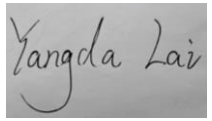
WCH734R
Passive Data
2026/06/17

Test Condition

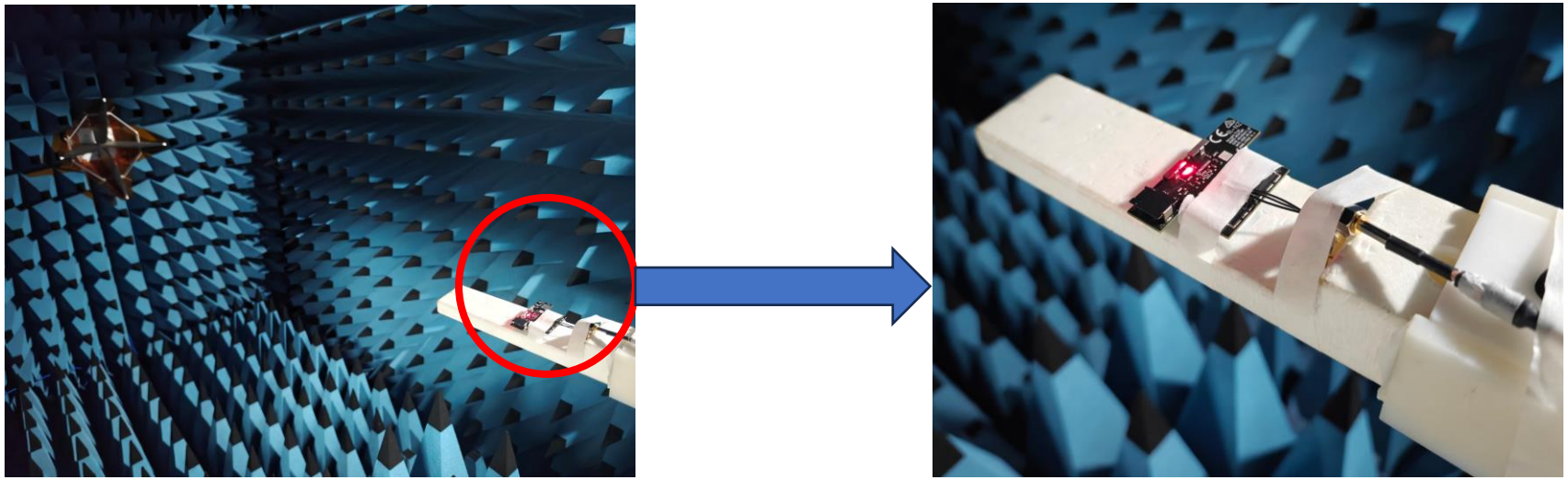
1. Test Condition

* QS95F Chip Antenna

- Test Chamber: Aplustech OTA Chamber
  (Address: R&D Building No.9, Main Park, Taohuayuan Science &Technology Innovation Park, Shenzhen, China)
- Network Analyzer : Return Loss
- 3D Passive Chamber : Gain and Efficiency
- Measured by Yangda Lai 2026/06/16



