

# Regulatory WWAN Antenna Information

## ASUS CZ1204

### [INNOWAVE antenna]

<b>Tx Antenna</b>		
Vendor (Manufacturer)	INNOWAVE	
Parts Number	Main Antenna:	F001C8712190001
	Auxiliary Antenna:	F001C8712590001(RX only)
<b>Address of Vendor (Manufacturer)</b>	No.2,Qianmei Road,Dongkeng Town,Dongguan City,Guangdong Province, China	
<b>Transmitter Module</b>		
WWAN Module	FM101-GL	

# Antenna Information

## Section 1. Antenna Assembly Specifications

Green = FM101-GL  
Gray = No Support Plan

### Main Antenna

Antenna Part Number	Manufacturer	Antenna Type	Cable Assembly Part Number and Information	Frequency (MHz)		Cable Loss (dB)	Peak Gain (including cable loss)		
							Horizontal (dBi)	Vertical (dBi)	Total (dBi)
Main F001C8712190001	Inno wave	PIFA	1. Cable P/N: RF 1.13LL 2. Diameter:1.13mm 50 ohm coaxial cable 3. Cable length: Main :530 mm Aux : 360 mm 4. Connector P/N: ST-4 or Equivalent	EU/ANZ/CN/Japan UMTS/HSPA (UMTS 2100, Band 1) (UE-UTRA, Band 1, n1)	1920.00	1.11	-4.82	-2.51	-0.81
					1950.00	1.12	-5.96	-2.88	-1.15
					1980.00	1.12	-3.66	-2.87	-1.48
				FCC Part 24 GSM/GPRS/EDGE (GSM 1900) UMTS/HSPA/EVDO (UMTS1900, Band 2) (UE-UTRA, Band 2, n2)	1850.00	1.09	-3.94	-0.50	0.27
					1880.00	1.10	-4.10	-1.37	-0.24
					1910.00	1.10	-4.24	-1.73	-0.95
				EU/ANZ/CN/Japan GSM/GPRS/EDGE (GSM 1800, Band 3) (UE-UTRA, Band 3, n3)	1710.00	1.05	-4.02	-5.15	-1.72
					1747.50	1.05	-2.21	-1.43	1.01
					1785.00	1.06	-4.34	-1.01	1.25
				FCC Part 27 UMTS(AWS) / HSPA (UMTS, Band 4) (UE-UTRA, Band 4)	1710.00	1.05	-4.02	-5.15	-1.72
					1732.50	1.05	-3.48	-3.02	0.04
					1755.00	1.06	-2.36	-1.49	1.01
				FCC Part 22 GSM/GPRS/EDGE (GSM 850) ANZ (UMTS850, Band 5) (UE-UTRA, Band 5, n5)	824.00	0.69	-5.61	-1.75	-0.99
					836.50	0.70	-5.82	-1.17	-0.53
					849.00	0.70	-5.25	-0.11	0.42
				Japan (UMTS, Band 6)	830.00	0.69	-6.57	-2.36	-0.62
					835.00	0.70	-6.08	-1.85	-0.39
					840.00	0.70	-5.33	-0.50	-0.02
				FCC Part 27 CA/EU/ANZ (UE-UTRA, Band 7, n7)	2500.00	1.26	-4.63	0.61	1.24
					2535.00	1.27	-3.12	0.93	1.48
					2570.00	1.27	-3.74	0.98	1.61
				EU/ANZ/Japan UMTS/HSPA (UMTS 900, Band 8) (UE-UTRA, Band 8, n8)	880.00	0.71	-6.19	0.64	0.87
					897.50	0.71	-6.28	-0.24	0.49
					915.00	0.71	-5.21	-1.69	-1.36
				Japan (WCDMA, Band 9)	1844.9				
					1862.5				
					1879.9				
				FCC Part 27 (UE-UTRA, Band 12, n12)	699.00	0.67	-6.73	-2.99	-1.65
					707.50	0.67	-5.34	-3.07	-1.04
					716.00	0.67	-4.33	-2.48	-1.19
				FCC Part 27 (UE-UTRA, Band 13)	777.00	0.68	-6.06	-3.28	-1.13
					782.00	0.68	-5.77	-3.05	-0.69
787.00	0.68	-6.19	-2.82		-0.75				
FCC Part 90 (UE-UTRA, Band 14)	788.00	0.68	-6.47	-2.13	-0.79				
	793.00	0.68	-6.49	-2.04	-0.81				
	798.00	0.68	-6.36	-2.10	-0.88				
FCC Part 27 (UE-UTRA, Band 17)	704.00	0.67	-5.13	-3.59	-1.24				
	710.00	0.67	-4.25	-3.08	-1.09				
	716.00	0.67	-4.33	-2.48	-1.19				
Japan (UE-UTRA, Band 18)	815.00	0.69	-5.59	-2.35	-1.10				
	822.50	0.69	-6.12	-1.49	-1.16				
	830.00	0.69	-6.57	-2.36	-0.62				

Japan (UMTS, Band 19) (UE-UTRA, Band 19)	830.00	0.69	-6.57	-2.36	-0.62
	837.50	0.70	-6.10	-2.03	-0.02
	845.00	0.70	-5.34	-1.87	0.13
EU (UE-UTRA, Band 20, n20)	832.00	0.70	-6.71	-2.24	-0.51
	847.00	0.70	-5.18	-1.01	0.14
	862.00	0.70	-5.54	-0.38	0.65
FCC Part 24 (UE-UTRA, Band 25)	1850.00	1.09	-3.94	-0.50	0.27
	1882.50	1.10	-4.34	-1.07	0.19
	1915	1.10	-4.63	-2.64	-0.95
FCC Part 90, 22H (UE-UTRA, Band 26)	814.00	0.69	-6.29	-2.42	-1.05
	831.50	0.69	-5.38	-1.16	-0.23
	849.00	0.70	-5.25	-0.11	0.42
EU/ANZ/Japan (UE-UTRA, Band 28, n28)	703.00	0.67	-5.64	-2.68	-1.25
	725.50	0.67	-4.28	-1.29	-0.65
	748.00	0.68	-3.77	-1.52	-0.29
FCC Part 27 CA (UE-UTRA, Band 29) * Down link only	717.00	0.67	-3.93	-1.87	-0.53
	722.50	0.67	-4.73	-2.19	-0.61
	728.00	0.67	-4.30	-1.45	-0.51
FCC Part 27 (UE-UTRA, Band 30)	2305.00	1.22	-3.64	-1.09	-0.27
	2310.00	1.22	-3.92	-1.27	0.53
	2315.00	1.22	-3.45	-0.71	0.86
EU (LTE, Band 32) * Down link only	1452.00				
	1474.00				
	1496.00				
EU (LTE Band 34)	2010.00				
	2017.50				
	2025.00				
EU/CN (UE-UTRA, Band 38, n38)	2570.00	1.27	-3.74	0.98	1.60
	2595.00	1.28	-5.11	0.32	1.15
	2620.00	1.28	-6.53	-0.01	0.59
CN (TD-SCDMA, Band 39)	1880.00	1.10	-4.1	-1.37	-0.24
	1900.00	1.10	-4.24	-1.73	-0.66
	1920.00	1.10	-4.82	-2.51	-0.81
EU/ANZ/CN (UE-UTRA, Band 40)	2300.00	1.22	-1.92	-1.77	-0.27
	2350.00	1.23	-5.06	-1.53	-0.51
	2400.00	1.24	-3.64	-1.42	-0.13
FCC Part 27 US/CN/Japan (UE-UTRA, Band 41, n41)	2496.00	1.26	-4.63	0.20	0.83
	2593.00	1.28	-5.11	0.49	1.37
	2690.00	1.31	-7.34	0.06	0.22
FCC Part 96 CA/EU/Japan (LTE Band 42)	3400.00	1.49	1.09	-3.21	1.28
	3500.00	1.51	0.24	0.13	1.54
	3600.00	1.53	-0.38	1.74	1.92
(LTE Band 43)	3600.00	1.53	-0.38	1.74	1.92
	3700.00	1.55	1.35	1.29	2.17
	3800.00	1.57	1.96	0.63	2.75
FCC Part 15, 90, 95 (LTE Band 46) TD Unlicensed, LAA RCV only	5150.00				
	5537.00				
	5925.00				
FCC Part 96 (LTE Band 48)	3550.00	1.52	-1.52	0.74	0.91
	3625.00	1.53	1.06	1.54	0.97
	3700.00	1.55	1.35	1.29	0.89
FCC Part 27 (LTE, Band 66, n66)	1710.00	1.05	-4.02	-5.15	-1.72
	1745.00	1.05	-2.21	-1.43	1.01
	1780.00	1.06	-3.78	-2.54	-0.39
FCC Part 24, 27 (LTE Band 71, n71)	663.00	0.66	-6.11	-3.03	-2.48
	680.50	0.66	-6.50	-3.94	-2.22
	698.00	0.67	-5.73	-3.36	-1.29
FCC/EU/CN/JP	3300.00				

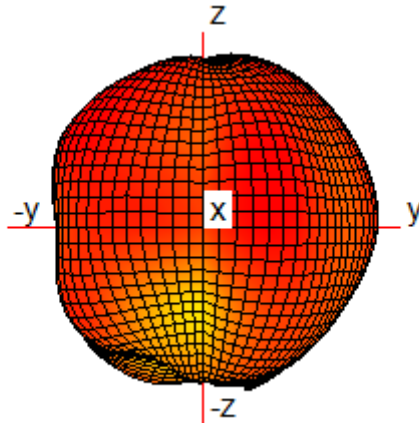
				<b>(5G NR Band 77)</b>	3750.00				
					4200.00				
				<b>EU/CN/JP (5G NR Band 78)</b>	3300.00				
					3550.00				
					3800.00				
				<b>CN/JP (5G NR Band 79)</b>	4400.00				
					4700.00				
					5000.00				
				<b>Japan (UE-UTRA, Band 21)</b>	1477.90				
					1455.40				
					1462.90				
				<b>Japan J-CDMA</b>	815.00				
					824.70				
					836.52				
					848.31				
					870.00				
					880.20				
					897.60				
					914.80				
					925.00				
940.00									
<b>Japan J-CDMA</b>	1922.40								
	1950.00								
	1977.60								

