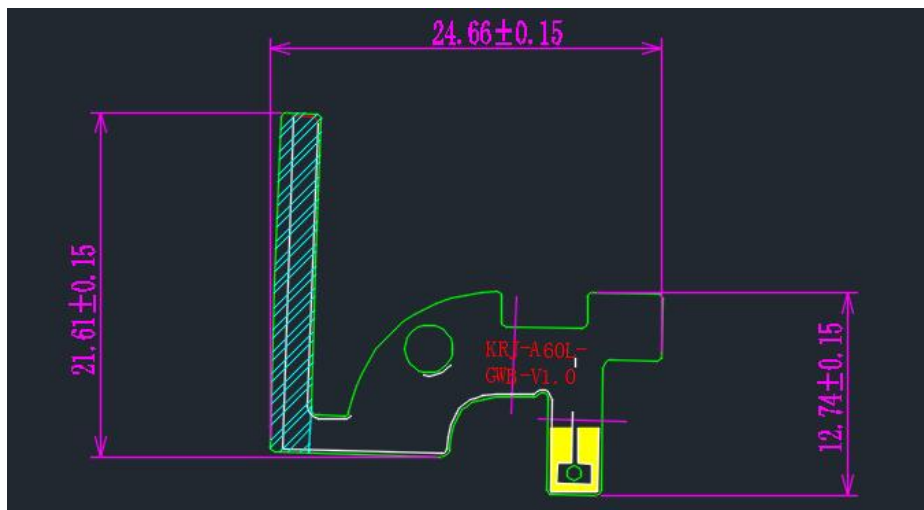
#### main antenna



#### Diversity antenna



#### GPS / WIFI / BT antenna

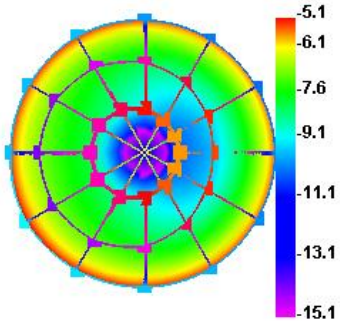


### 3. Antenna gain, direction diagram:

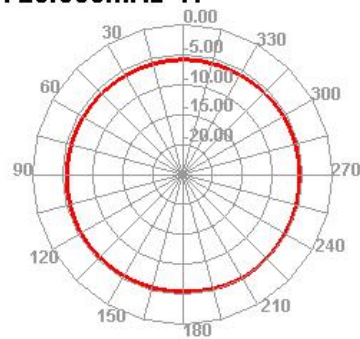
#### main antenna

Passive Test For 824-2700		
Freq	Effi	Gain
(MHz)	(%)	(dBi)
720	23.4	-0.3
790	25.3	-0.3
850	34.1	0.6
1710	41.3	1.5
1870	45.5	1.5
2040	43.9	1.5
2690	42.8	1.5