2. Test Environment



Antenna Gain Measurement Procedure and Software

OTA measurement system

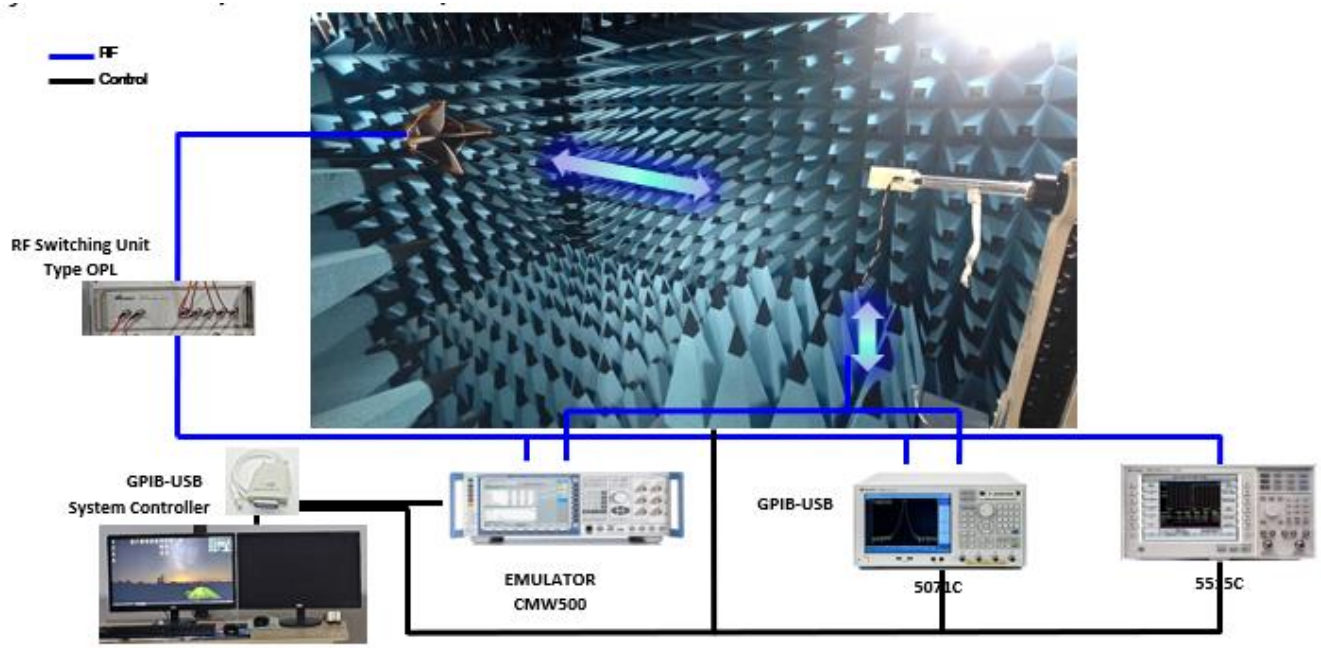
- Test Frequency : Support 400 MHz to 7.5 GHz
- Chamber Size: 4m x 2.5m x 2.5m

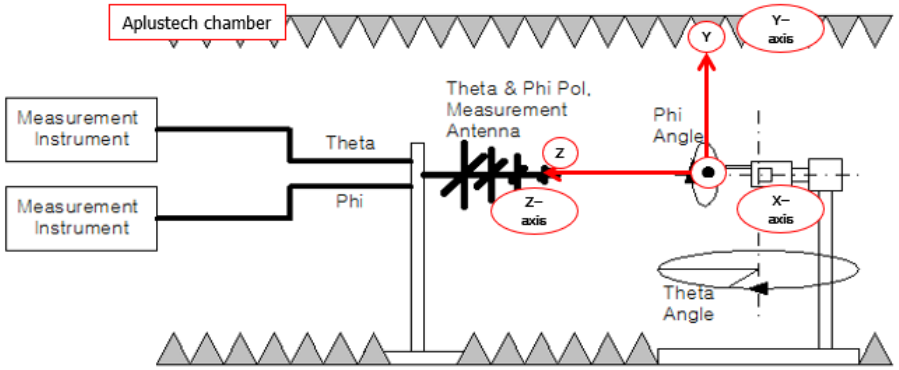
Support

- LTE Support ALL Band (FDD/TDD)
- CDMA,GSM,WCDMA Support ALL Band
- Passive Efficiency Measurement (400 MHz ~ 7.5GHz)

Measurement specifications

- Test Plan for RF Performance Evaluation for LTE Mobile
- Converged Devices
- Test Plan for Wireless Device Over-the-Air Performance





