

0910_ Antenna spec

Test environment:

ETS-Lindgren, AMS8500



Test equipment:

Passive : E5071C

Active : CMW500

List of calibrated test equipment

ETS-Lindgren, 3126 Precision Sleeve Dipole



Test setup



0910_ Antenna spec

Manufacturer: Arima

Test facility: Huizhou SPEED Wireless Technology Co., Ltd.

Type Name:

1. Main Antenna

Band & Frequency:

BAND	TX Frequency	RX Frequency
LTE B1	1920MHZ ~1980MHZ	2110MHZ ~2170MHZ
LTE B2	1850MHZ ~1910MHZ	1930MHZ ~1990MHZ
LTE B3	1710MHZ ~1785MHZ	1805MHZ ~1880MHZ
LTE B4	1710MHZ ~1755MHZ	2110 MHZ ~2170MHZ
LTE B5	824MHZ ~849MHZ	869MHZ ~894MHZ
LTE B7	2500MHZ ~2570MHZ	2620MHZ ~2690MHZ
LTE B8	880MHZ ~915MHZ	925.2MHZ ~960MHZ
LTE B12	698MHZ ~716 MHZ	728MHZ ~746 MHZ
LTE B13	777MHZ ~787 MHZ	746MHZ ~756 MHZ
LTE B14	788MHZ ~798 MHZ	758MHZ ~768 MHZ
LTE B18	815MHZ ~830MHZ	860MHZ ~875MHZ
LTE B19	830MHZ ~845MHZ	875MHZ ~890MHZ
LTE B20	832MHZ ~862MHZ	791MHZ ~821MHZ
LTE B25	1850MHZ ~1915MHZ	1930MHZ ~1995MHZ
LTE B26	814MHZ ~849MHZ	859MHZ ~894MHZ
LTE B28	703MHZ ~748MHZ	758MHZ ~803MHZ
LTE B30	2305MHZ ~2315MHZ	2350MHZ ~2360MHZ
LTE B38	2570MHZ ~2620 MHZ	2570MHZ ~2620 MHZ
LTE B40	2300MHZ ~2400MHZ	2300MHZ ~2400MHZ
LTE B41	2496MHZ ~2690 MHZ	2496 MHZ ~2690MHZ
LTE B42	3400MHZ ~3600MHZ	3400MHZ ~3600MHZ
LTE B48	3550MHZ ~3700MHZ	3550MHZ ~3700MHZ
LTE B66	1710MHZ ~1780MHZ	2110MHZ ~2200MHZ

Passive Gain :

Passive

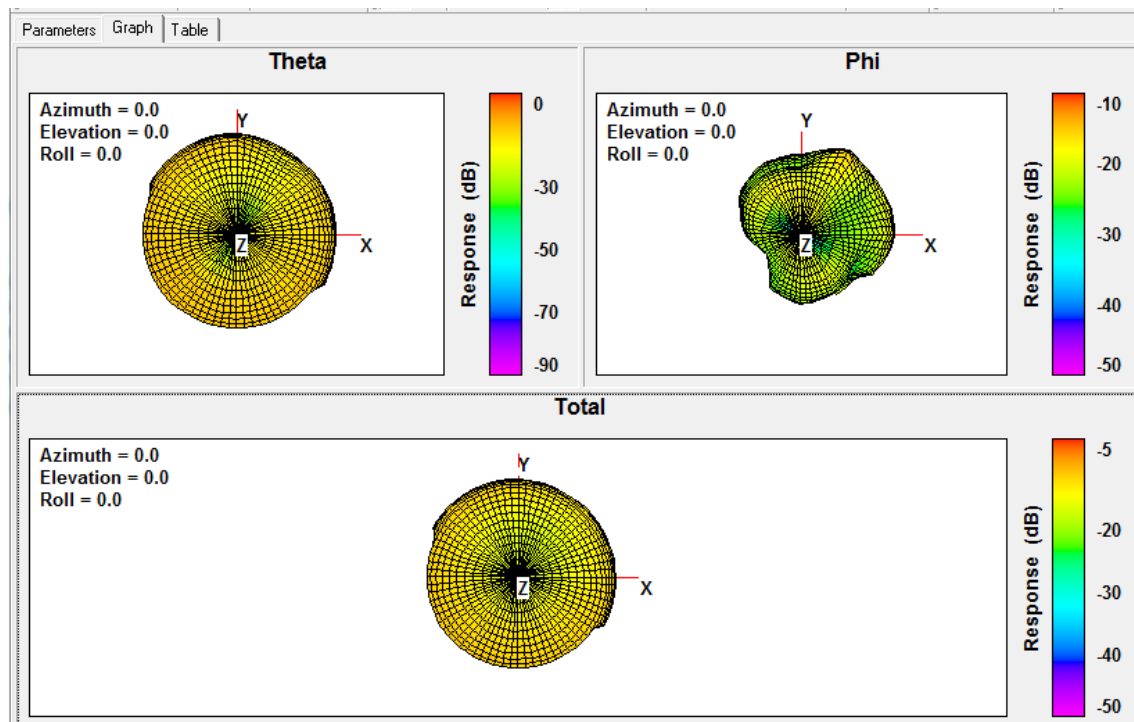
BAND	AVG. Eff.(dB)	Peak Gain(dBi)
LTE B1	-4.8	-0.33
LTE B2	-4.5	-0.12
LTE B3	-3.6	0.36
LTE B4	-3.6	0.36
LTE B5	-9.3	-6.9
LTE B7	-3.9	-0.02
LTE B8	-7.5	-4.7
LTE B12	-13.2	-8.3
LTE B13	-11.2	-6.2
LTE B14	-11.2	-6.4
LTE B18	-9.3	-6.8
LTE B19	-9.6	-7.2
LTE B20	-9.6	-7.2
LTE B25	-4.5	-0.12
LTE B26	-9.3	-6.8
LTE B28	-6.9	-5.1
LTE B30	-3.3	0.56
LTE B38	-4.4	-0.93
LTE B40	-3.3	0.56
LTE B41	-3.9	-0.02
LTE B42	-3.5	0.99
LTE B48	-2.2	1.2
LTE B66	-3.0	0.35

Antenna Type: PIFA Antenna

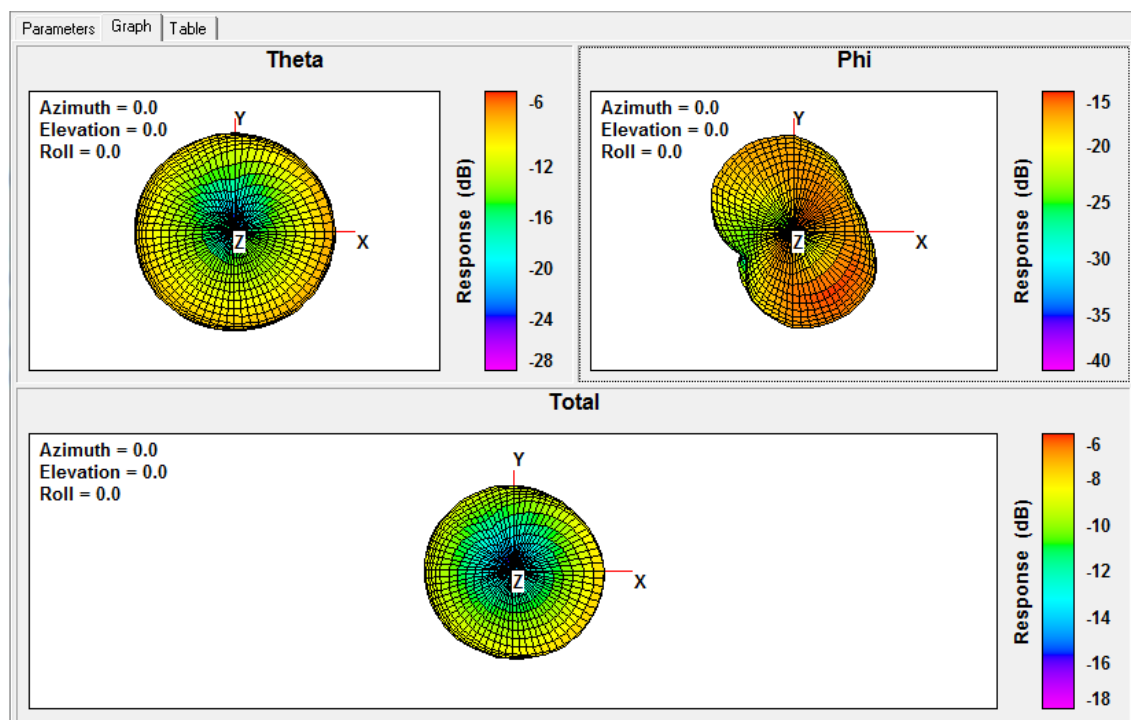
Antenna Material: LDS (Metal)

Free Space Radiation Pattern:

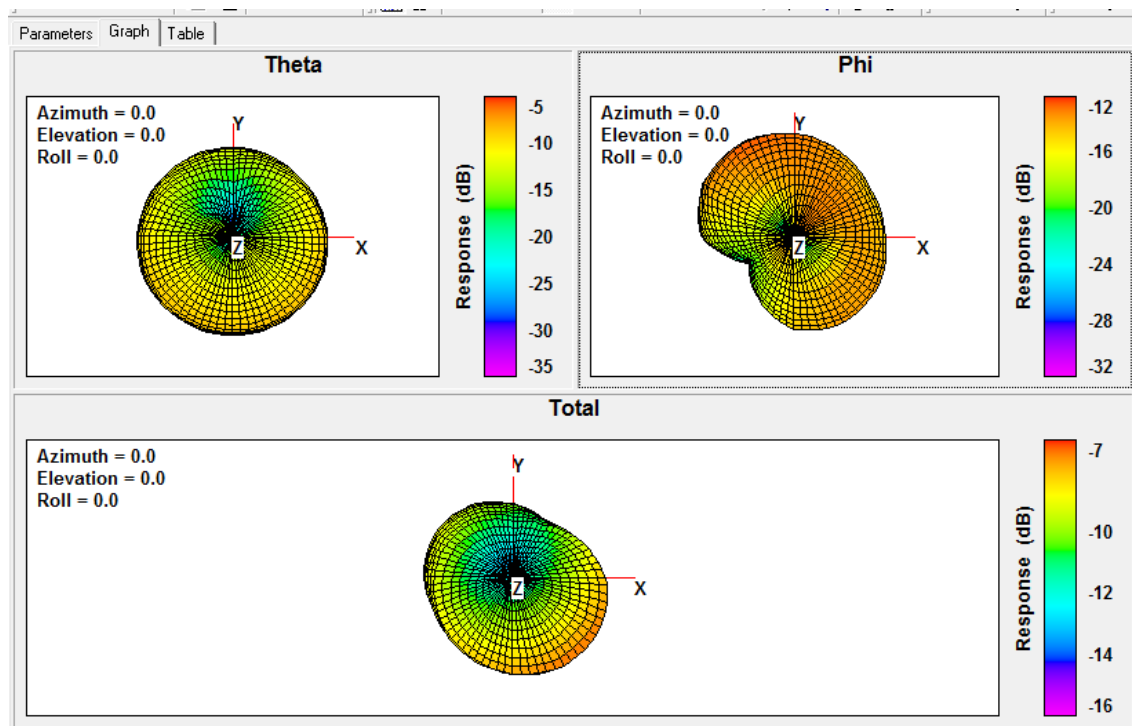
704 MHz



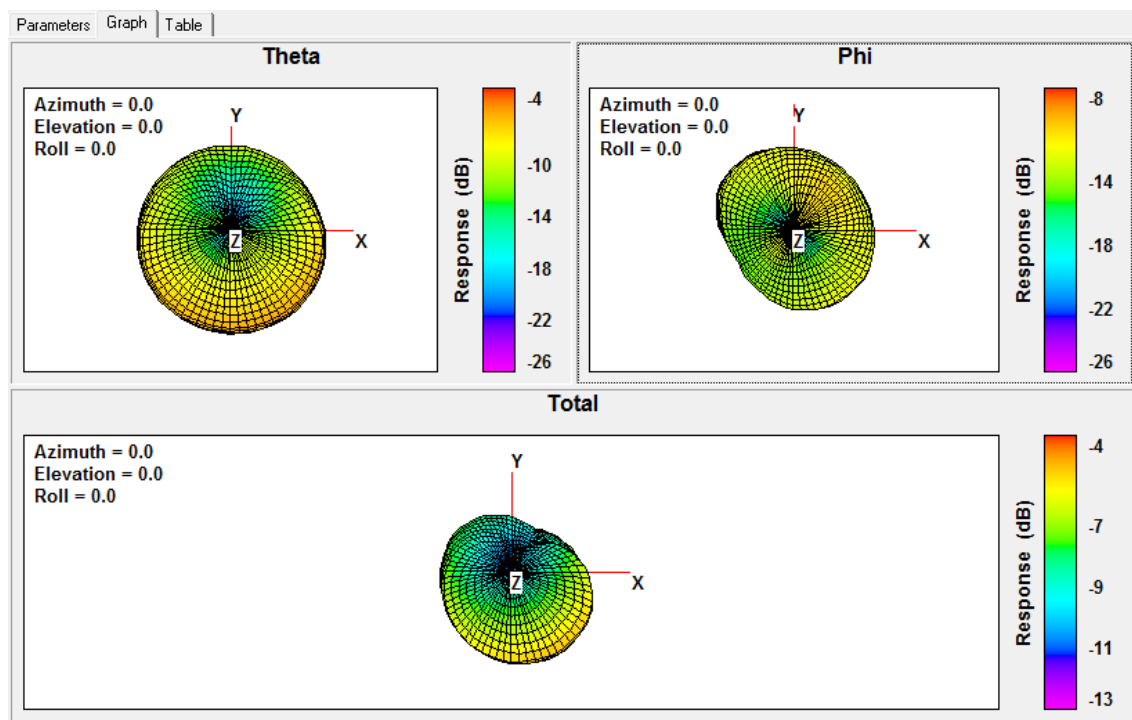
791 MHz



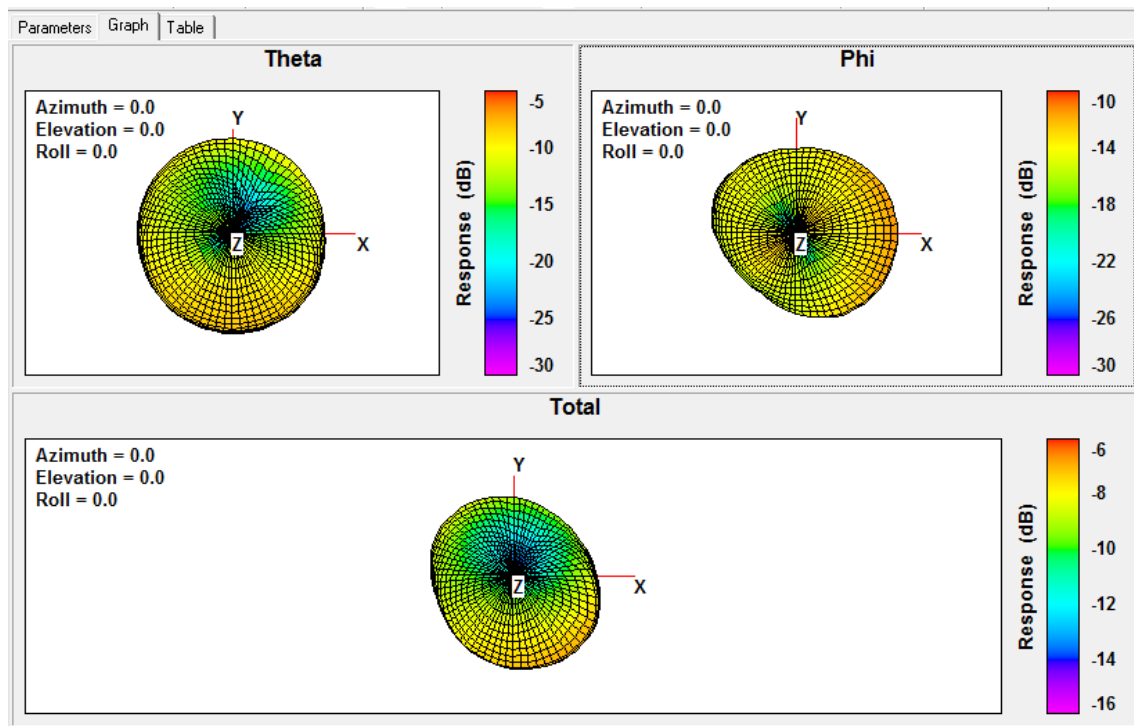
836 MHz



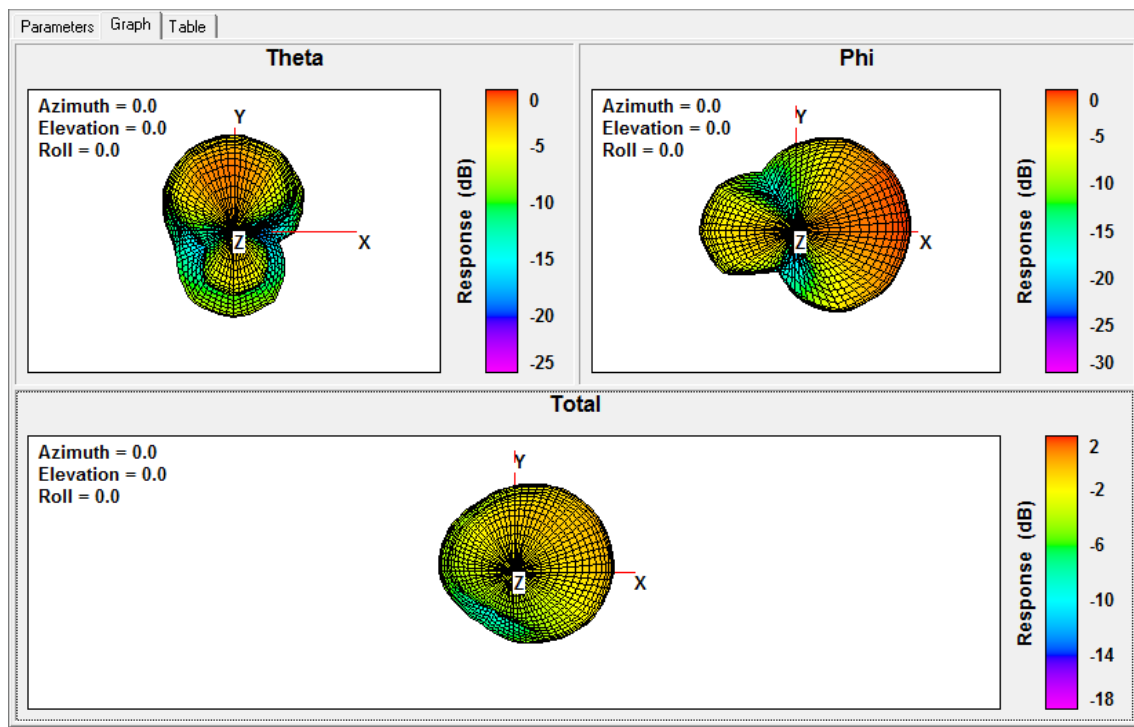
880 MHz



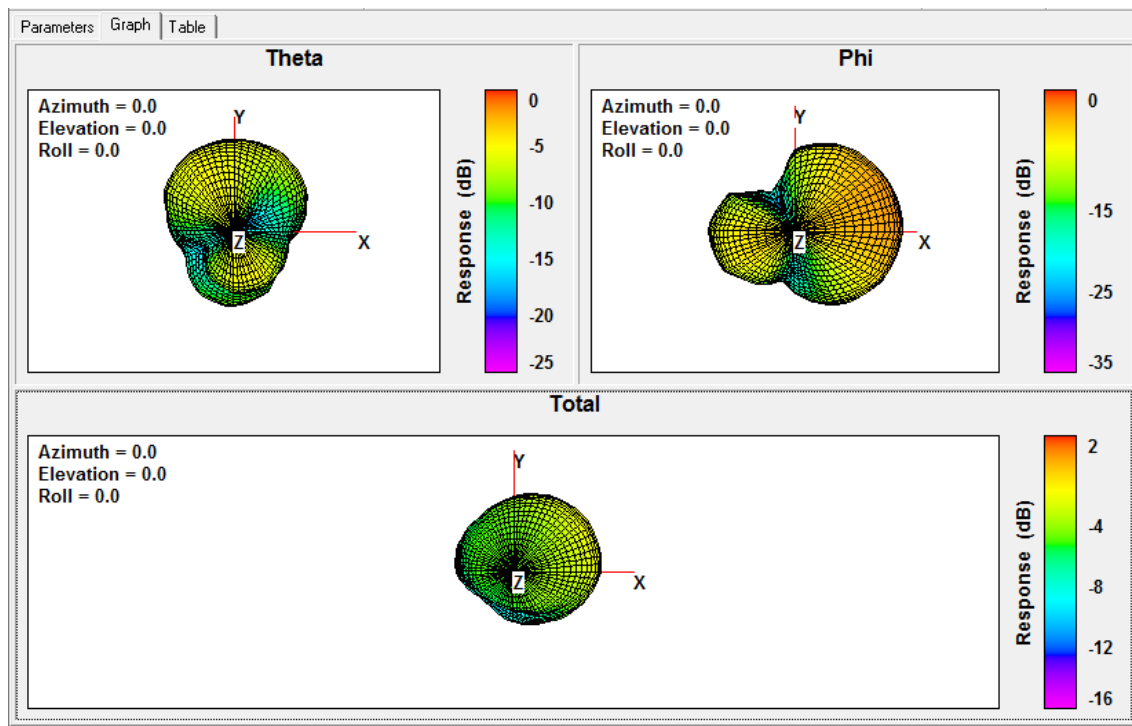
960 MHz



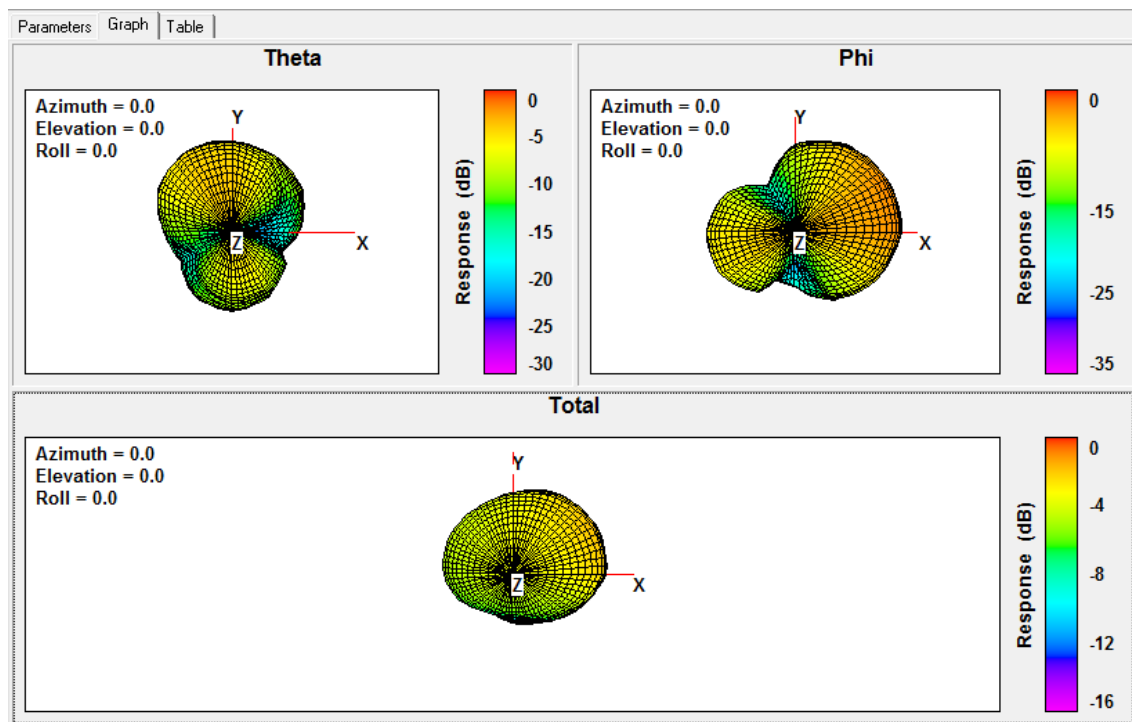
1710 MHz



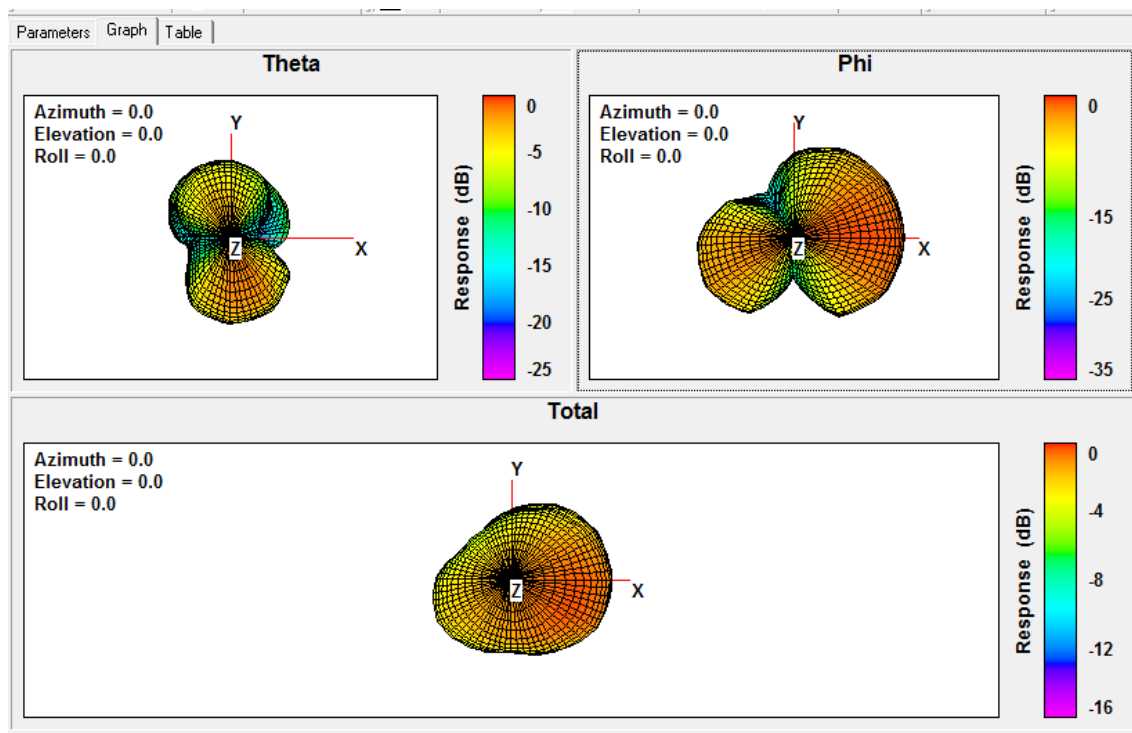
1880 MHz



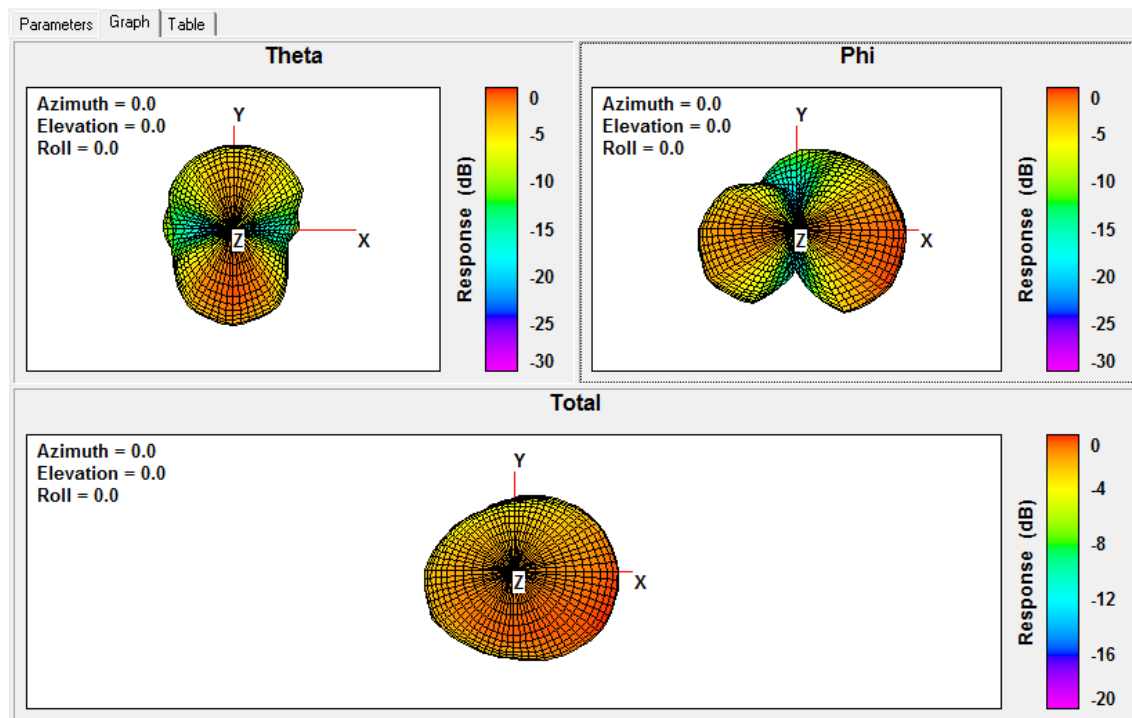
1930 MHz