## Section 2. Radiation characteristics of antenna

Radiation characteristic in 1920MHz ~ 1980MHz (EU/ANZ/CN/JP: UMTS/HSDPA, Band 1, n1)

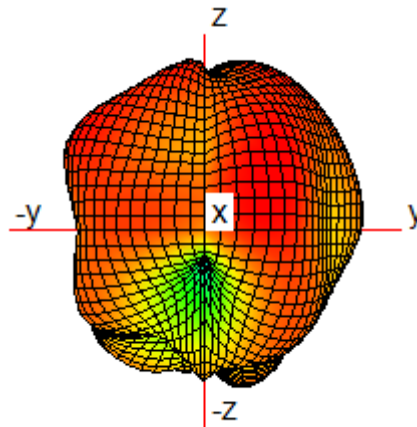
**Main antenna: 1920.00 MHz**

1920.00 MHz	
Horizontal Peak (dBi)	-4.82
Vertical Peak(dBi)	-2.51



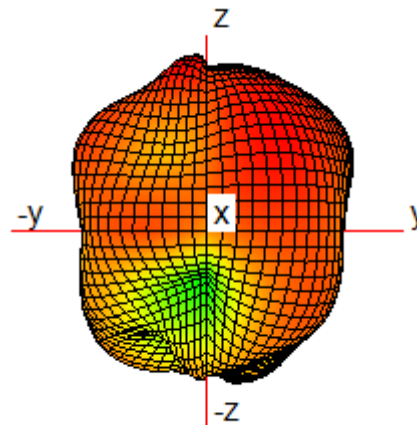
**Main antenna: 1950.00 MHz**

1950.00 MHz	
Horizontal Peak (dBi)	-5.96
Vertical Peak(dBi)	-2.88



**Main antenna: 1980.00 MHz**

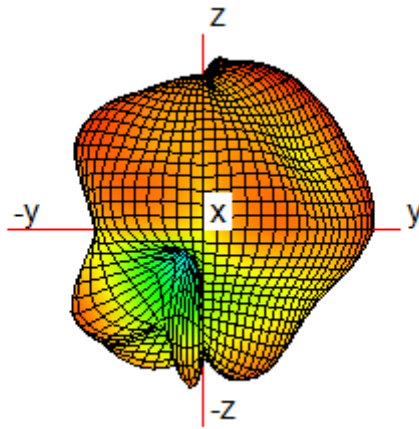
1980.00 MHz	
Horizontal Peak (dBi)	-3.66
Vertical Peak(dBi)	-2.87



**Radiation characteristic in 1850MHz ~ 1910MHz (FCC Part 24 PCS, Band 2, n2)**

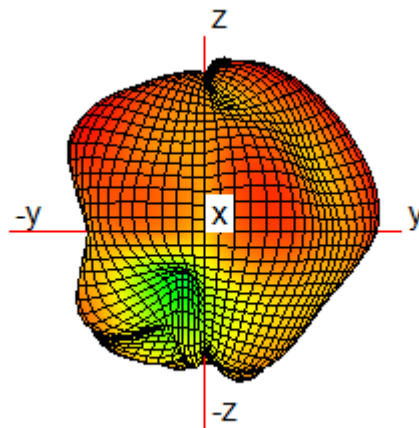
**Main antenna: 1850.00 MHz**

<b>1850.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-3.94</b>
<b>Vertical Peak(dBi)</b>	<b>-0.50</b>



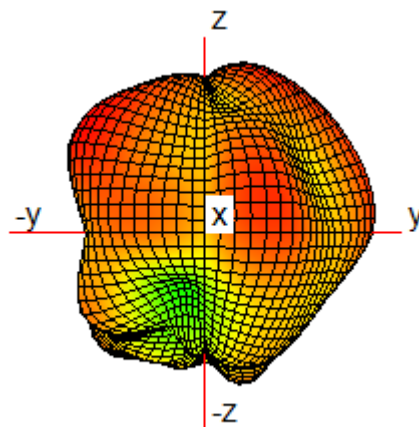
**Main antenna: 1880.00 MHz**

<b>1880.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-4.10</b>
<b>Vertical Peak(dBi)</b>	<b>-1.37</b>



**Main antenna: 1910.00 MHz**

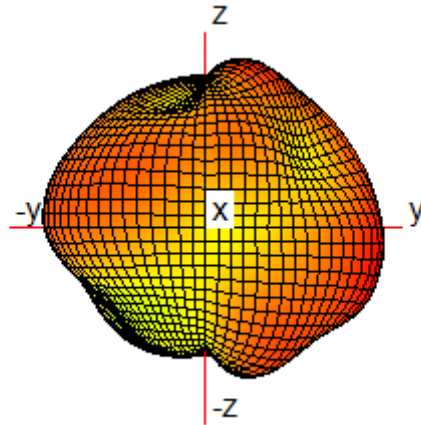
<b>1910.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-4.24</b>
<b>Vertical Peak(dBi)</b>	<b>-1.73</b>



**Radiation characteristic in 1710MHz ~ 1785MHz (EU/ANZ/CN/JP: UE-UTRA, Band 3, n3)**

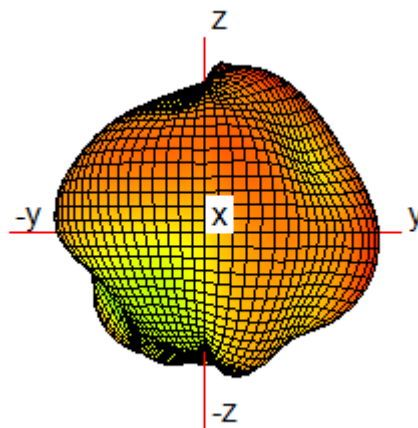
**Main antenna: 1710.00 MHz**

1710.00 MHz	
Horizontal Peak (dBi)	-4.02
Vertical Peak(dBi)	-5.15



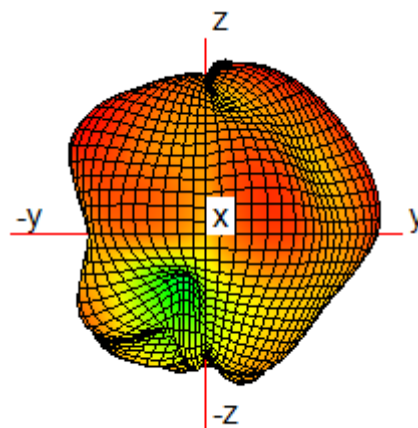
**Main antenna: 1747.50 MHz**

1747.50 MHz	
Horizontal Peak (dBi)	-2.21
Vertical Peak(dBi)	-1.43



**Main antenna: 1785.00 MHz**

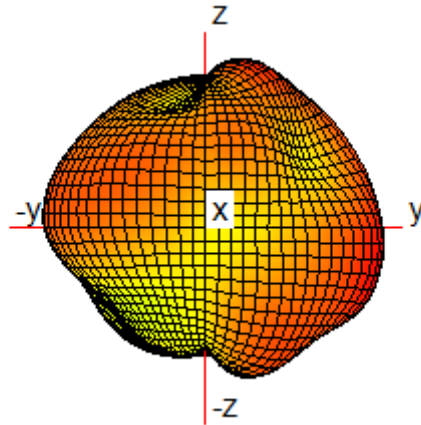
1785.00 MHz	
Horizontal Peak (dBi)	-4.34
Vertical Peak(dBi)	-1.01