Great Circle Cut Method

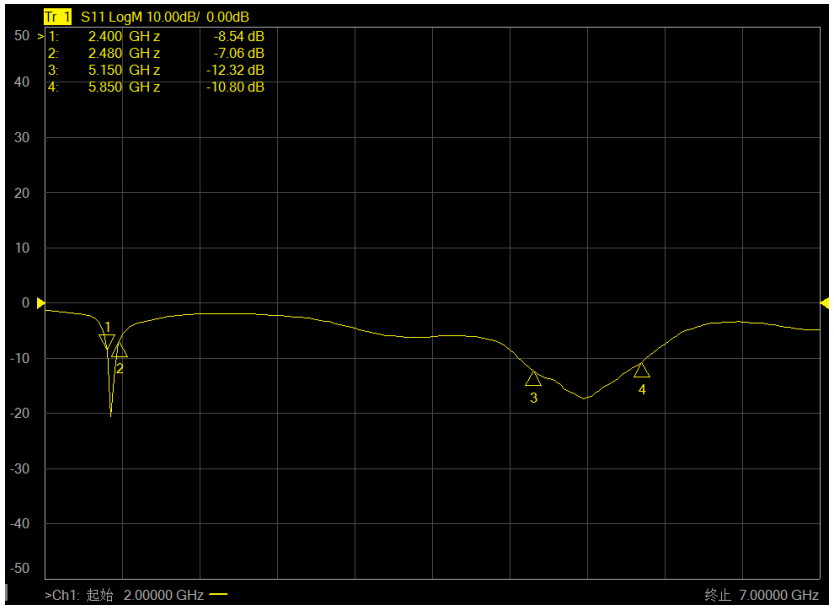
Measuring Instruments

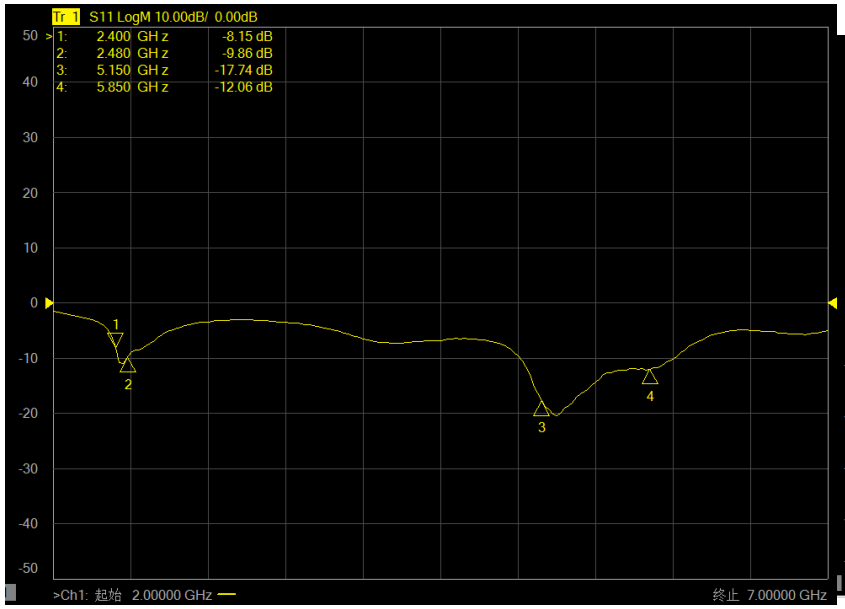
Item	Measuring Instruments	Latest Calibration Schedule
1	OTA Chamber	2026/01/12
2	Network Analyzer Keysight 5071c	2026/04/15