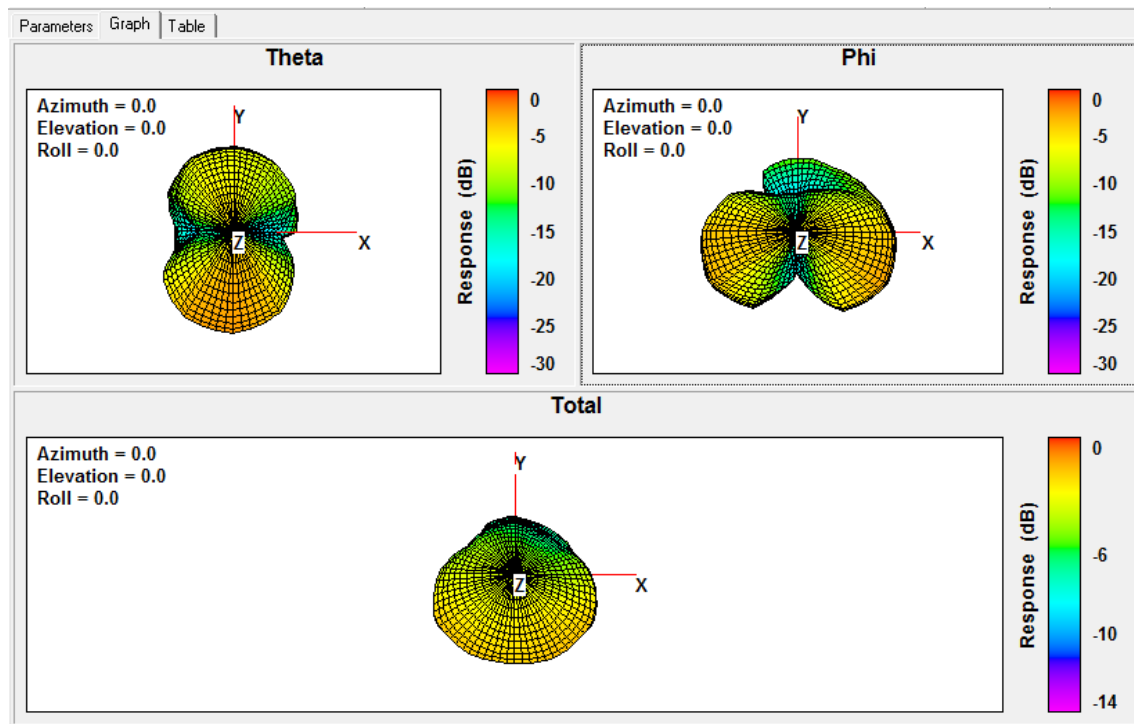
2170 MHz



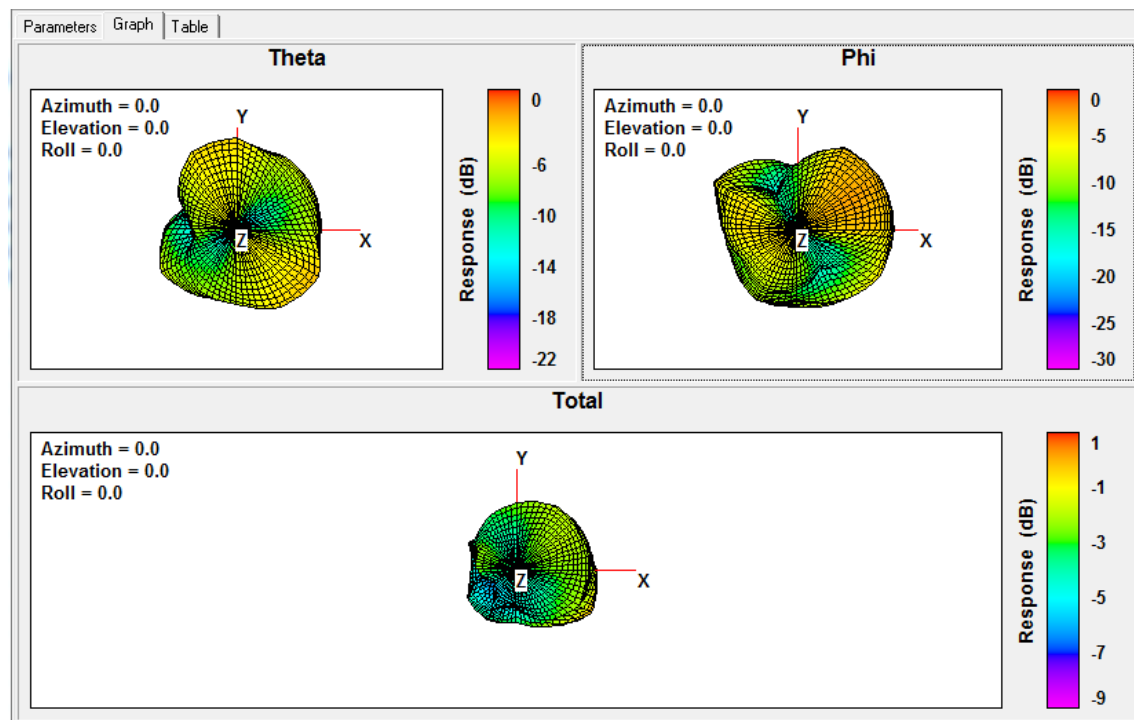
2500 MHz



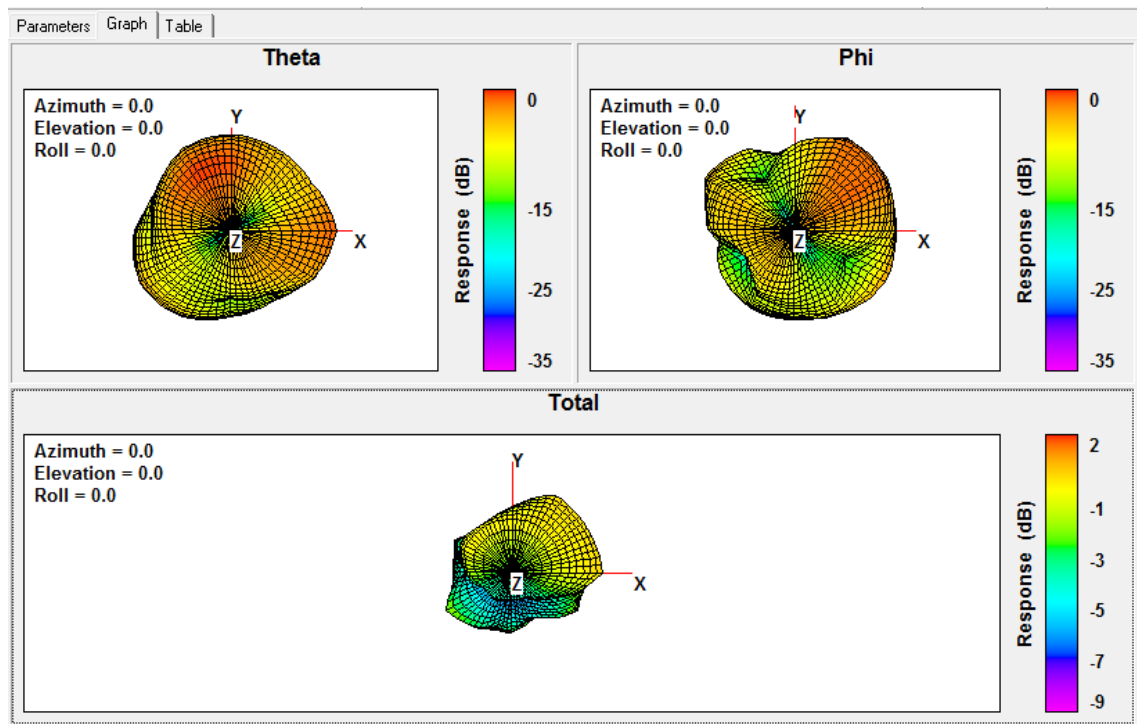
2620 MHz



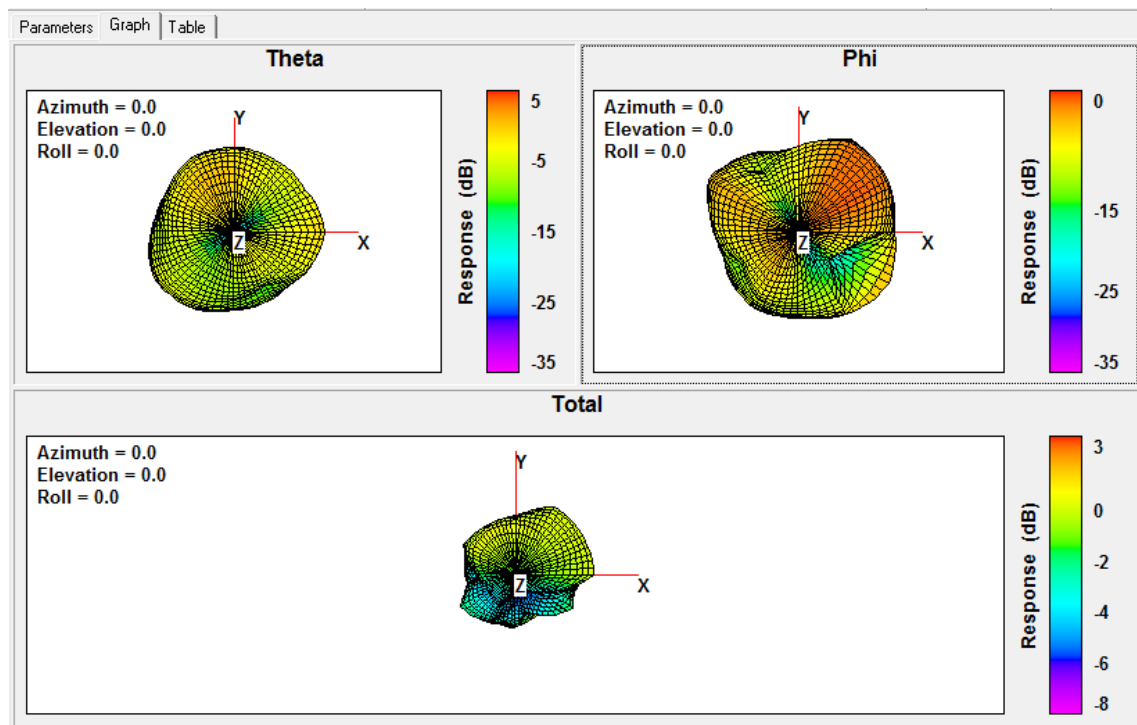
3400MHz



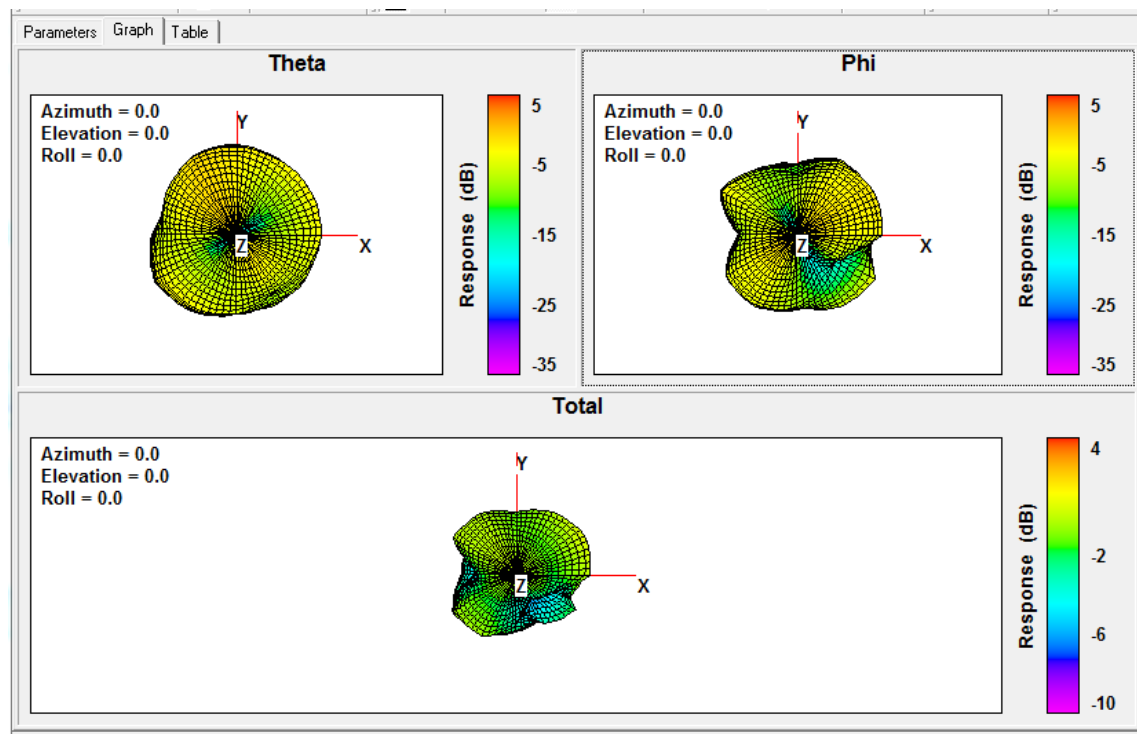
3550Hz



3600MHz



3700MHz



2. Diversity Antenna

BAND	RX Frequency
LTE B1	2110MHZ ~2170MHZ
LTE B2	1930MHZ ~1990MHZ
LTE B3	1805MHZ ~1880MHZ
LTE B4	2110 MHZ ~2170MHZ
LTE B5	869MHZ ~894MHZ
LTE B7	2620MHZ ~2690MHZ
LTE B8	925.2MHZ ~960MHZ
LTE B12	728MHZ ~746 MHZ
LTE B13	746MHZ ~756 MHZ
LTE B14	758MHZ ~768 MHZ
LTE B18	860MHZ ~875MHZ
LTE B19	875MHZ ~890MHZ
LTE B20	791MHZ ~821MHZ
LTE B25	1930MHZ ~1995MHZ
LTE B26	859MHZ ~894MHZ
LTE B28	758MHZ ~803MHZ
LTE B30	2350MHZ ~2360MHZ
LTE B38	2570MHZ ~2620 MHZ
LTE B40	2300MHZ ~2400MHZ
LTE B41	2496 MHZ ~2690MHZ
LTE B42	3400MHZ ~3600MHZ
LTE B48	3550MHZ ~3700MHZ
LTE B66	2110MHZ ~2200MHZ

Passive Gain :