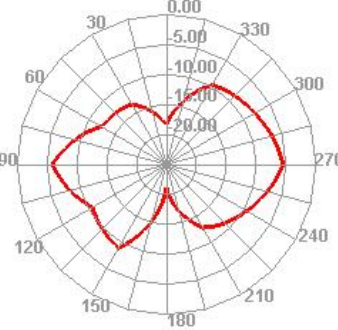
720.000MHz



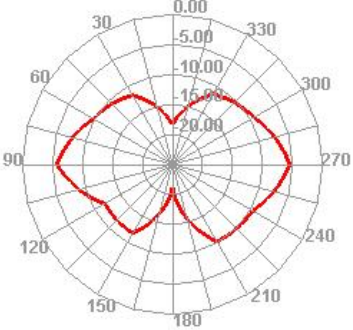
720.000MHz H



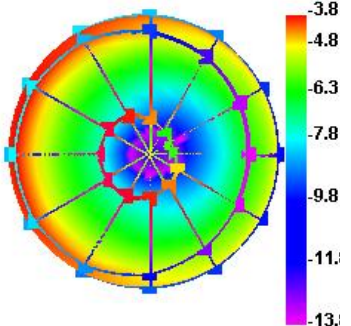
720.000MHz E1



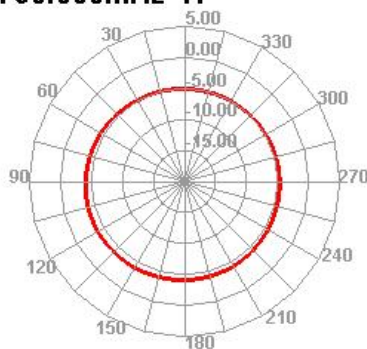
720.000MHz E2



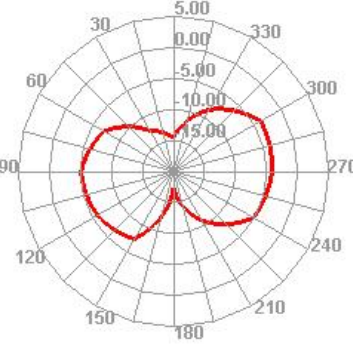
790.000MHz



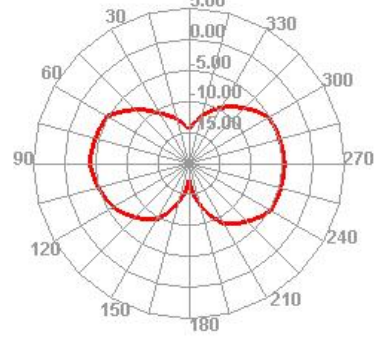
790.000MHz H



790.000MHz E1

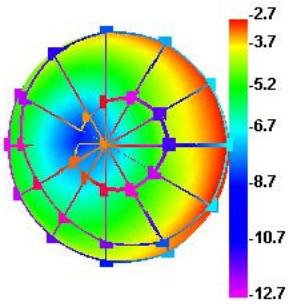


790.000MHz E2

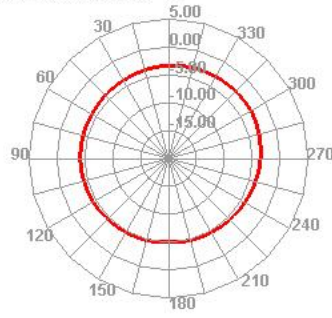




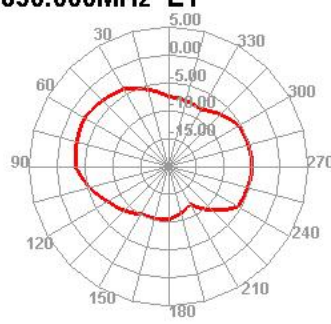
850.000MHz



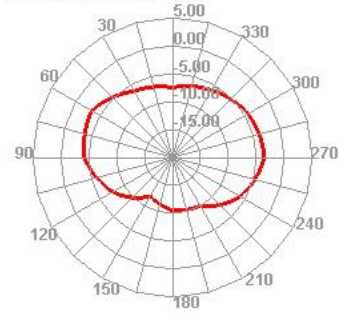
850.000MHz H