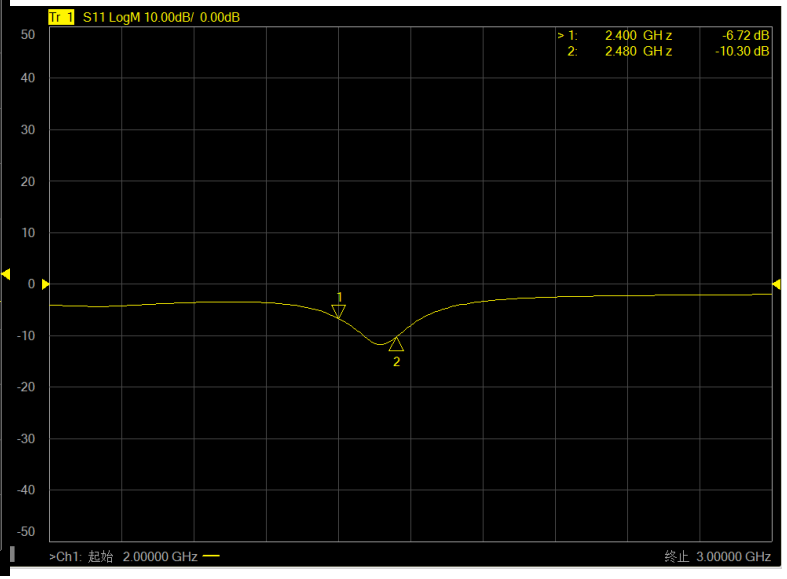
Electrical Characteristics

Item	Specification ANT0		Specification ANT1		Specification BT
Antenna Type	Metal Antenna		Metal Antenna		Metal Antenna
Central Frequency	2440MHz	5500MHz	2440MHz	5500MHz	2440MHz
Band Width	80MHz	700MHz	80MHz	700MHz	80MHz
Peak Gain	0.01dBi	1.39dBi	0.68dBi	0.87dBi	-2.04dBi
Return Loss	<-7dB		<-8dB		<-6dB
Polarization	Linear		Linear		Linear
Azimuth Beam width	Omni-directional		Omni-directional		Omni-directional
Impedance	50Ω		50Ω		50Ω
Dimension	10*3*3mm		10*3*3mm		13*10*5mm