Passive

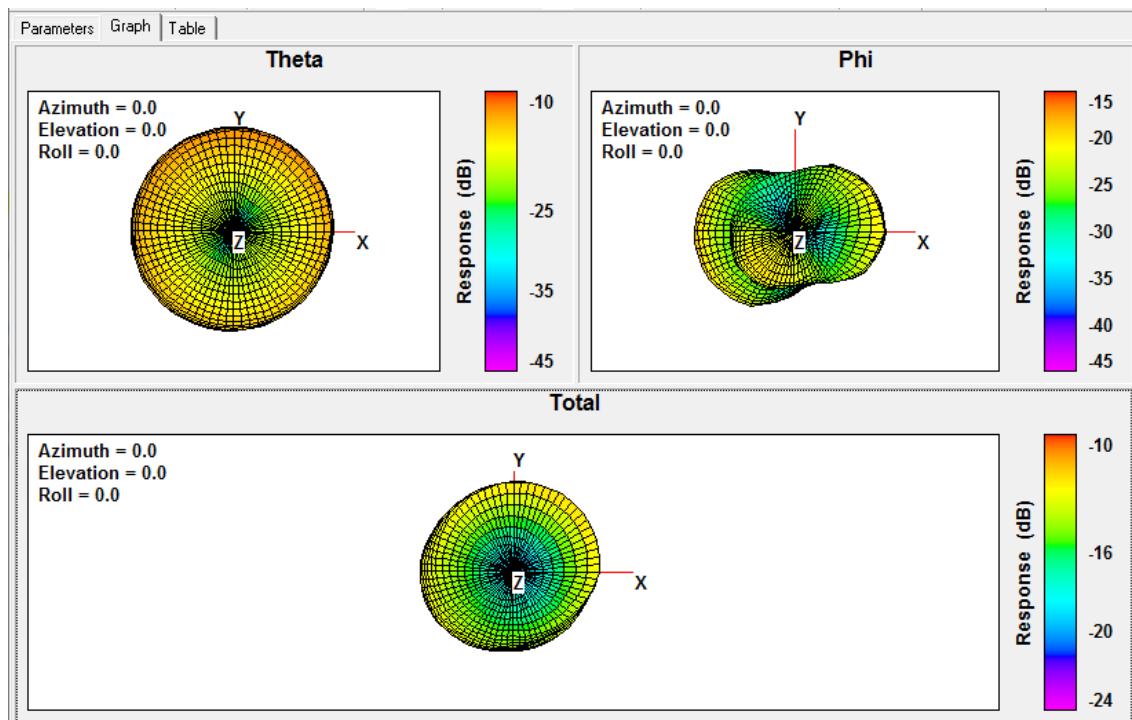
BAND	AVG. Eff.(dB)	Peak Gain(dBi)
LTE B1	-8.9	-4.5
LTE B2	-7.0	-2.4
LTE B3	-9.8	5.7
LTE B4	-8.9	-4.7
LTE B5	-7.2	-5.0
LTE B7	-8.6	-4.1
LTE B8	-13.2	-10.6
LTE B12	-15.6	-13.1
LTE B13	-13.7	-11.3
LTE B14	-12.7	-10.5
LTE B18	-6.3	-4.1
LTE B19	-8.5	-6.3
LTE B20	-9.5	-7.5
LTE B25	-7.0	-2.4
LTE B26	-6.3	-4.1
LTE B28	-9.6	-7.4
LTE B30	-8.1	-4.4
LTE B38	-8.0	-3.7
LTE B40	-7.6	-4.9
LTE B41	-7.7	-4.0
LTE B42	-7.2	-1.1
LTE B48	-9.6	-5.4
LTE B66	-8.9	-4.7

Antenna Type: PIFA Antenna

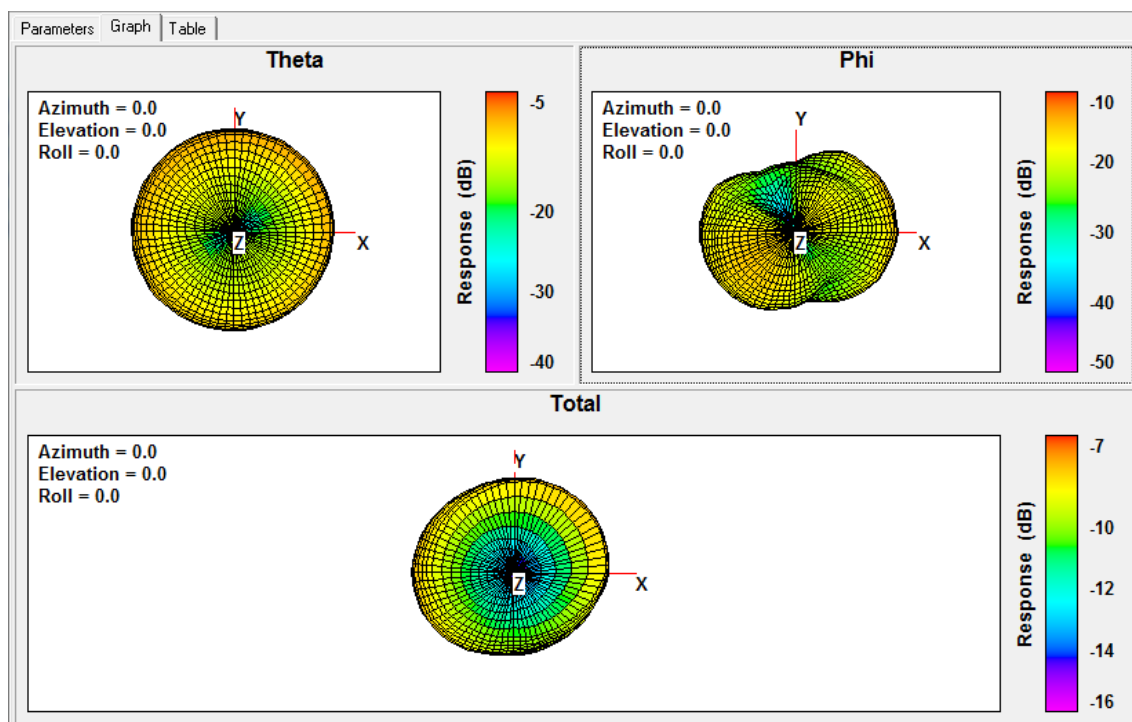
Antenna Material: LDS (Metal)

Free Space Radiation Pattern:

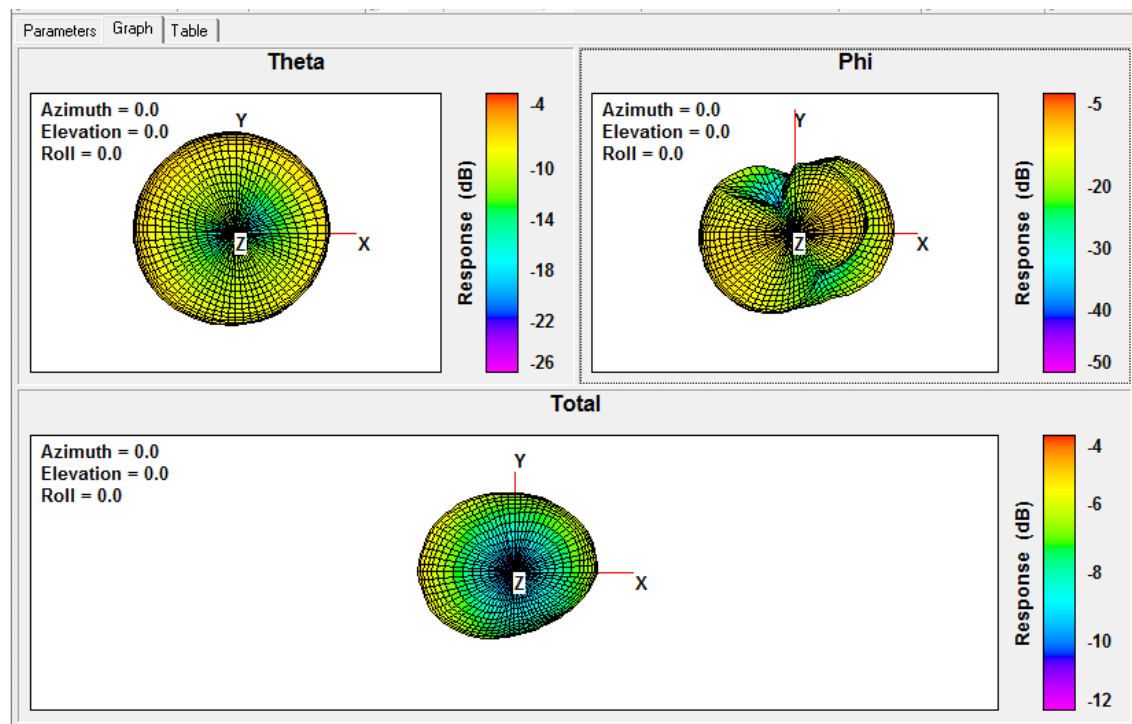
746 MHz



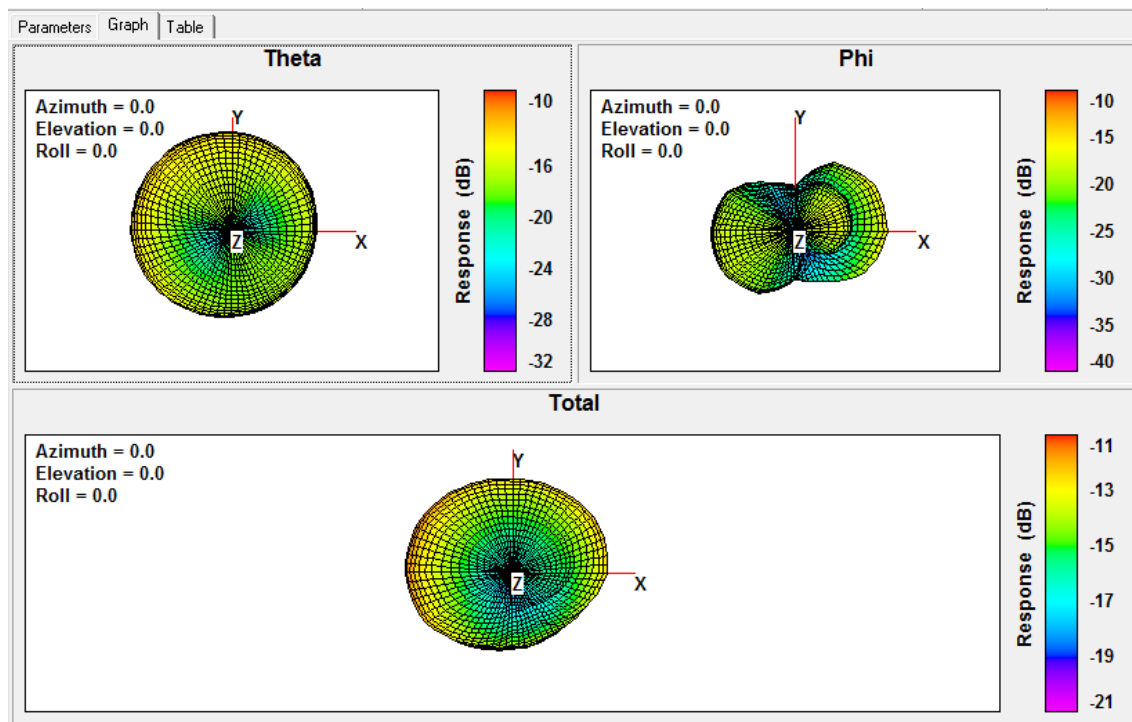
791 MHz



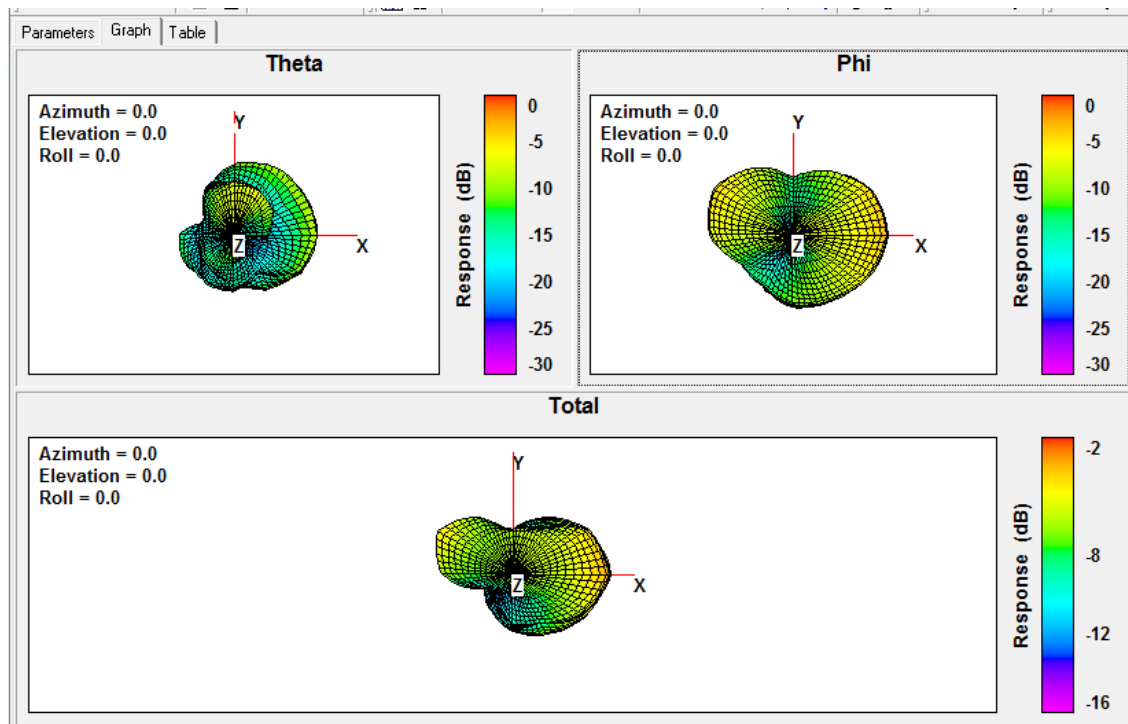
869 MHz



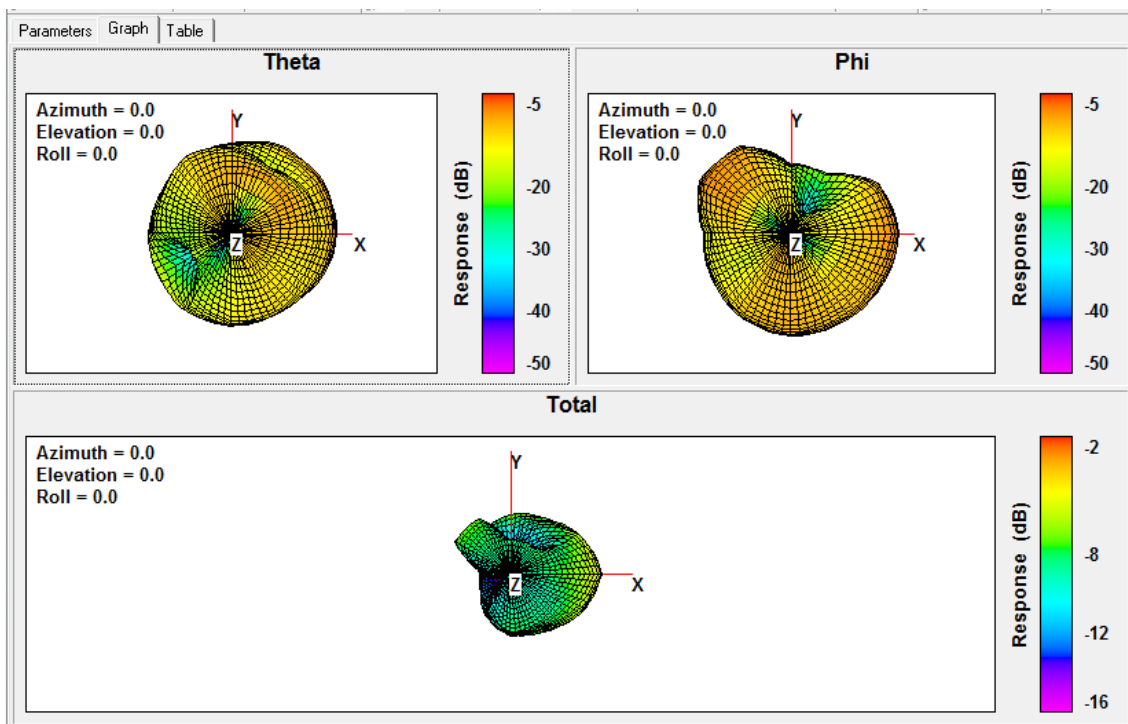
925 MHz



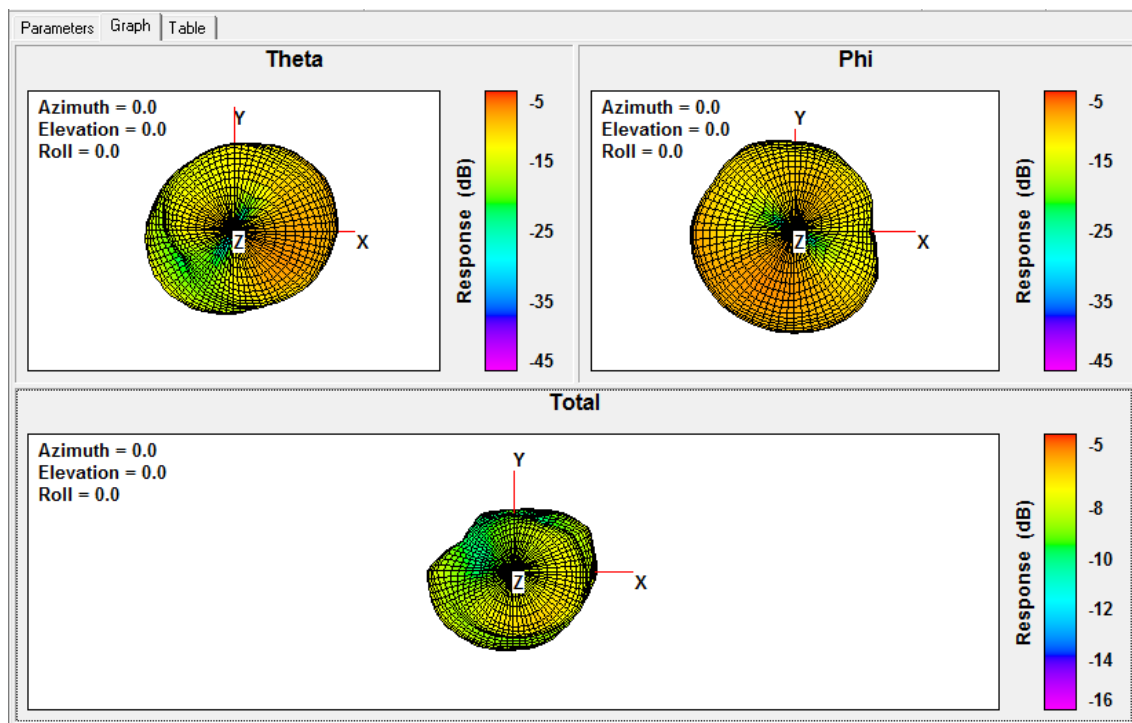
1880 MHz



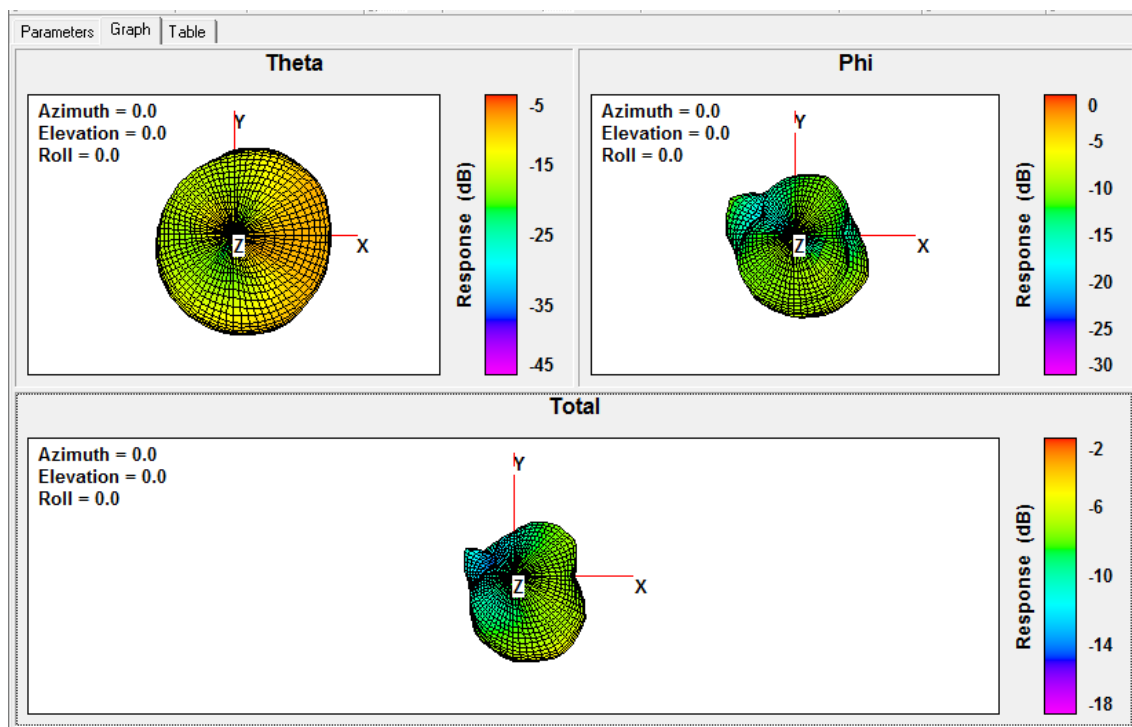
1980 MHz



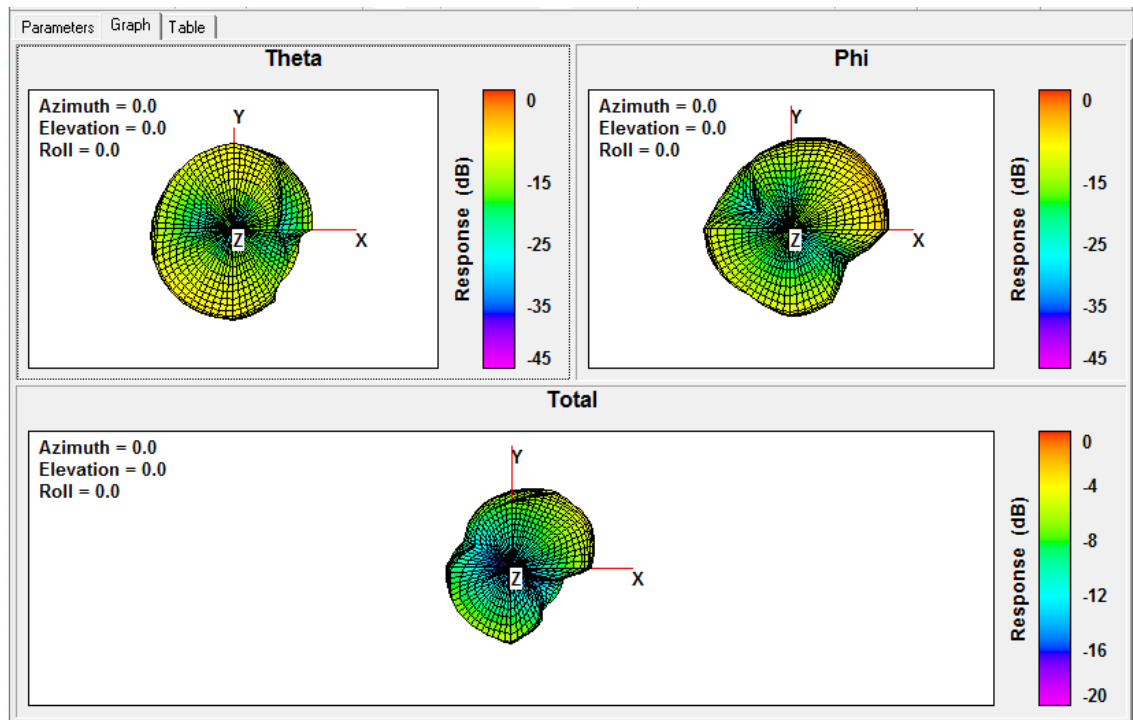
2170 MHz



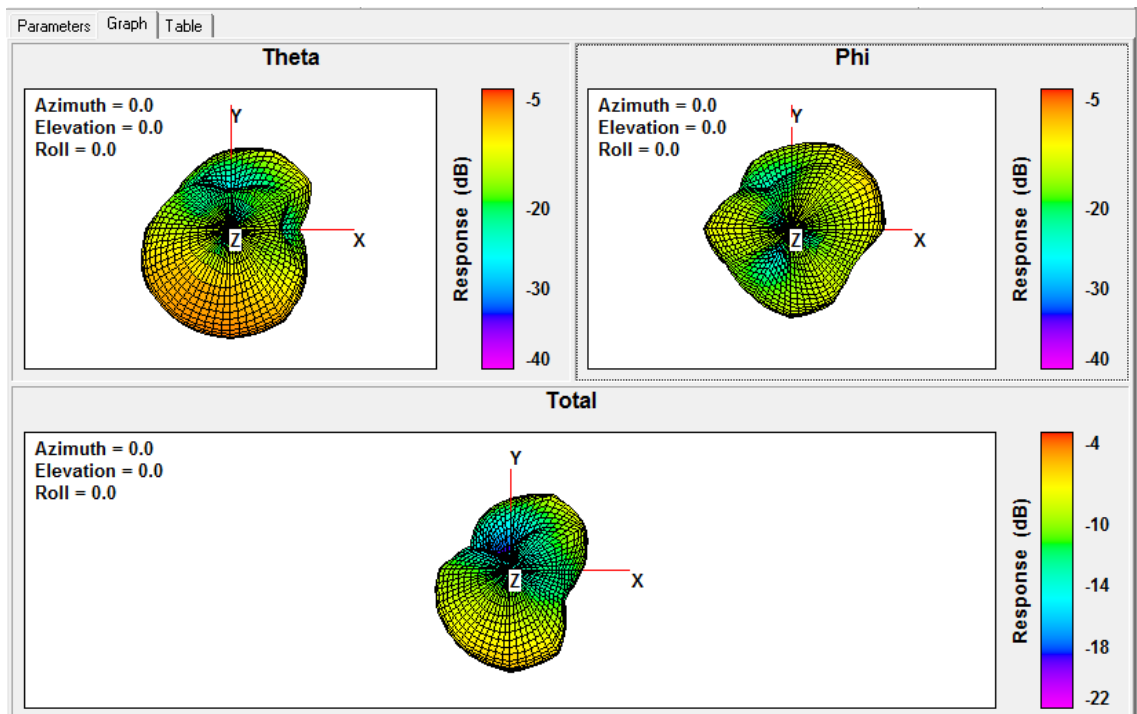
2690 MHz



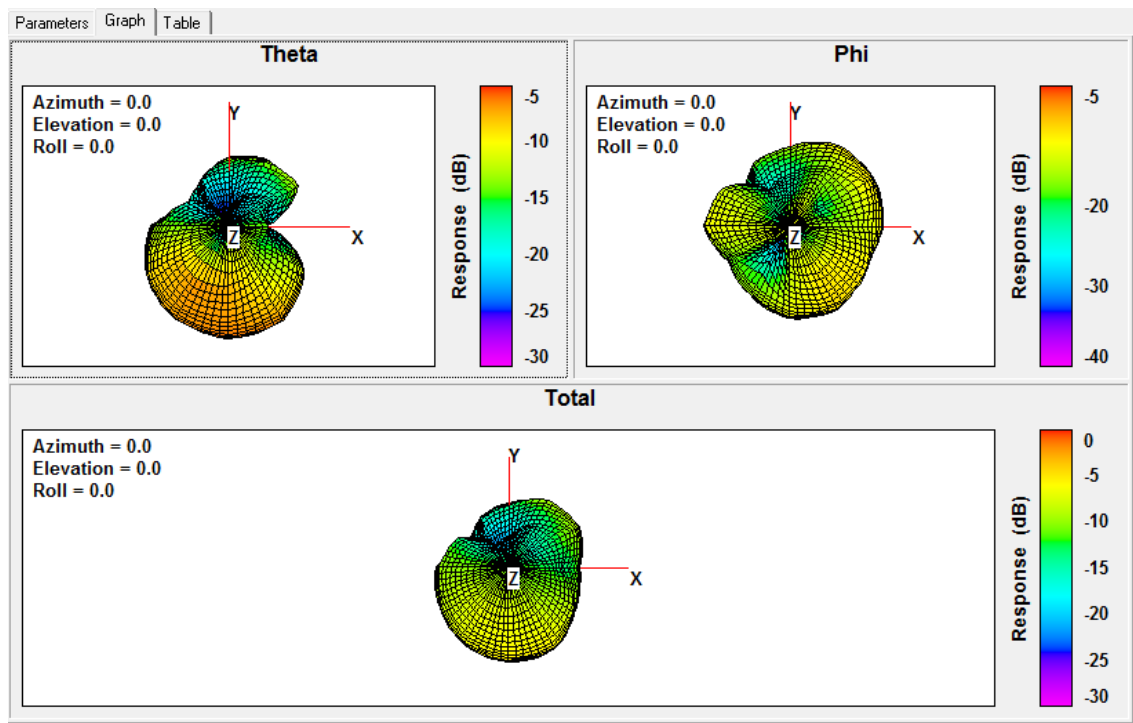