**Radiation characteristic in 1710MHz ~ 1755MHz (FCC Part 27 UMTS(AWS), Band 4)**

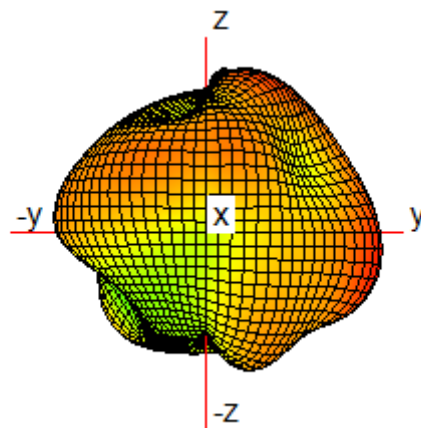
**Main antenna: 1710.00 MHz**

1710.00 MHz	
Horizontal Peak (dBi)	-4.02
Vertical Peak(dBi)	-5.15



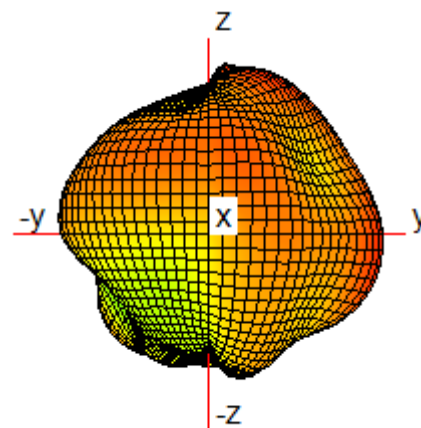
**Main antenna: 1732.50 MHz**

1732.50 MHz	
Horizontal Peak (dBi)	-3.48
Vertical Peak(dBi)	-3.02



**Main antenna: 1755.00 MHz**

1755.00 MHz	
Horizontal Peak (dBi)	-2.36
Vertical Peak(dBi)	-1.49

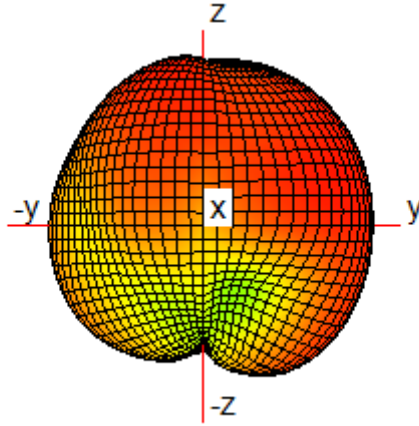




**Radiation characteristic in 824MHz ~ 849MHz (FCC Part 22 Cellular, Band 5, n5)**

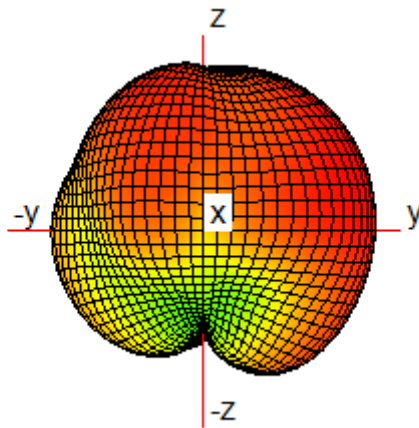
**Main antenna: 824.00 MHz**

824.00 MHz	
Horizontal Peak (dBi)	-5.61
Vertical Peak(dBi)	-1.75



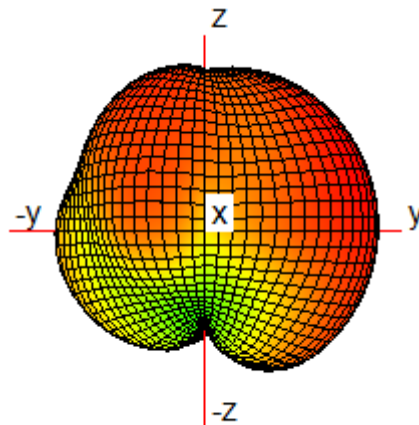
**Main antenna: 836.50 MHz**

836.50 MHz	
Horizontal Peak (dBi)	-5.82
Vertical Peak(dBi)	-1.17



**Main antenna: 849.0 MHz**

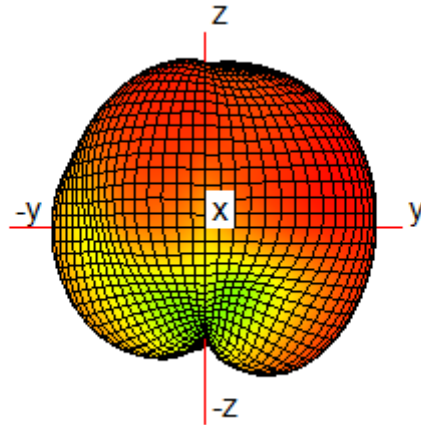
849.0 MHz	
Horizontal Peak (dBi)	-5.25
Vertical Peak(dBi)	-0.11



**Radiation characteristic in 830MHz ~ 840MHz (Japan UMTS, Band 6)**

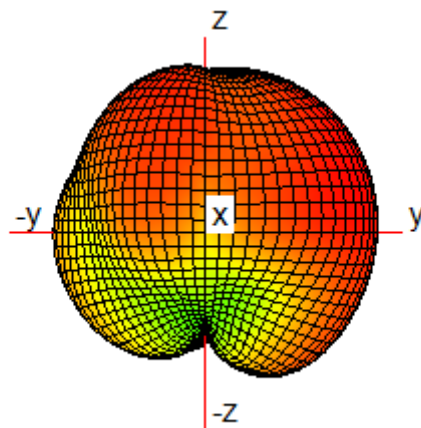
**Main antenna: 830.00 MHz**

830.00 MHz	
Horizontal Peak (dBi)	-6.57
Vertical Peak(dBi)	-2.36



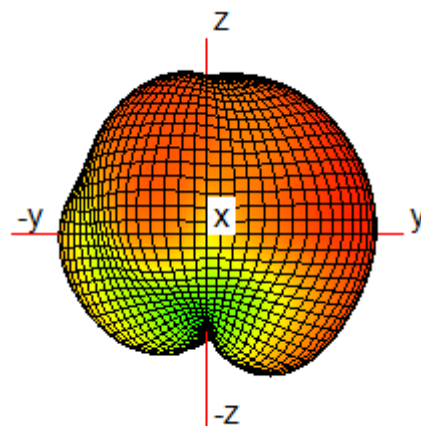
**Main antenna: 835.0 MHz**

835.0 MHz	
Horizontal Peak (dBi)	-6.08
Vertical Peak(dBi)	-1.85



**Main antenna: 840.0 MHz**

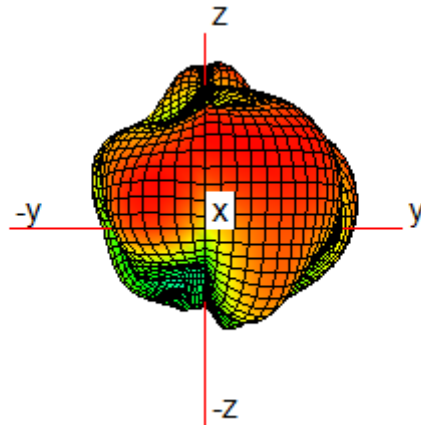
840.0 MHz	
Horizontal Peak (dBi)	-5.33
Vertical Peak(dBi)	-0.50



**Radiation characteristic in 2500MHz ~ 2570MHz (CA/EU/ANZ UE-UTRA, Band 7, n7)**

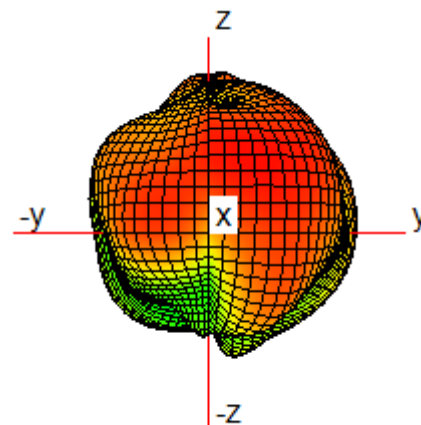
**Main antenna: 2500.00 MHz**

2500.00 MHz	
Horizontal Peak (dBi)	-4.63
Vertical Peak(dBi)	0.61



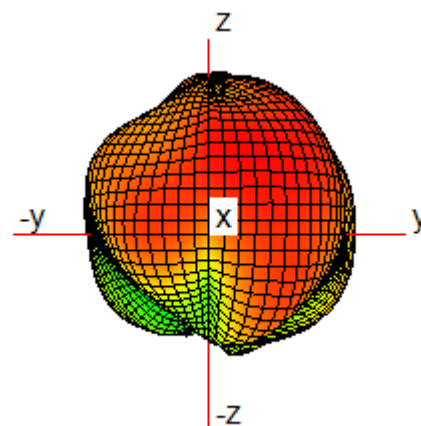
**Main antenna: 2535.00 MHz**

2535.00 MHz	
Horizontal Peak (dBi)	-3.12
Vertical Peak(dBi)	0.93



**Main antenna: 2570.00 MHz**

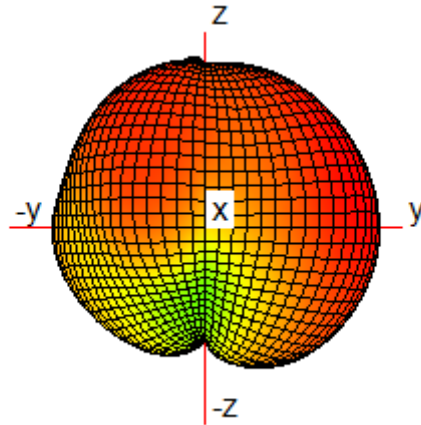
2570.00 MHz	
Horizontal Peak (dBi)	-3.74
Vertical Peak(dBi)	0.98



**Radiation characteristic in 880MHz ~ 915MHz (EU/ANZ/JP: Band 8, n8)**

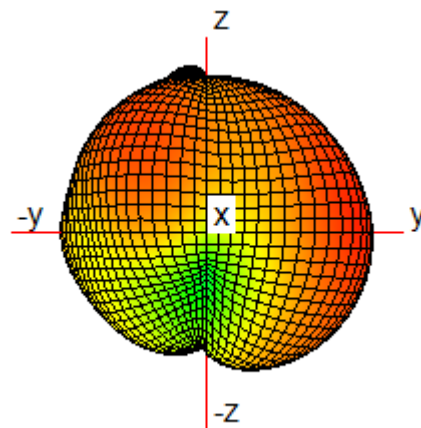
**Main antenna: 880.00 MHz**

880.00 MHz	
Horizontal Peak (dBi)	-6.19
Vertical Peak(dBi)	0.64



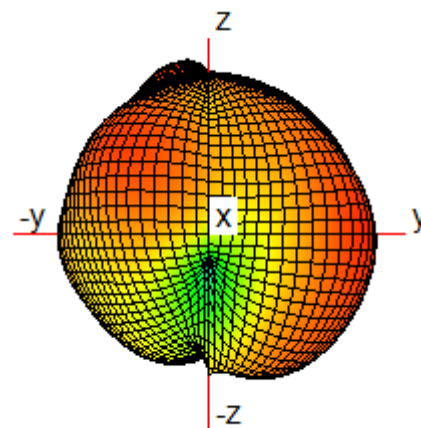
**Main antenna: 897.50 MHz**

897.50 MHz	
Horizontal Peak (dBi)	-6.28
Vertical Peak(dBi)	-0.24



**Main antenna: 915.00 MHz**

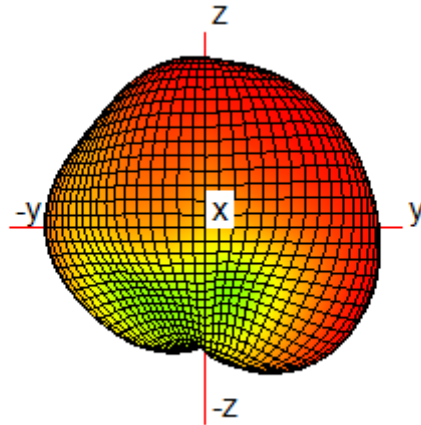
915.00 MHz	
Horizontal Peak (dBi)	-5.21
Vertical Peak(dBi)	-1.69