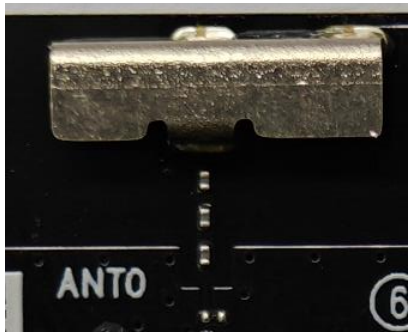
Passive test-Return Loss



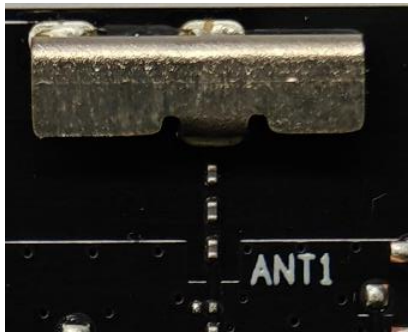




ANT0



ANT1



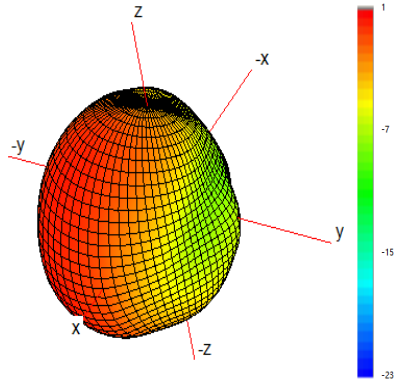
BT0

ANT0 Passive Test-Antenna 3D Gain

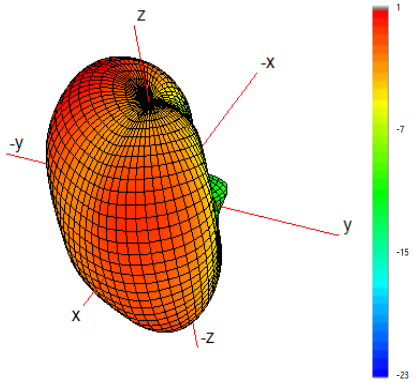
Frequency	Efficiency	Average Gain			Max Gain		
		Ver	Hor	Total	Ver	Hor	Total
2400MHz	38.52 %	-10.56 dBi	-5.26 dBi	-4.14 dBi	-4.64 dBi	-0.60 dBi	-0.12 dBi
2410MHz	41.30 %	-10.22 dBi	-4.98 dBi	-3.84 dBi	-4.47 dBi	-0.53 dBi	0.01 dBi
2420MHz	43.05 %	-10.03 dBi	-4.80 dBi	-3.66 dBi	-4.49 dBi	-0.62 dBi	-0.03 dBi
2430MHz	43.17 %	-10.00 dBi	-4.80 dBi	-3.65 dBi	-4.20 dBi	-0.91 dBi	-0.25 dBi
2440MHz	42.12 %	-10.12 dBi	-4.90 dBi	-3.76 dBi	-4.25 dBi	-1.32 dBi	-0.64 dBi
2450MHz	41.70 %	-10.12 dBi	-4.95 dBi	-3.80 dBi	-4.39 dBi	-1.86 dBi	-1.12 dBi
2460MHz	41.41 %	-10.15 dBi	-4.98 dBi	-3.83 dBi	-4.62 dBi	-2.25 dBi	-1.54 dBi
2470MHz	40.91 %	-10.21 dBi	-5.03 dBi	-3.88 dBi	-4.77 dBi	-2.39 dBi	-1.94 dBi
2480MHz	38.69 %	-10.44 dBi	-5.27 dBi	-4.12 dBi	-4.91 dBi	-2.53 dBi	-2.19 dBi
5150MHz	47.67 %	-8.25 dBi	-4.86 dBi	-3.22 dBi	-0.26 dBi	0.29 dBi	0.66 dBi
5250MHz	49.83 %	-8.12 dBi	-4.63 dBi	-3.02 dBi	0.25 dBi	0.01 dBi	0.85 dBi
5350MHz	48.98 %	-8.16 dBi	-4.72 dBi	-3.10 dBi	0.20 dBi	-0.61 dBi	0.83 dBi
5450MHz	50.34 %	-7.91 dBi	-4.66 dBi	-2.98 dBi	0.52 dBi	-0.83 dBi	1.27 dBi
5500MHz	50.53 %	-7.92 dBi	-4.63 dBi	-2.96 dBi	0.40 dBi	-0.68 dBi	1.20 dBi
5650MHz	53.36 %	-7.77 dBi	-4.36 dBi	-2.73 dBi	0.44 dBi	-0.30 dBi	1.39 dBi
5750MHz	49.35 %	-8.19 dBi	-4.67 dBi	-3.07 dBi	0.01 dBi	-0.38 dBi	1.02 dBi
5850MHz	47.12 %	-8.44 dBi	-4.84 dBi	-3.27 dBi	-0.38 dBi	-0.54 dBi	0.63 dBi