3400MHz



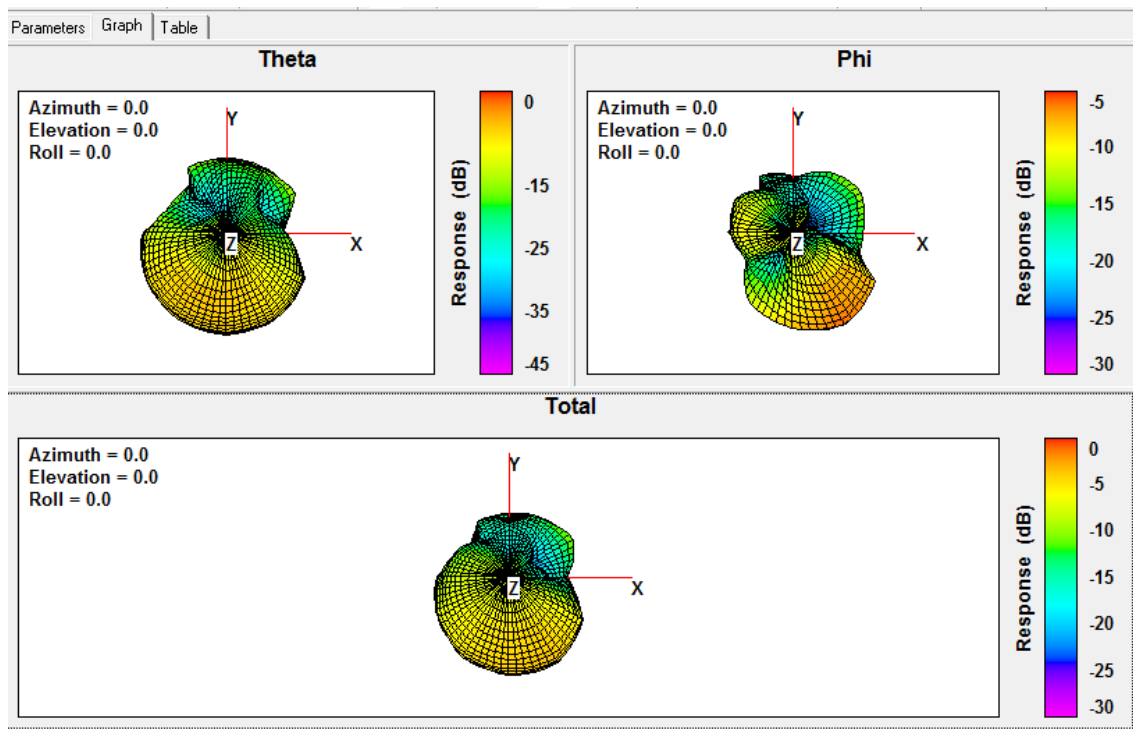
3550Hz



3600MHz



3700MHz



3. Wi-Fi Antenna

Frequency Band(s) : 2.4GHz , 5GHz

Operating Frequency : 2.412 ~ 2.472GHz , 5.15 ~ 5.825GHz

Number of Channel : 1, 6, 11 Channels

Channel Spacing : 1MHz

Bandwidth : 2.4GHz

Transmit Power : 0 to 20 (Max) dBm

ITU-class of emission : Class 1

Antenna Type : Loop antenna

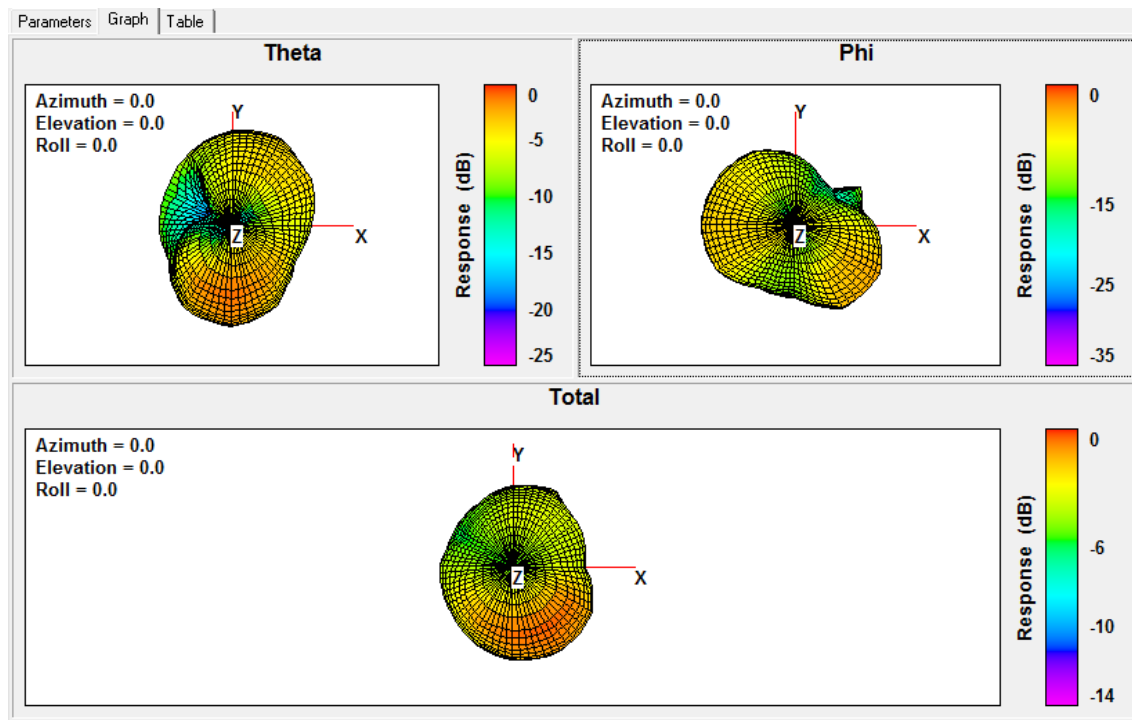
Antenna Material: LDS

Passive Gain:

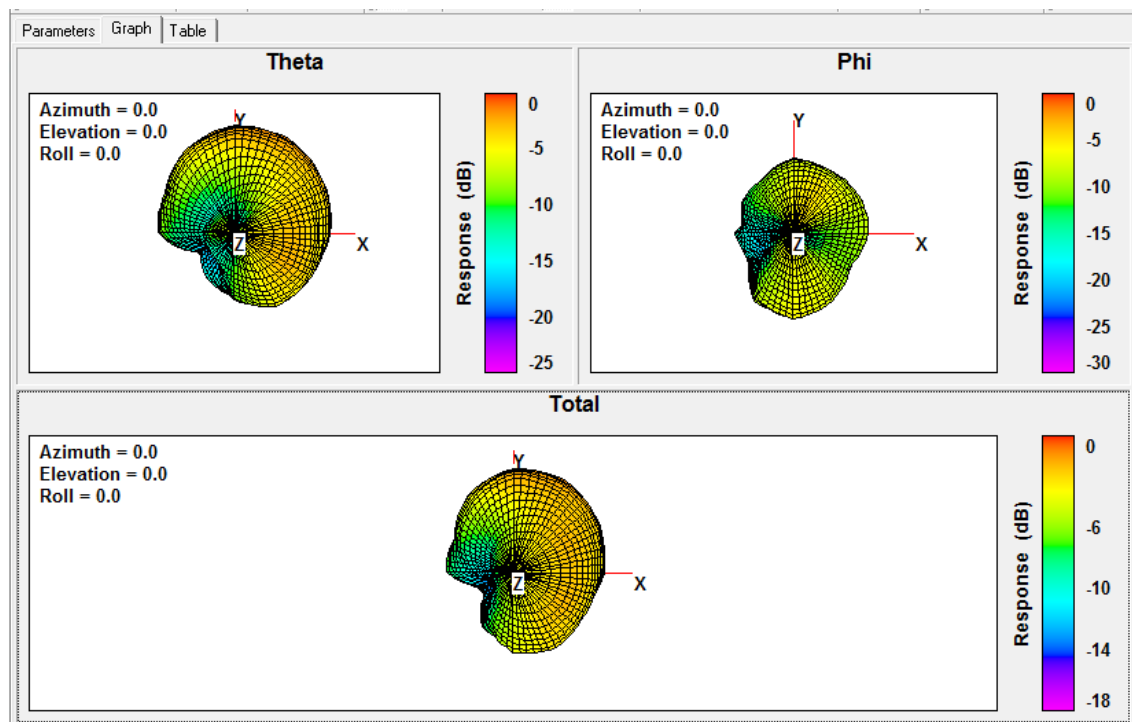
BAND	Frequency (MHz)	Passive	
		AVG. Eff (dB)	Peak Gain(dBi)
Wi-Fi	2400	-3.9	0.3
	2442	-3.4	0.8
	2472	-3.4	0.8
	5150	-7.5	-2.4
	5250	-6.8	-1.7
	5470	-6.5	-1.4
	5825	-9	-3.7

Free Space Radiation Pattern:

2.442 GHz



5.825 GHz



4. Bluetooth Antenna

Frequency Band(s) : 2.4GHz

Operating Frequency : 2.400-2.483.5GHz

Number of Channel : 1, 38, 79 Channels

Channel Spacing : 1MHz

Bandwidth : 2.4GHz

Transmit Power : 0 to 9.5 (Max) dBm

ITU-class of emission : Class 1

Antenna Type : Loop antenna

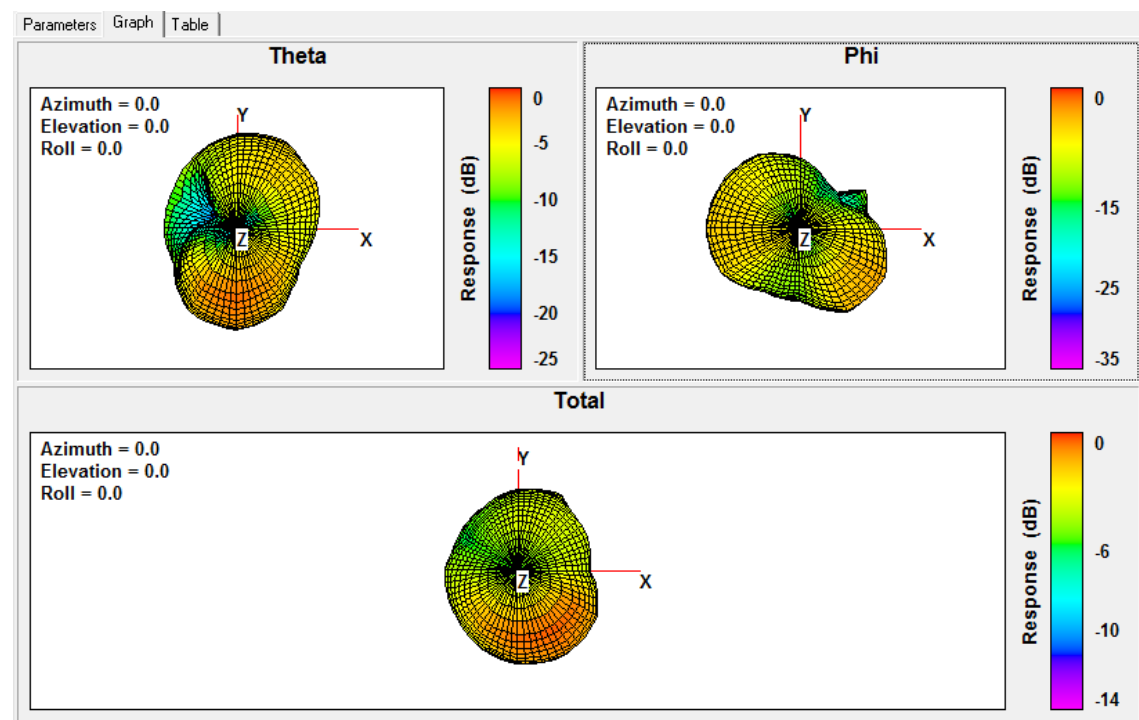
Antenna Material: LDS

Passive Gain:

BAND	Frequency (MHz)	Passive	
		AVG. Eff (dB)	Peak Gain(dBi)
Bluetooth	2400	-3.9	0.3
	2438	-3.4	0.8
	2485	-3.5	0.8
	2500	-3.6	0.6

Free Space Radiation Pattern:

2.442 GHz



5. GPS Antenna

Frequency Band: 1570MHZ-1610MHZ

Operating Frequency: 1575.42MHZ

Mode of operation: Simplex (Receive)

Antenna Type: PIFA antenna

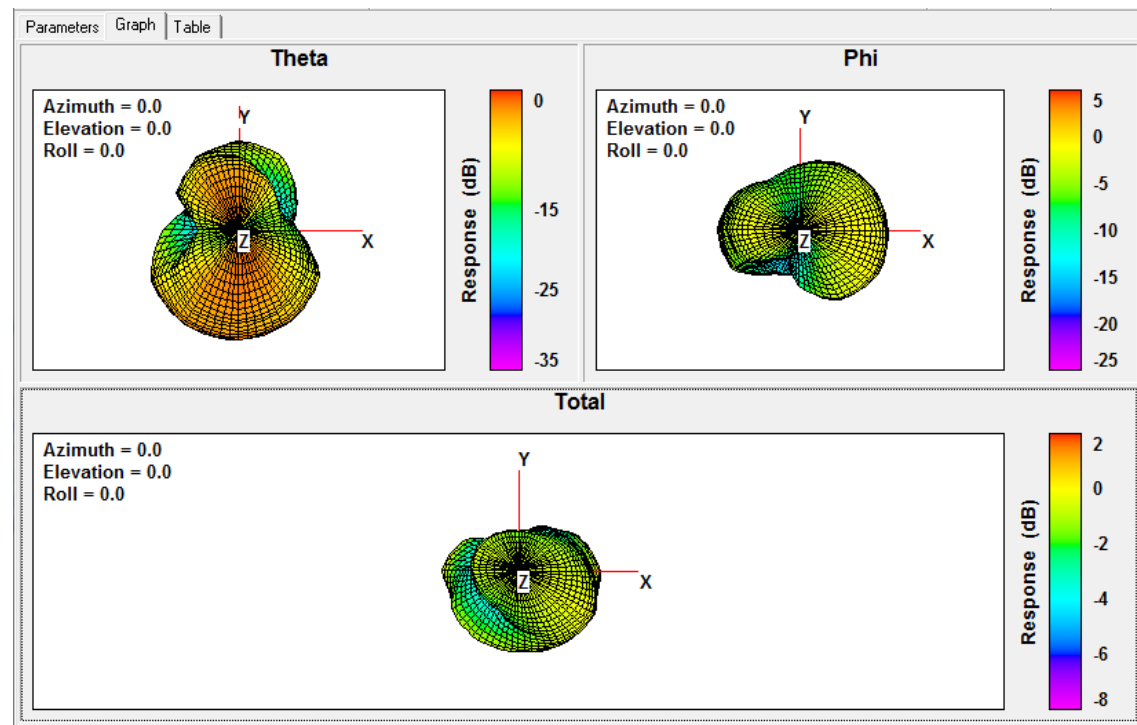
Antenna Material: LDS

Passive Performance:

BAND	Frequency (MHz)	Passive		
		AVG. Eff (dB)	Peak Gain(dBi)	Efficiency (%)
GPS	1570	-4.9	-1.4	32.4%
	1575	-4.9	-1.4	32.4%
	1610	-5.4	-1.9	29.1%

Free Space Radiation Pattern:

1575.42 GHz



6. NFC Antenna

Frequency Band: 13.56MHZ

Operating Frequency: 13.56MHZ

Antenna Type: Loop antenna

Antenna Material: FPC

Passive Performance:

Electrical Specification	
Frequency Range (MHz)	12 ~ 15
Inductance (μ H)	1.4 $\pm$ 0.06
Resistance (m Ω)	550 $\pm$ 150(DCR)

7. Walkie-Talkie Antenna

Support Frequency Band: 400 ~ 470MHZ

Permitted Frequency: 400 ~ 406MHz; 406.1 ~ 420MHZ, (disable 421MHz-470MHz)

Antenna Type: External Dipole antenna

Antenna Material: metal

Passive Performance:

Electrical Specification	
Frequency Range (MHz)	400 ~ 406MHz; 406.1 ~ 420MHZ (disable 421MHz-470MHz)
Antenna Gain (dBi)	-3dBi