Radiation characteristic in 699MHz ~ 716MHz (FCC Part 27 UE-UTRA, Band 12, n12)

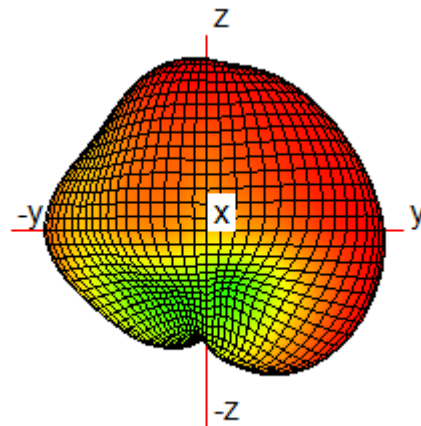
Main antenna: 699.00 MHz

699.00 MHz	
Horizontal Peak (dBi)	-6.73
Vertical Peak(dBi)	-2.99



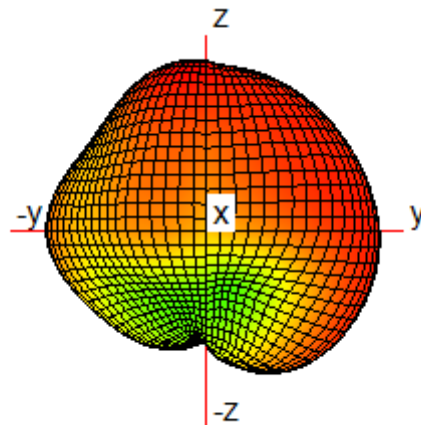
Main antenna: 707.50 MHz

707.50 MHz	
Horizontal Peak (dBi)	-5.34
Vertical Peak(dBi)	-3.07



Main antenna: 716.00 MHz

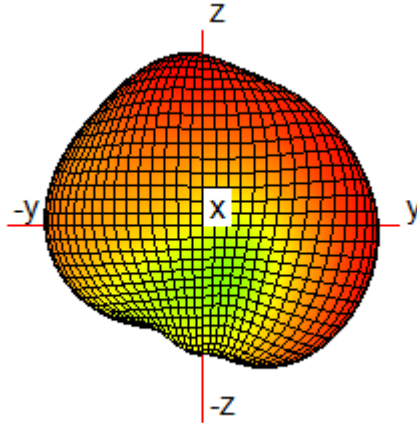
716.00 MHz	
Horizontal Peak (dBi)	-4.33
Vertical Peak(dBi)	-2.48



**Radiation characteristic in 776MHz ~ 787MHz (FCC Part 27 UE-UTRA, Band 13)**

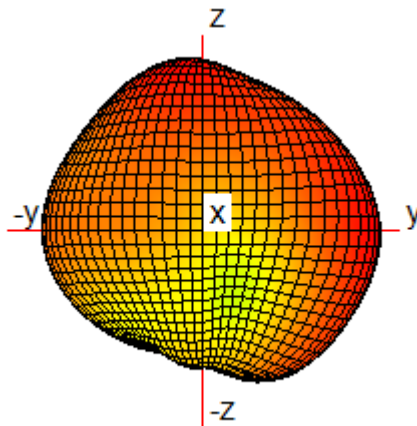
**Main antenna: 777.00 MHz**

777.00 MHz	
Horizontal Peak (dBi)	-6.06
Vertical Peak(dBi)	-3.28



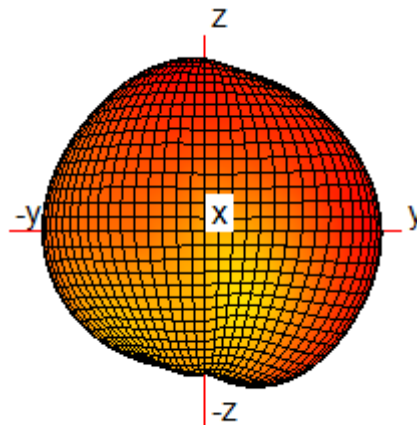
**Main antenna: 782.00 MHz**

782.00 MHz	
Horizontal Peak (dBi)	-5.77
Vertical Peak(dBi)	-3.05



**Main antenna: 787.00 MHz**

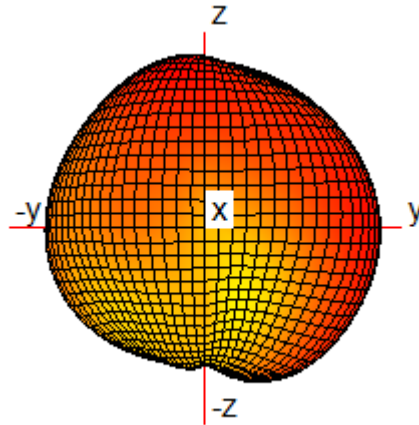
787.00 MHz	
Horizontal Peak (dBi)	-6.19
Vertical Peak(dBi)	-2.82



**Radiation characteristic in 788MHz ~ 798MHz (FCC Part 90 UE-UTRA, Band 14)**

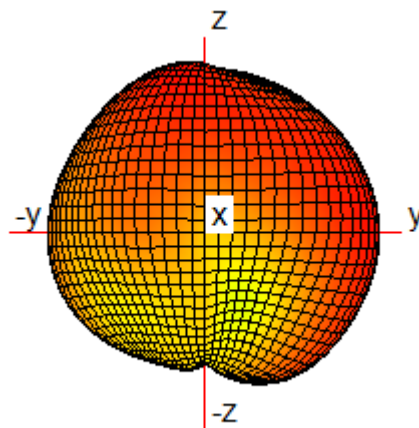
**Main antenna: 788.00 MHz**

788.00 MHz	
Horizontal Peak (dBi)	-6.47
Vertical Peak(dBi)	-2.13



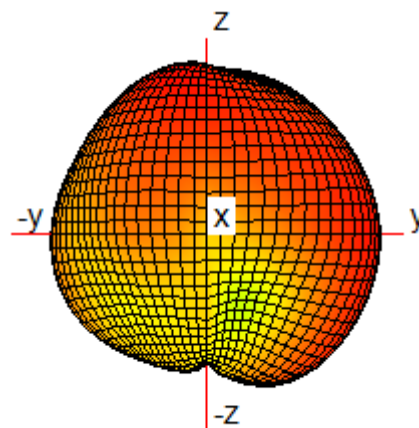
**Main antenna: 793.00 MHz**

793.00 MHz	
Horizontal Peak (dBi)	-6.49
Vertical Peak(dBi)	-2.04



**Main antenna: 798.00 MHz**

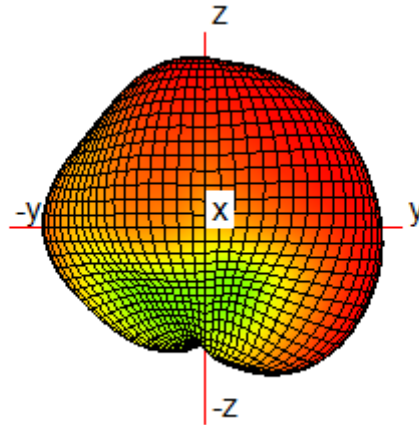
798.00 MHz	
Horizontal Peak (dBi)	-6.36
Vertical Peak(dBi)	-2.10