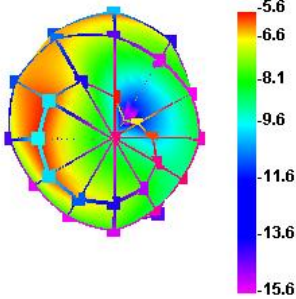
850.000MHz E1



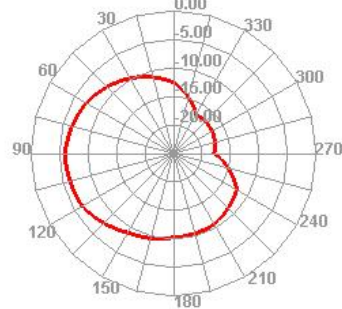
850.000MHz E2



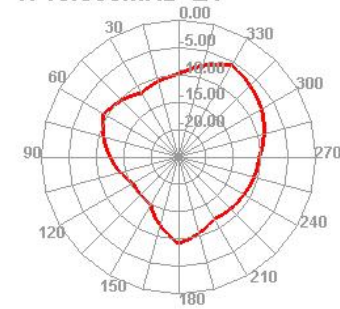
1710.000MHz



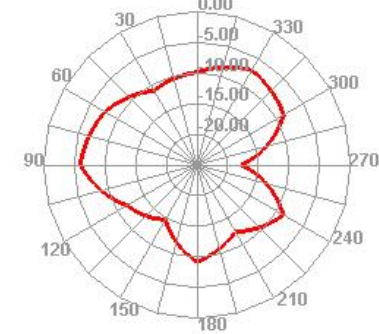
1710.000MHz H



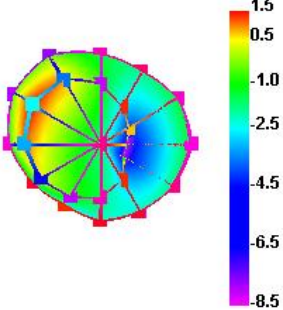
1710.000MHz E1



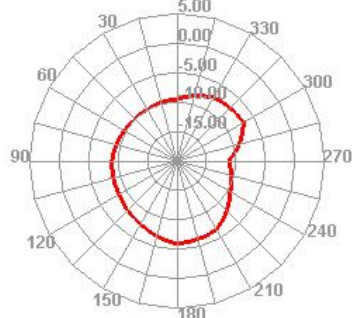
1710.000MHz E2



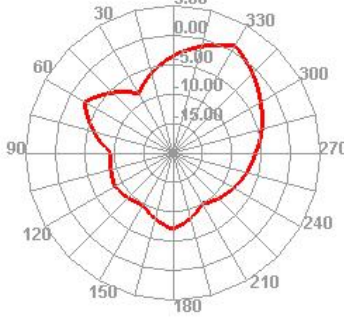
1870.000MHz



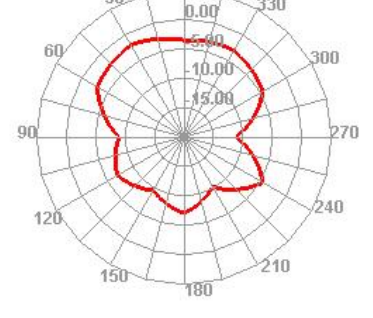
1870.000MHz H



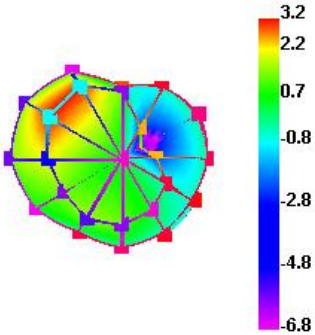
1870.000MHz E1



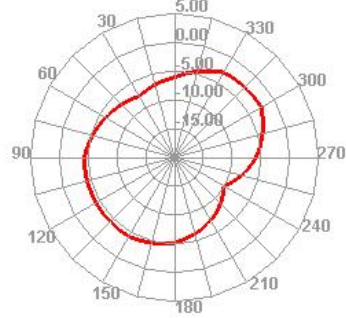
1870.000MHz E2