ANT0 Passive Test-Antenna 3D Radiation Pattern

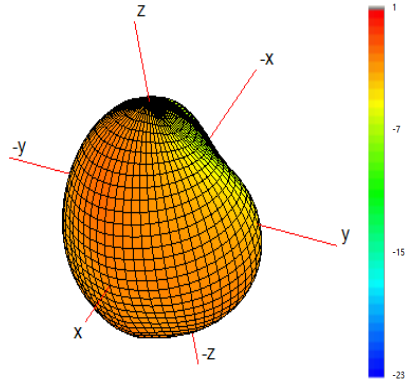
2400MHz



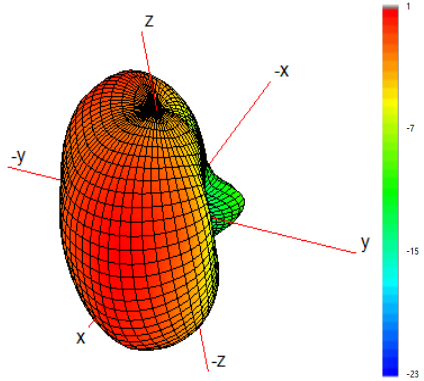
2440MHz



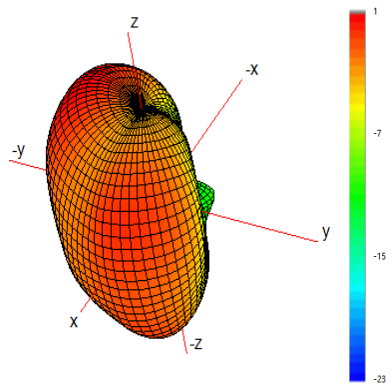
2480MHz



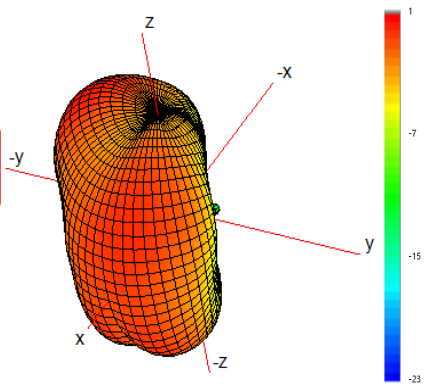
5150MHz



5550MHz



5850MHz

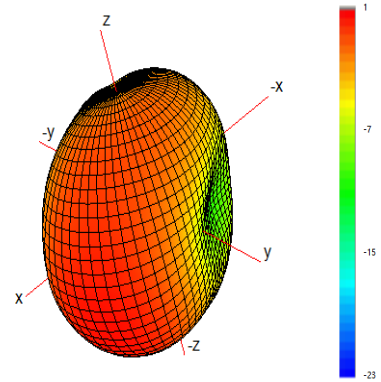


ANT1 Passive Test-Antenna 3D Gain

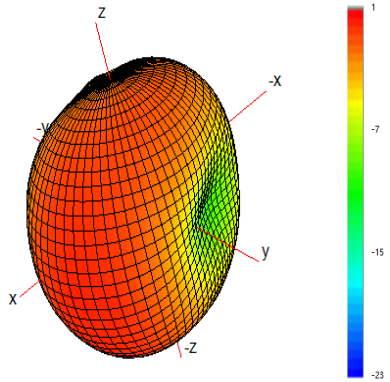
Frequency	Efficiency	Average Gain			Max Gain		
		Ver	Hor	Total	Ver	Hor	Total
2400MHz	47.25 %	-8.39 dBi	-1.95 dBi	-3.26 dBi	-3.65 dBi	0.41 dBi	0.64 dBi
2410MHz	48.91 %	-8.30 dBi	-1.61 dBi	-3.11 dBi	-3.61 dBi	0.41 dBi	0.68 dBi
2420MHz	50.36 %	-8.25 dBi	-1.58 dBi	-2.98 dBi	-3.53 dBi	0.26 dBi	0.55 dBi
2430MHz	51.02 %	-8.22 dBi	-1.44 dBi	-2.92 dBi	-3.40 dBi	0.14 dBi	0.41 dBi
2440MHz	51.37 %	-8.12 dBi	-1.46 dBi	-2.89 dBi	-3.19 dBi	-0.01 dBi	0.24 dBi
2450MHz	50.70 %	-8.15 dBi	-1.58 dBi	-2.95 dBi	-3.09 dBi	-0.06 dBi	0.15 dBi
2460MHz	50.25 %	-8.10 dBi	-1.73 dBi	-2.99 dBi	-2.89 dBi	-0.07 dBi	0.12 dBi
2470MHz	49.85 %	-7.99 dBi	-1.91 dBi	-3.02 dBi	-2.68 dBi	-0.16 dBi	0.02 dBi
2480MHz	48.86 %	-7.96 dBi	-2.25 dBi	-3.11 dBi	-2.54 dBi	-0.11 dBi	0.02 dBi
5150MHz	46.70 %	-8.16 dBi	-1.18 dBi	-3.31 dBi	-5.32 dBi	-0.36 dBi	0.03 dBi
5250MHz	49.35 %	-8.28 dBi	-0.79 dBi	-3.07 dBi	-4.44 dBi	0.39 dBi	0.55 dBi
5350MHz	50.44 %	-8.28 dBi	-1.08 dBi	-2.97 dBi	-4.11 dBi	0.34 dBi	0.69 dBi
5450MHz	51.89 %	-8.20 dBi	-0.99 dBi	-2.85 dBi	-3.87 dBi	0.45 dBi	0.75 dBi
5500MHz	51.21 %	-8.47 dBi	-1.51 dBi	-2.91 dBi	-3.97 dBi	0.29 dBi	0.60 dBi
5650MHz	53.83 %	-8.30 dBi	-0.90 dBi	-2.69 dBi	-3.78 dBi	0.60 dBi	0.87 dBi
5750MHz	50.72 %	-8.63 dBi	-1.80 dBi	-2.95 dBi	-3.87 dBi	0.58 dBi	0.67 dBi
5850MHz	48.95 %	-8.62 dBi	-1.63 dBi	-3.10 dBi	-3.77 dBi	0.71 dBi	0.77 dBi