**Radiation characteristic in 704MHz ~ 716MHz (FCC Part 27H UE-UTRA, Band 17)**

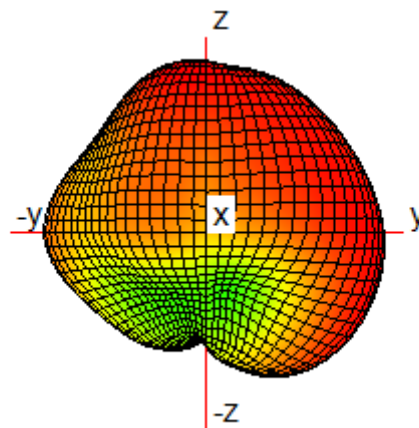
**Main antenna: 704.00 MHz**

704.00 MHz	
Horizontal Peak (dBi)	-5.13
Vertical Peak(dBi)	-3.59



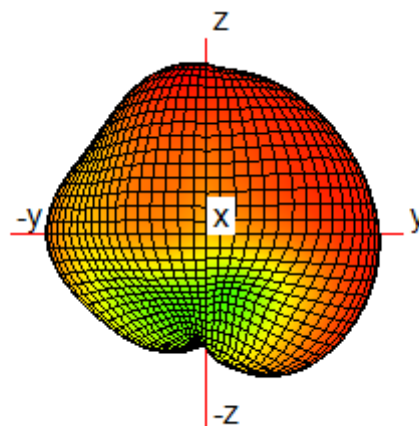
**Main antenna: 710.00 MHz**

710.00 MHz	
Horizontal Peak (dBi)	-4.25
Vertical Peak(dBi)	-3.08



**Main antenna: 716.00 MHz**

716.00 MHz	
Horizontal Peak (dBi)	-4.33
Vertical Peak(dBi)	-2.48

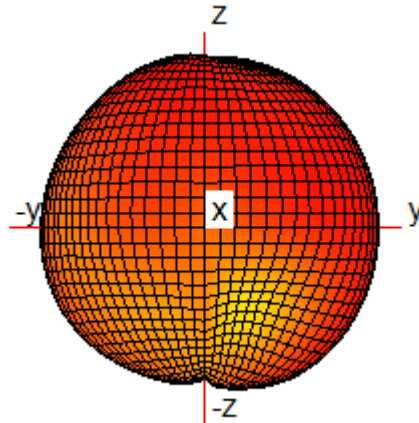




**Radiation characteristic in 815MHz ~ 830MHz (Japan, Band 18)**

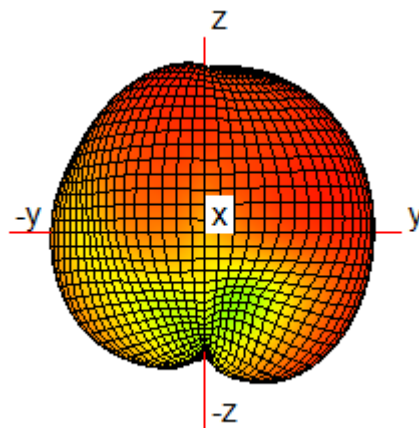
**Main antenna: 815.00 MHz**

815.00 MHz	
Horizontal Peak (dBi)	-5.59
Vertical Peak(dBi)	-2.35



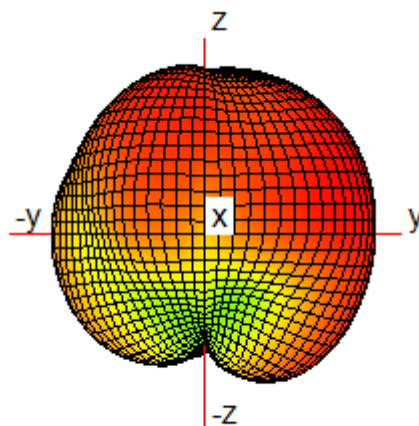
**Main antenna: 822.50 MHz**

822.50 MHz	
Horizontal Peak (dBi)	-6.12
Vertical Peak(dBi)	-1.49



**Main antenna: 830.00 MHz**

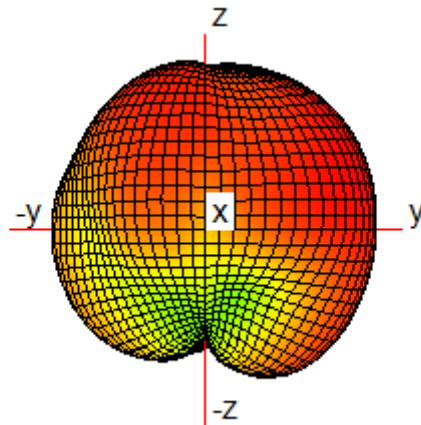
830.00 MHz	
Horizontal Peak (dBi)	-6.57
Vertical Peak(dBi)	-2.36



**Radiation characteristic in 830MHz ~ 845MHz (Japan, Band 19)**

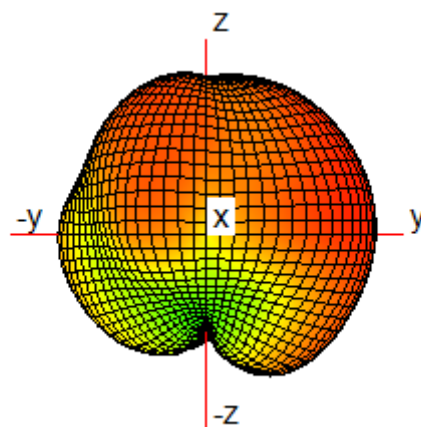
**Main antenna: 830.00 MHz**

830.00 MHz	
Horizontal Peak (dBi)	-6.57
Vertical Peak(dBi)	-2.36



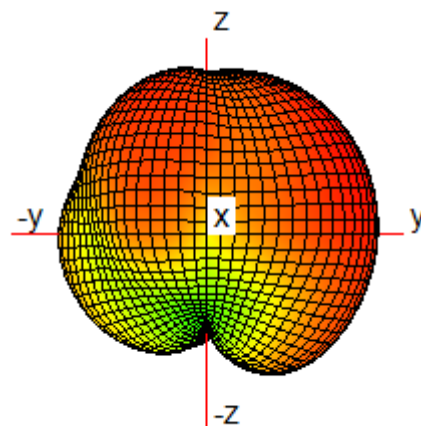
**Main antenna: 837.50 MHz**

837.50 MHz	
Horizontal Peak (dBi)	-6.10
Vertical Peak(dBi)	-2.03



**Main antenna: 845.00 MHz**

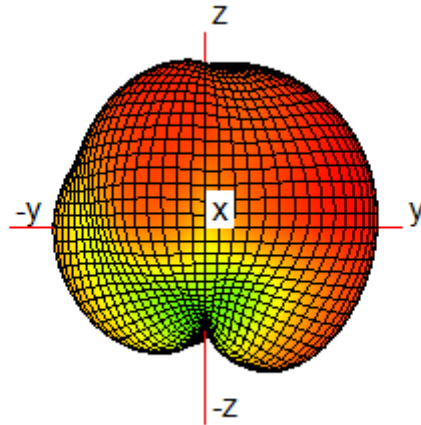
845.00 MHz	
Horizontal Peak (dBi)	-5.34
Vertical Peak(dBi)	-1.87



**Radiation characteristic in 832MHz ~ 862MHz (EU UE-UTRA, Band 20, n20)**

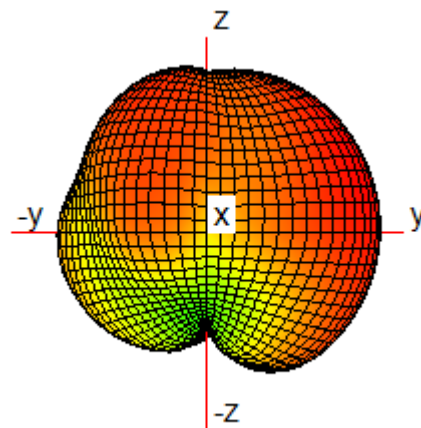
**Main antenna: 832.00 MHz**

832.00 MHz	
Horizontal Peak (dBi)	-6.71
Vertical Peak(dBi)	-2.24



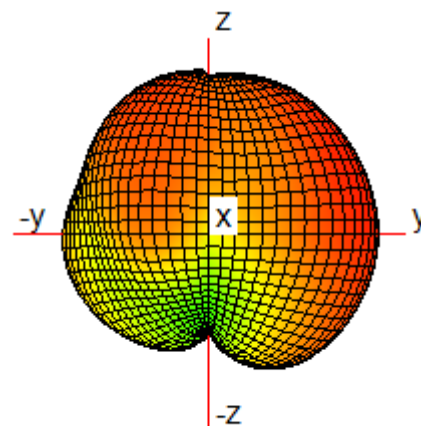
**Main antenna: 847.00 MHz**

847.00 MHz	
Horizontal Peak (dBi)	-5.18
Vertical Peak(dBi)	-1.01



**Main antenna: 862.00 MHz**

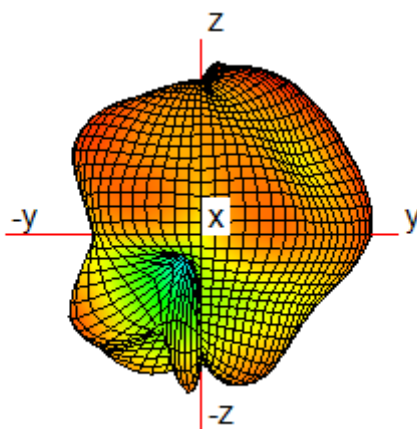
862.00 MHz	
Horizontal Peak (dBi)	-5.54
Vertical Peak(dBi)	-0.38



Radiation characteristic in 1850MHz ~ 1915MHz (FCC Part 24 UE-UTRA, Band 25)

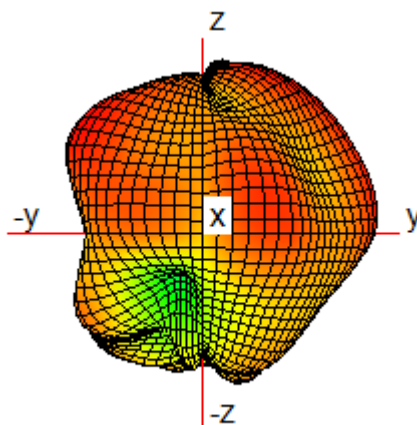
**Main antenna: 1850.00 MHz**

<b>1850.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-3.94</b>
<b>Vertical Peak(dBi)</b>	<b>-0.50</b>



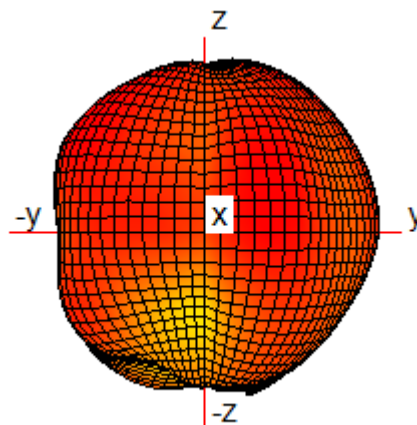
**Main antenna: 1882.50 MHz**

<b>1882.50 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-4.34</b>
<b>Vertical Peak(dBi)</b>	<b>-1.07</b>



**Main antenna: 1915.00 MHz**

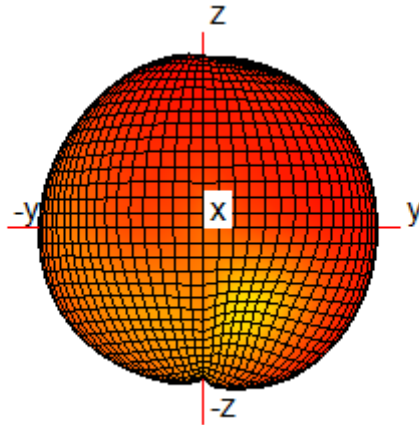
<b>1915.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-4.63</b>
<b>Vertical Peak(dBi)</b>	<b>-2.64</b>