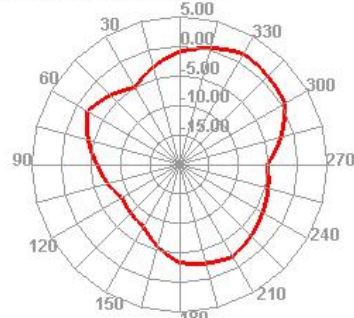
2040.000MHz



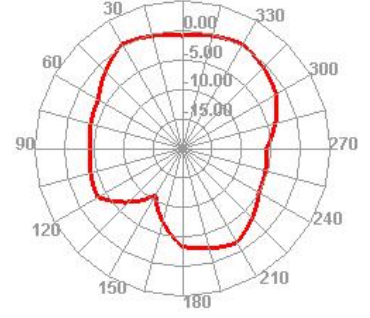
2040.000MHz H



2040.000MHz E1

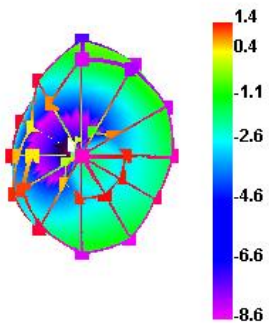


2040.000MHz E2

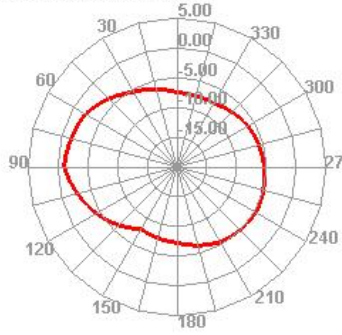




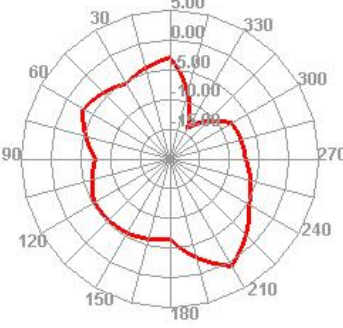
2690.000MHz



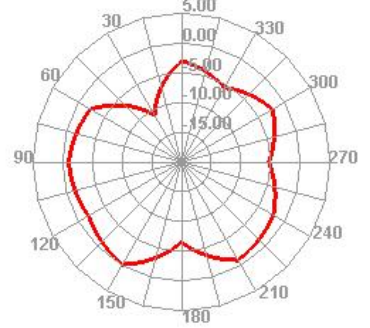
2690.000MHz H



2690.000MHz E1



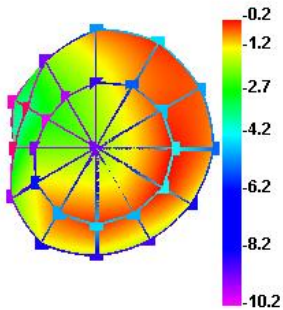
2690.000MHz E2



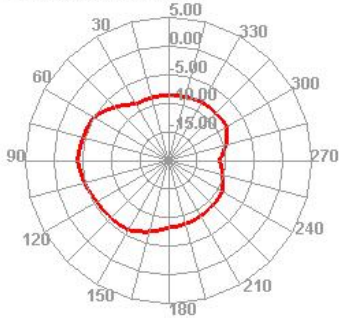
Diversity antenna

Passive Test For 1780-2700		
Freq	Effi	Gain
(MHz)	(%)	(dBi)
1790	30.2	0.5
1920	31.5	0.7
2120	32.8	0.7
2600	30.7	0.5