ANT1 Passive Test-Antenna 3D Radiation Pattern

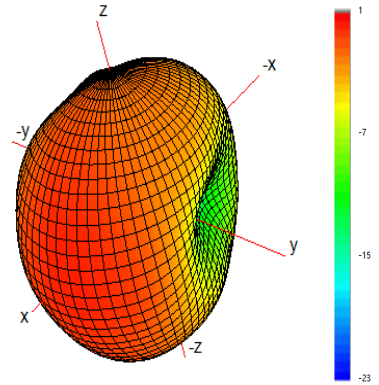
2400MHz



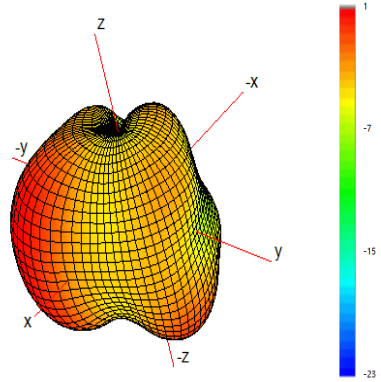
2440MHz



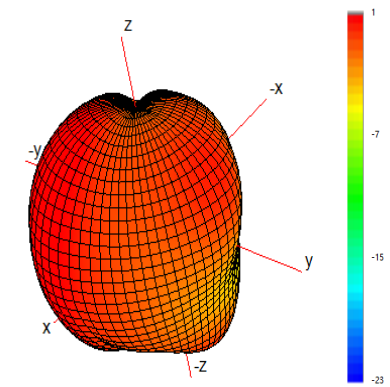
2480MHz



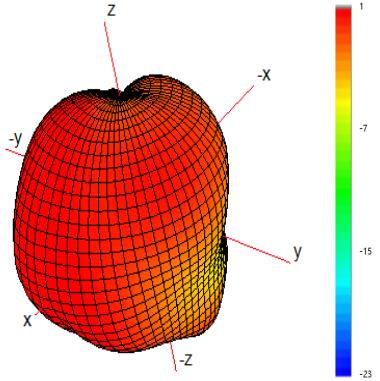
5150MHz



5550MHz



5850MHz

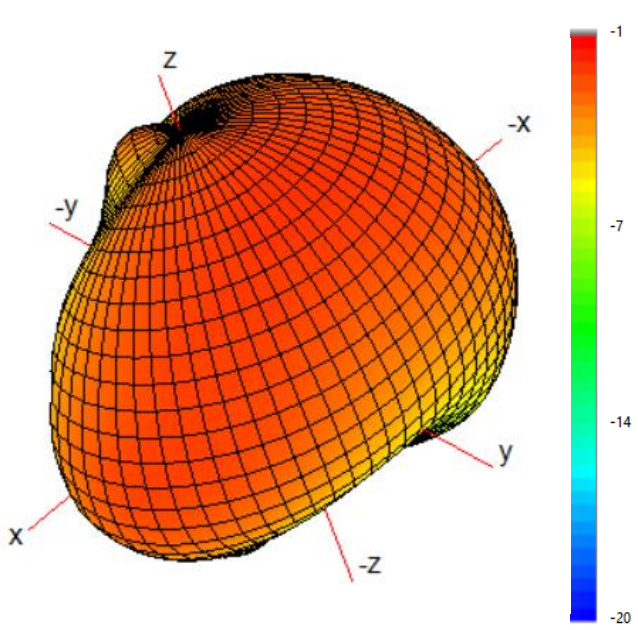


BT0 Passive Test-Antenna 3D Gain

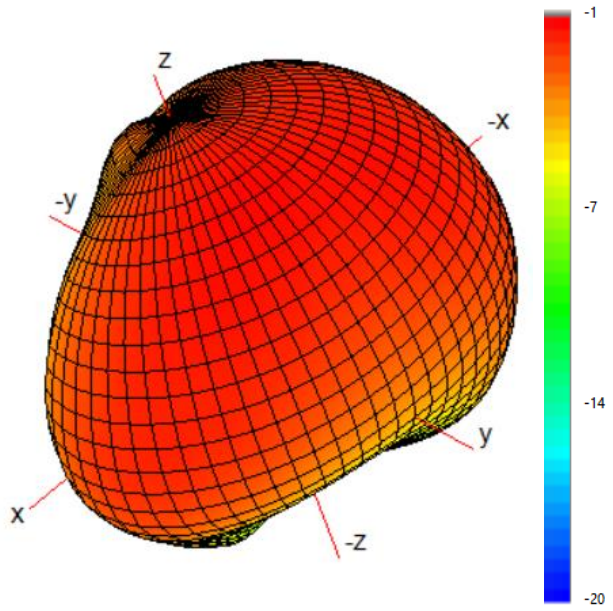
Frequency	Efficiency	Average Gain			Max Gain		
		Ver	Hor	Total	Ver	Hor	Total
2400MHz	22.03 %	-10.84 dBi	-10.84 dBi	-6.57 dBi	-3.43 dBi	-4.72 dBi	-4.38 dBi
2410MHz	23.60 %	-10.28 dBi	-9.66 dBi	-6.27 dBi	-2.92 dBi	-4.33 dBi	-3.32 dBi
2420MHz	24.15 %	-9.81 dBi	-9.04 dBi	-6.17 dBi	-2.89 dBi	-3.93 dBi	-2.82 dBi
2430MHz	26.06 %	-9.17 dBi	-7.98 dBi	-5.84 dBi	-3.62 dBi	-4.44 dBi	-2.16 dBi
2440MHz	27.10 %	-8.72 dBi	-7.05 dBi	-5.67 dBi	-3.75 dBi	-4.00 dBi	-2.11 dBi
2450MHz	25.53 %	-8.72 dBi	-6.71 dBi	-5.93 dBi	-4.69 dBi	-3.81 dBi	-2.04 dBi
2460MHz	25.76 %	-8.50 dBi	-7.11 dBi	-5.89 dBi	-4.92 dBi	-3.98 dBi	-2.53 dBi
2470MHz	25.94 %	-8.31 dBi	-7.76 dBi	-5.86 dBi	-5.04 dBi	-4.07 dBi	-3.15 dBi
2480MHz	24.27 %	-8.48 dBi	-8.33 dBi	-6.15 dBi	-5.32 dBi	-4.39 dBi	-3.36 dBi

BT0 Passive Test-Antenna 3D Radiation Pattern

2400MHz



2440MHz



2480MHz