**Radiation characteristic in 814MHz ~ 849MHz (FCC Part 90, 22H UE-UTRA, Band 26)**

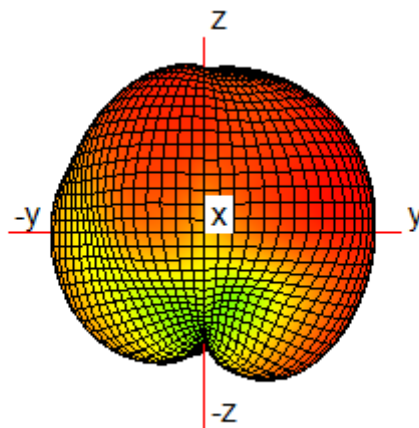
**Main antenna: 814.00 MHz**

814.00 MHz	
Horizontal Peak (dBi)	-6.29
Vertical Peak(dBi)	-2.42



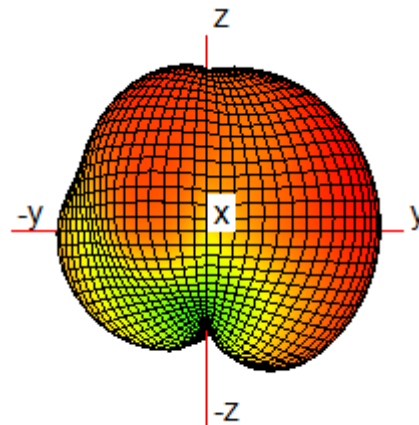
**Main antenna: 831.50 MHz**

831.50 MHz	
Horizontal Peak (dBi)	-5.38
Vertical Peak(dBi)	-1.16



**Main antenna: 849.00 MHz**

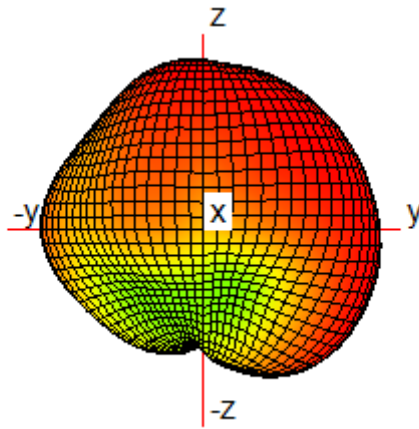
849.00 MHz	
Horizontal Peak (dBi)	-5.25
Vertical Peak(dBi)	-0.11



**Radiation characteristic in 703MHz ~ 748MHz (EU/ANZ/Japan UE-UTRA, Band 28, 28)**

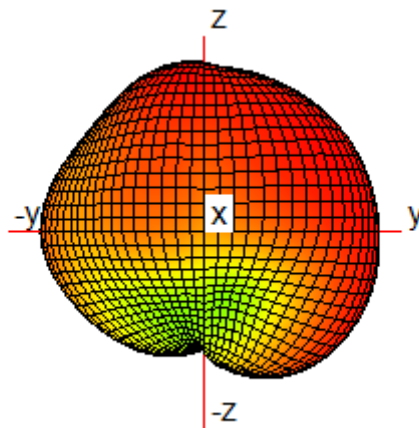
**Main antenna: 703.00 MHz**

703.00 MHz	
Horizontal Peak (dBi)	-5.64
Vertical Peak(dBi)	-2.68



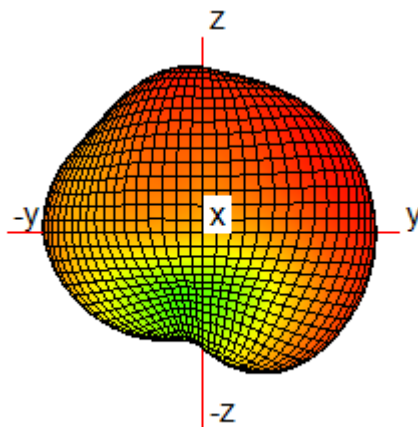
**Main antenna: 725.50 MHz**

725.50 MHz	
Horizontal Peak (dBi)	-4.28
Vertical Peak(dBi)	-1.29



**Main antenna: 748.00 MHz**

748 MHz	
Horizontal Peak (dBi)	-3.77
Vertical Peak(dBi)	-1.52

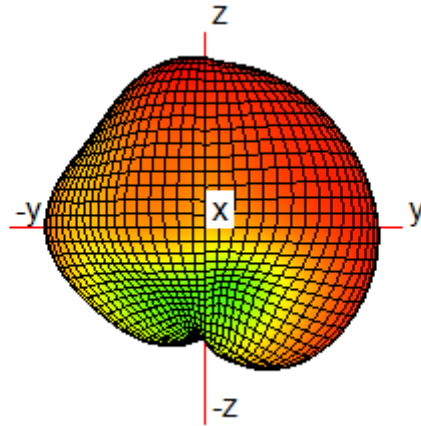


**Radiation characteristic in 717MHz ~ 728MHz (FCC Part 27 UE-UTRA, Band 29)**

\* Down link only

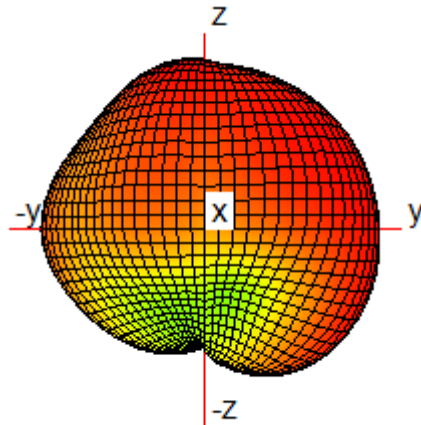
**Main antenna: 717.00 MHz**

717.00 MHz	
Horizontal Peak (dBi)	-3.93
Vertical Peak(dBi)	-1.87



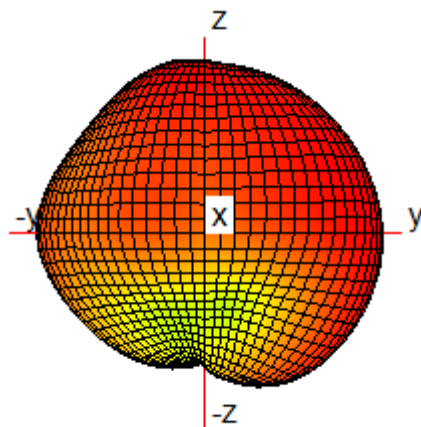
**Main antenna: 722.50 MHz**

722.50 MHz	
Horizontal Peak (dBi)	-4.73
Vertical Peak(dBi)	-2.19



**Main antenna: 728.00 MHz**

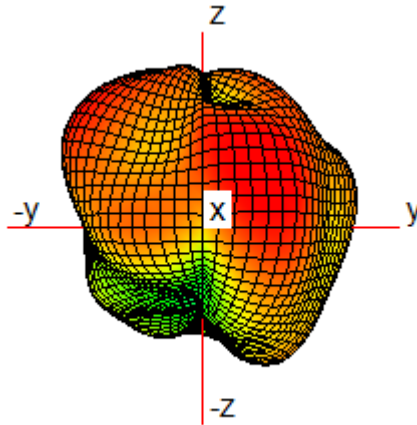
728.00 MHz	
Horizontal Peak (dBi)	-4.30
Vertical Peak(dBi)	-1.45



**Radiation characteristic in 2305MHz ~ 2315MHz (FCC Part 27 UE-UTRA, Band 30)**

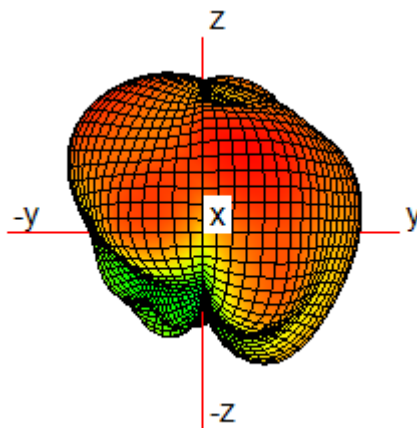
**Main antenna: 2305.00 MHz**

2305.00 MHz	
Horizontal Peak (dBi)	-3.64
Vertical Peak(dBi)	-1.09



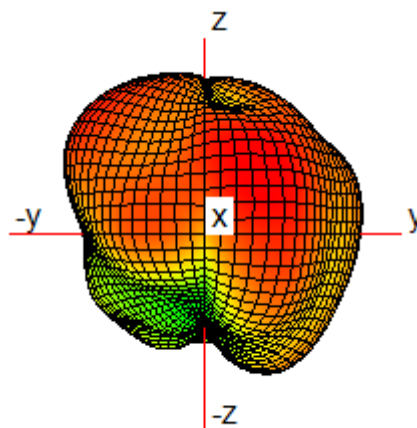
**Main antenna: 2310.00 MHz**

2310.00 MHz	
Horizontal Peak (dBi)	-3.92
Vertical Peak(dBi)	-1.27



**Main antenna: 2315.00 MHz**

2315.00 MHz	
Horizontal Peak (dBi)	-3.45
Vertical Peak(dBi)	-0.71

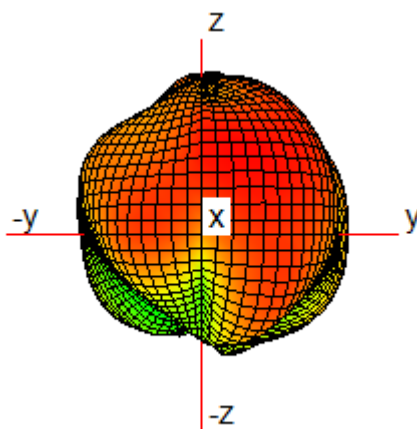




Radiation characteristic in 2570MHz ~ 2620MHz (EU/CN UE-UTRA, Band 38,n38)