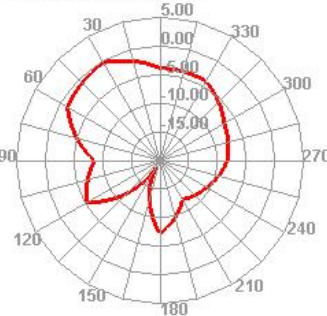
1790.000MHz



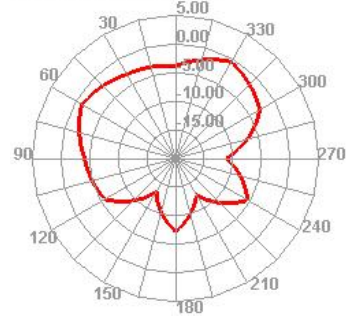
1790.000MHz H



1790.000MHz E1

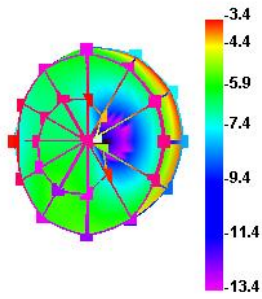


1790.000MHz E2

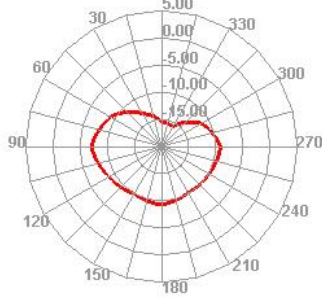




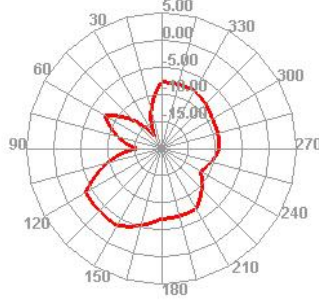
1920.000MHz



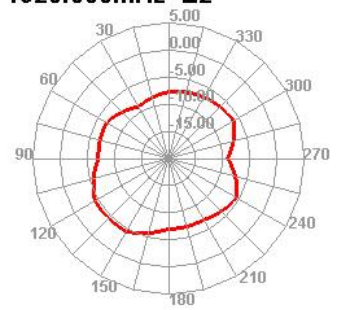
1920.000MHz H



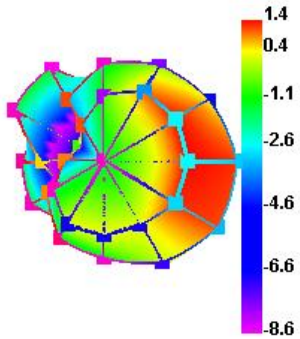
1920.000MHz E1



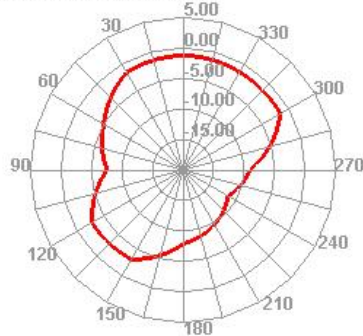
1920.000MHz E2



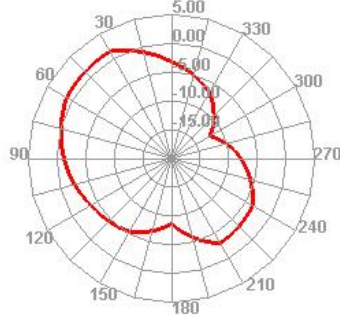
2120.000MHz



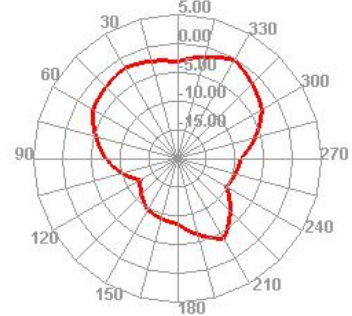
2120.000MHz H



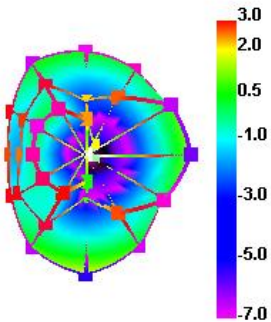
2120.000MHz E1



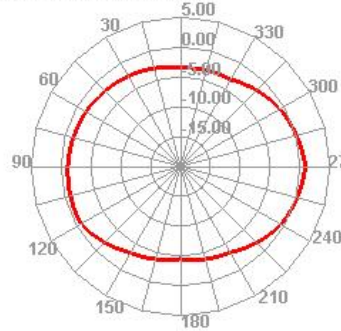
2120.000MHz E2



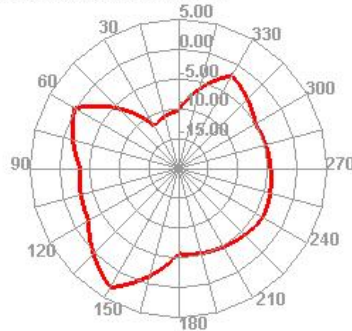
2600.000MHz



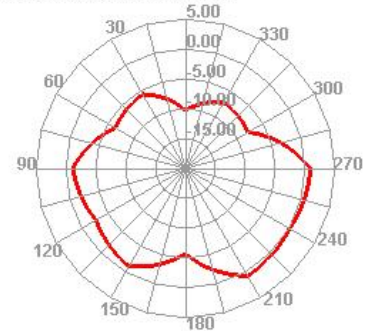
2600.000MHz H



2600.000MHz E1



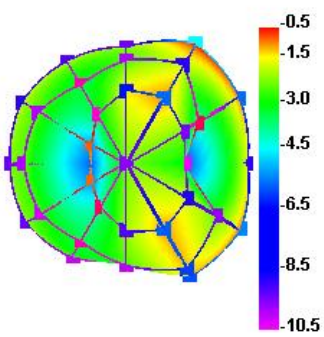
2600.000MHz E2



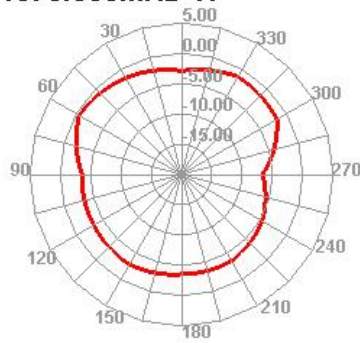


Passive Test For WIFI/BT/GPS		
Freq	Effi	Gain
(MHz)	(%)	(dBi)
1575	31.9	0.7
2450	40.1	1.0

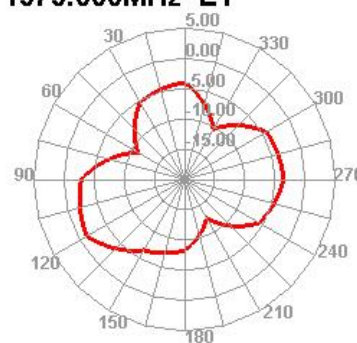
**1575.000MHz**



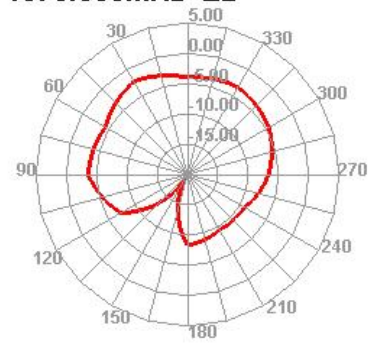
**1575.000MHz H**



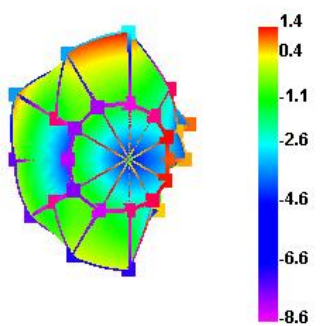
**1575.000MHz E1**



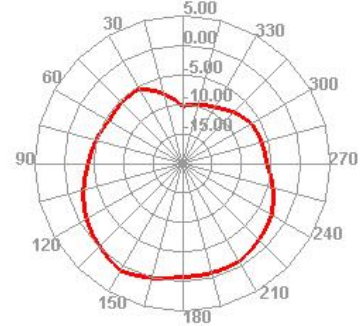
**1575.000MHz E2**



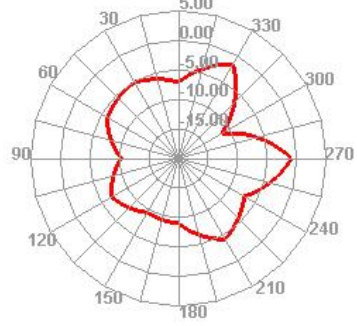
**2450.000MHz**



**2450.000MHz H**



**2450.000MHz E1**



**2450.000MHz E2**