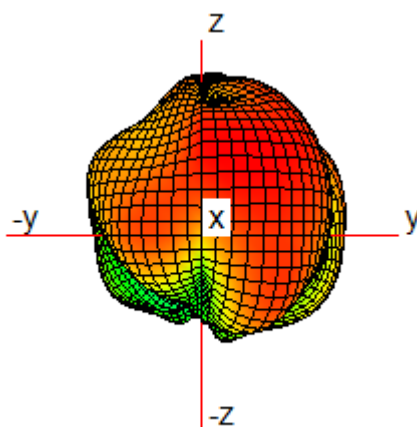
**Main antenna: 2570.00 MHz**

2570.00 MHz	
Horizontal Peak (dBi)	-3.74
Vertical Peak(dBi)	0.98



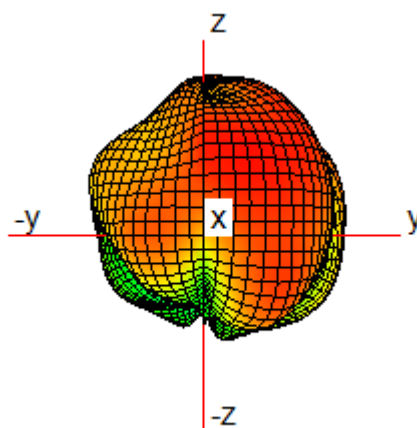
**Main antenna: 2595.00 MHz**

2595.00 MHz	
Horizontal Peak (dBi)	-5.11
Vertical Peak(dBi)	0.32



**Main antenna: 2620.00 MHz**

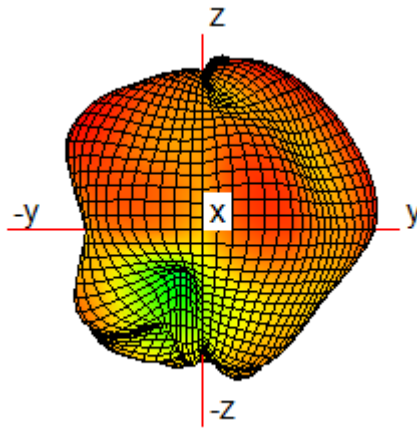
2620.00 MHz	
Horizontal Peak (dBi)	-6.53
Vertical Peak(dBi)	-0.01



Radiation characteristic in 1880MHz ~ 1920MHz (CN TD-SCDMA, Band 39)

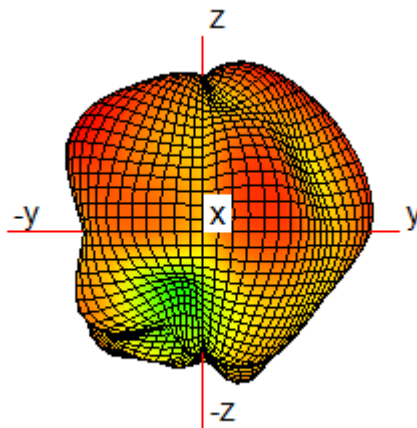
**Main antenna: 1880.00 MHz**

1880.00 MHz	
Horizontal Peak (dBi)	-4.10
Vertical Peak(dBi)	-1.37



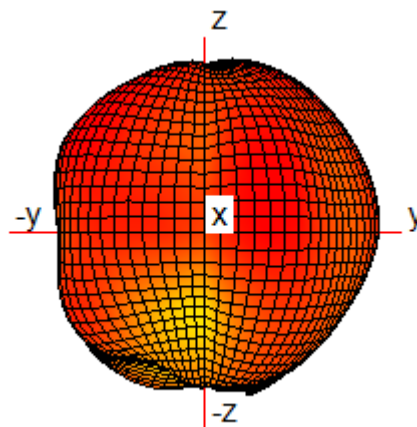
**Main antenna: 1900.00 MHz**

1900.00 MHz	
Horizontal Peak (dBi)	-4.24
Vertical Peak(dBi)	-1.73



**Main antenna: 1920.00 MHz**

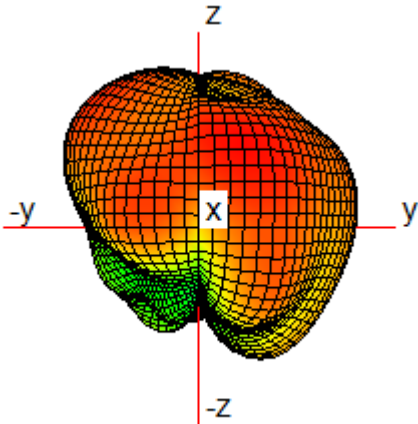
1920.00 MHz	
Horizontal Peak (dBi)	-4.82
Vertical Peak(dBi)	-2.51



Radiation characteristic in 2300MHz ~ 2400MHz (EU/ANZ/CN UE-UTRA, Band 40)

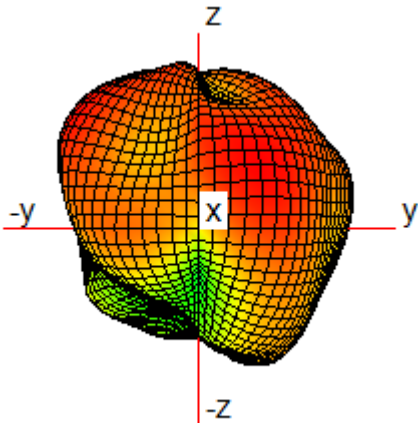
**Main antenna: 2300.00 MHz**

<b>2300.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-1.92</b>
<b>Vertical Peak(dBi)</b>	<b>-1.77</b>



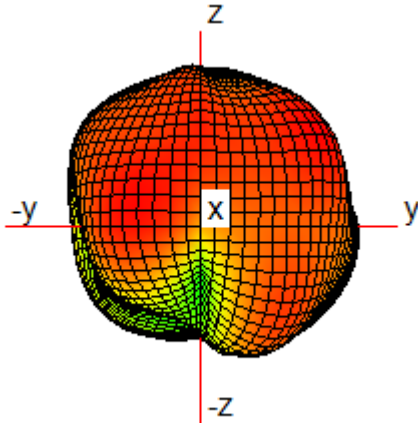
**Main antenna: 2350.00 MHz**

<b>2350.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-5.06</b>
<b>Vertical Peak(dBi)</b>	<b>-1.53</b>



**Main antenna: 2400.00 MHz**

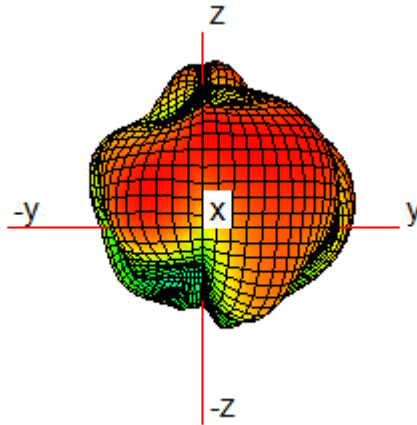
<b>2400.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-3.64</b>
<b>Vertical Peak(dBi)</b>	<b>-1.42</b>



**Radiation characteristic in 2496MHz ~ 2690MHz (FCC Part 27 UE-UTRA, Band 41, n41)**

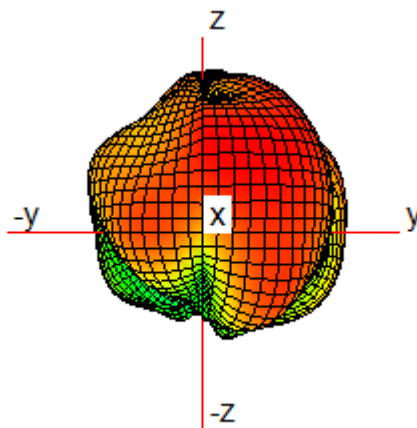
**Main antenna: 2496.00 MHz**

2496.00 MHz	
Horizontal Peak (dBi)	-4.63
Vertical Peak(dBi)	0.20



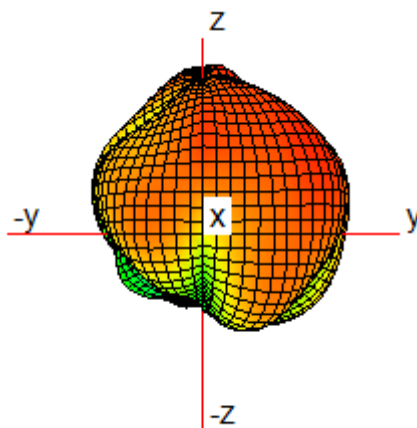
**Main antenna: 2593.00 MHz**

2593.00 MHz	
Horizontal Peak (dBi)	-5.11
Vertical Peak(dBi)	0.49



**Main antenna: 2690.00 MHz**

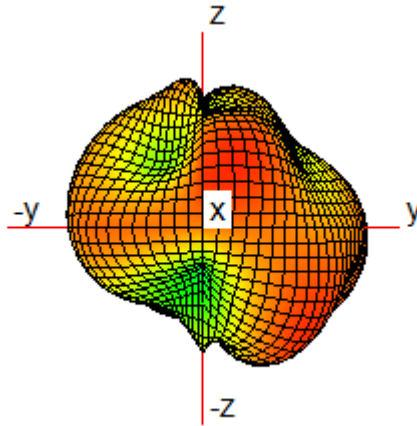
2690.00 MHz	
Horizontal Peak (dBi)	-7.34
Vertical Peak(dBi)	0.06



**Radiation characteristic in 3400MHz ~ 3600MHz (FCC Part 96 CA/EU/Japan LTE, Band 42)**

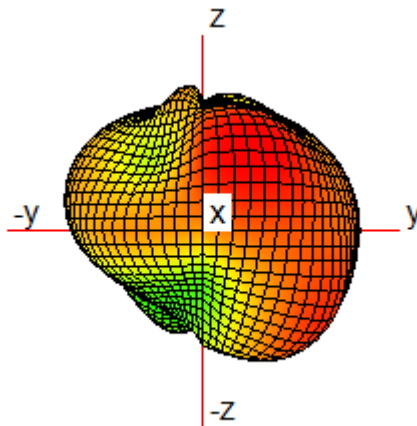
**Main antenna: 3400.00 MHz**

3400.00 MHz	
Horizontal Peak (dBi)	1.09
Vertical Peak(dBi)	-3.21



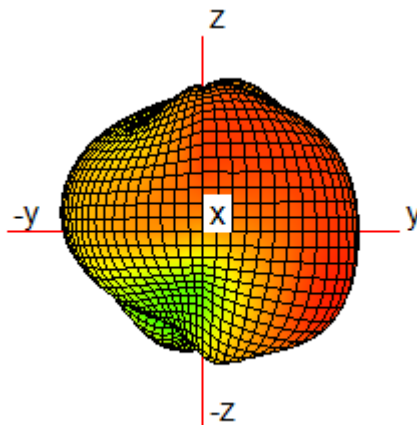
**Main antenna: 3500.00 MHz**

3500.00 MHz	
Horizontal Peak (dBi)	0.24
Vertical Peak(dBi)	0.13



**Main antenna: 3600.00 MHz**

3600.00 MHz	
Horizontal Peak (dBi)	-0.38
Vertical Peak(dBi)	1.74



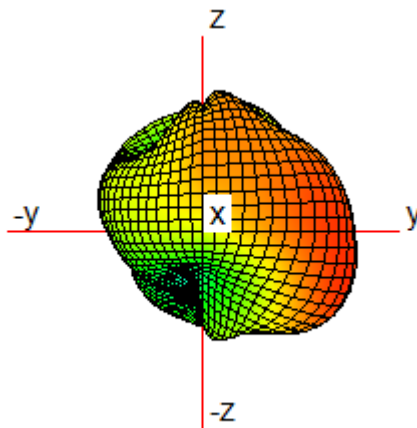
**Radiation characteristic in 3600MHz ~ 3800MHz (Band 43)**

**Main antenna: 3600.00 MHz**

3600.00 MHz	
Horizontal Peak (dBi)	-0.38
Vertical Peak(dBi)	1.74

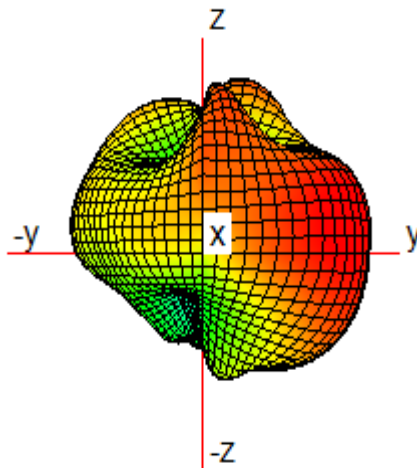
**Main antenna: 3700.00 MHz**

3700.00 MHz	
Horizontal Peak (dBi)	1.35
Vertical Peak(dBi)	1.29



**Main antenna: 3800.00 MHz**

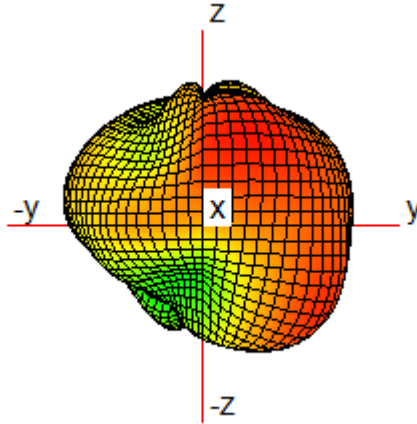
3800.00 MHz	
Horizontal Peak (dBi)	1.96
Vertical Peak(dBi)	0.63



**Radiation characteristic in 3550MHz ~ 3700MHz (FCC Part 96 LTE, Band 48)**

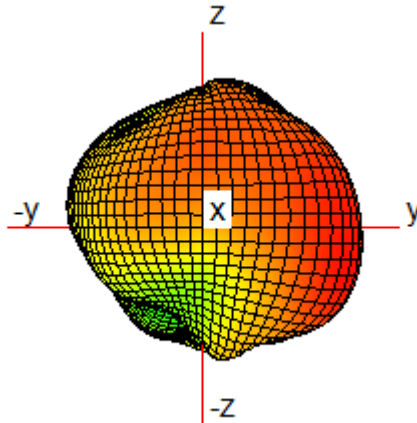
**Main antenna: 3550.00 MHz**

3550.00 MHz	
Horizontal Peak (dBi)	-1.52
Vertical Peak(dBi)	0.74



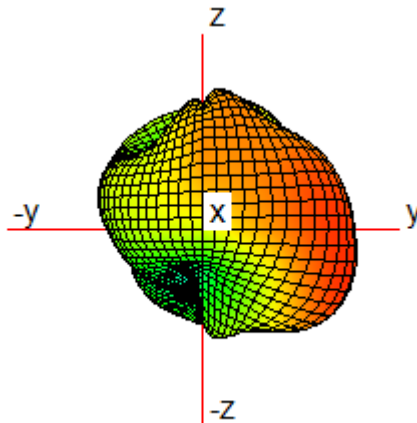
**Main antenna: 3625.00 MHz**

3625.00 MHz	
Horizontal Peak (dBi)	1.06
Vertical Peak(dBi)	1.54



**Main antenna: 3700.00 MHz**

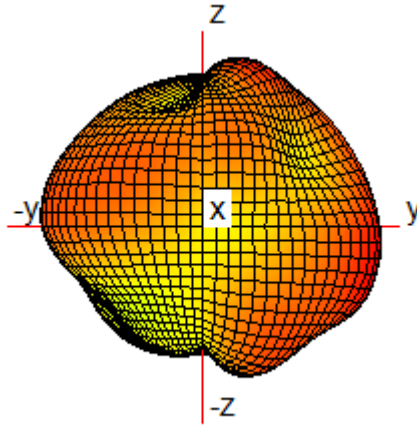
3700.00 MHz	
Horizontal Peak (dBi)	1.35
Vertical Peak(dBi)	1.29



Radiation characteristic in 1710MHz ~ 1780MHz (FCC Part 27 LTE, Band 66, n66)

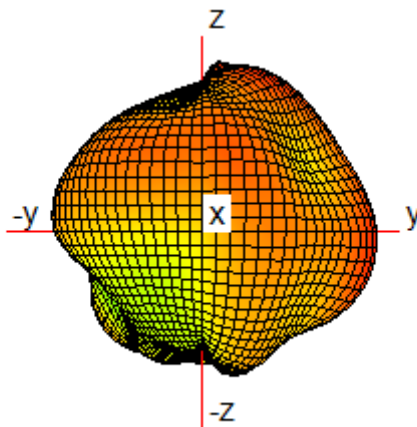
**Main antenna: 1710.00 MHz**

<b>1710.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-4.02</b>
<b>Vertical Peak(dBi)</b>	<b>-5.15</b>



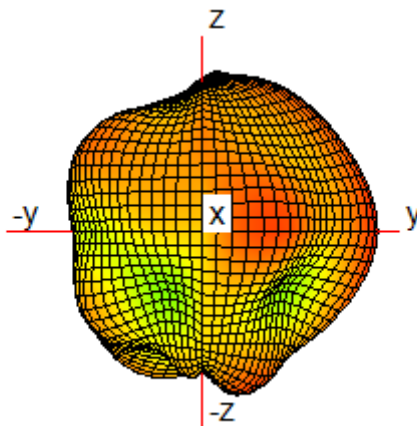
**Main antenna: 1745.00 MHz**

<b>1745.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-2.21</b>
<b>Vertical Peak(dBi)</b>	<b>-1.43</b>



**Main antenna: 1780.00 MHz**

<b>1780.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-3.78</b>
<b>Vertical Peak(dBi)</b>	<b>-2.54</b>

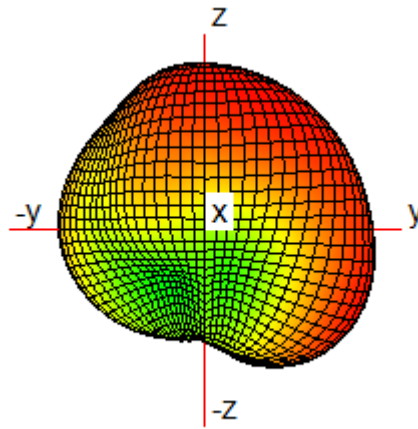




**Radiation characteristic in 663MHz ~ 698MHz (FCC Part 24, 27 LTE, Band 71, n71)**

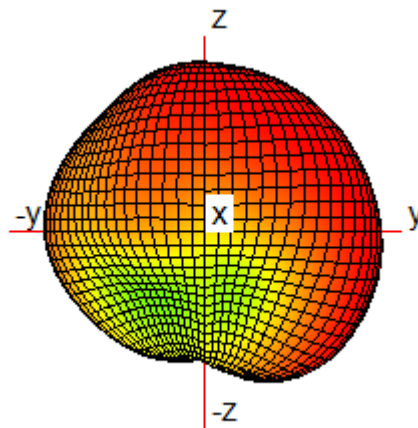
**Main antenna: 663.00 MHz**

663.00 MHz	
Horizontal Peak (dBi)	-6.11
Vertical Peak(dBi)	-3.03



**Main antenna: 680.50 MHz**

680.50 MHz	
Horizontal Peak (dBi)	-6.50
Vertical Peak(dBi)	-3.94



**Main antenna: 698.00 MHz**

698.00 MHz	
Horizontal Peak (dBi)	-5.73
Vertical Peak(dBi)	-3.36

