

# Regulatory WWAN Antenna Information

## ASUS CZ1104 (PAD mode)

### [INPAQ antenna]

<b>Tx Antenna</b>		
Vendor (Manufacturer)	INPAQ	
Parts Number	Main Antenna:	WA-F-S6G1-02-025
	Auxiliary Antenna:	WA-F-S6G1-03-002 (RX only)
<b>Address of Vendor (Manufacturer)</b>	No. 11, Keyi St., Zhunan Township, Miaoli County 350402, Taiwan	
<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)	
WA-F-S6G1-0 2-025	INPAQ	PIFA	50 ohm Coaxial. length:530mm diameterr:1.13mm lowloss Connector: Caimei RF-4L13 958-C413-W-B-Bu	EU/ANZ/CN/Japan UMTS/HSPA (UMTS 2100, Band 1) (UE-UTRA, Band 1, n1)	1920.00	1.40	-5.24	-0.12	0.40
					1950.00	1.42	-4.53	-0.65	0.11
					1980.00	1.42	-2.72	-5.10	0.01
				FCC Part 24 GSM/GPRS/EDGE (GSM 1900) UMTS/HSPA/EVDO (UMTS1900, Band 2) (UE-UTRA, Band 2, n2)	1850.00	1.38	-8.43	-1.62	-1.12
					1880.00	1.38	-4.83	-2.08	-1.39
					1910.00	1.39	-6.45	0.67	0.21
				EU/ANZ/CN/Japan GSM/GPRS/EDGE (GSM 1800, Band 3) (UE-UTRA, Band 3, n3)	1710.00	1.34	-8.57	-2.34	1.28
					1747.50	1.35	-8.72	-1.38	1.56
					1785.00	1.35	-9.94	-1.26	1.72
				FCC Part 27 UMTS(AWS) / HSPA (UMTS, Band 4) (UE-UTRA, Band 4)	1710.00	1.34	-8.57	-2.34	1.28
					1732.50	1.34	-8.69	-2.57	2.04
					1755.00	1.35	-8.50	-1.54	1.47
				FCC Part 22 GSM/GPRS/EDGE (GSM 850) ANZ (UMTS850, Band 5) (UE-UTRA, Band 5, n5)	824.00	0.81	-10.86	-6.24	-4.37
					836.50	0.82	-11.57	-6.80	-3.91
					849.00	0.83	-11.26	-5.63	-3.34
				Japan (UMTS, Band 6)	830.00	0.82	-9.47	-7.48	-3.76
					835.00	0.82	-9.84	-5.90	-4.11
					840.00	0.83	-11.24	-5.70	-3.56
				FCC Part 27 CA/EU/ANZ (UE-UTRA, Band 7, n7)	2500.00	1.65	-3.89	0.68	-4.32
					2535.00	1.66	-5.15	-0.07	-3.81
					2570.00	1.66	-4.88	-1.89	0.68
				EU/ANZ/Japan UMTS/HSPA (UMTS 900, Band 8) (UE-UTRA, Band 8, n8)	880.00	0.98	-11.24	-3.53	-3.76
					897.50	0.98	-12.44	-4.24	-4.23
					915.00	1.00	-12.04	-4.86	-2.89
				Japan (WCDMA, Band 9)	1844.9				
					1862.5				
					1879.9				
				FCC Part 27 (UE-UTRA, Band 12, n12)	699.00	0.73	-12.94	-4.95	-4.98
					707.50	0.74	-12.65	-6.28	-4.71
					716.00	0.74	-11.12	-6.67	-4.71
				FCC Part 27 (UE-UTRA, Band 13)	777.00	0.74	-12.35	-6.96	-3.76
					782.00	0.75	-1-3.91	-6.24	-4.67
787.00	0.75	-12.08	-6.75		-3.81				
FCC Part 90 (UE-UTRA, Band 14)	788.00	0.75	-12.76	-6.82	-5.10				
	793.00	0.75	-13.27	-6.37	-5.39				
	798.00	0.75	-11.67	-7.55	-5.39				
FCC Part 27 (UE-UTRA, Band 17)	704.00	0.74	-11.73	-4.93	-3.56				
	710.00	0.74	-12.65	-6.28	-4.71				
	716.00	0.74	-11.12	-6.67	-4.71				
Japan (UE-UTRA, Band 18)	815.00	0.79	-10.84	-6.49	-4.71				
	822.50	0.81	-10.71	-6.32	-5.32				
	830.00	0.82	-9.47	-7.48	-3.76				

Japan (UMTS, Band 19) (UE-UTRA, Band 19)	830.00	0.82	-9.47	-7.48	-3.76
	837.50	0.82	-11.57	-6.80	-3.91
	845.00	0.83	-11.53	-6.13	-3.12
EU (UE-UTRA, Band 20, n20)	832.00	0.83	-9.46	-7.32	-3.48
	847.00	0.84	-11.39	-5.50	-4.03
	862.00	0.84	-11.26	-3.93	-3.48
FCC Part 24 (UE-UTRA, Band 25)	1850.00	1.38	-8.43	-1.62	-1.12
	1882.50	1.38	-5.78	--3.12	1.25
	1915	1.39	-2.82	-0.14	0.20
FCC Part 90, 22H (UE-UTRA, Band 26)	814.00	0.82	-10.65	-7.60	-4.32
	831.50	0.82	-10.18	-6.41	-4.03
	849.00	0.83	-11.26	-5.63	-3.34
EU/ANZ/Japan (UE-UTRA, Band 28, n28)	703.00	0.74	-12.96	-5.34	-3.12
	725.50	0.74	-10.55	-7.59	-2.78
	748.00	0.75	-9.17	-7.45	-3.09
FCC Part 27 CA (UE-UTRA, Band 29) * Down link only	717.00				
	722.50				
	728.00				
FCC Part 27 (UE-UTRA, Band 30)	2305.00	1.57	-4.32	-1.73	0.67
	2310.00	1.57	-4.29	--4.71	0.53
	2315.00	1.57	-3.82	-2.04	0.48
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	1.66	-4.88	-1.89	0.68
	2595.00	1.66	-4.66	0.15	0.22
	2620.00	1.67	-6.52	-0.95	0.46
CN (TD-SCDMA, Band 39)	1880.00	1.38	-4.83	-2.08	-1.39
	1900.00	1.38	-4.70	-0.84	-1.35
	1920.00	1.39	-5.24	-0.12	-1.40
EU/ANZ/CN (UE-UTRA, Band 40)	2300.00	1.57	-4.33	-3.25	1.83
	2350.00	1.57	-5.21	-0.03	0.77
	2400.00	1.60	-3.76	-0.44	1.41
FCC Part 27 US/CN/Japan (UE-UTRA, Band 41, n41)	2496.00	1.65	-5.16	-3.81	1.00
	2593.00	1.67	-5.35	--4.67	0.32
	2690.00	1.71	-7.49	0.63	0.19
FCC Part 96 CA/EU/Japan (LTE Band 42)	3400.00	1.96	-7.05	-6.37	0.98
	3500.00	1.99	-12.11	-7.41	1.26
	3600.00	2.00	-9.45	-3.07	0.15
CE (LTE Band 43)	3600.00	2.00	-9.45	-3.07	0.15
	3700.00	2.00	-5.32	-0.85	0.03
	3800.00	2.01	-4.17	--3.81	1.39
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	1.99	-13.08	-5.30	0.76
	3625.00	2.02	-8.91	-3.71	0.66
	3700.00	2.04	-5.32	-0.85	0.03
FCC Part 27 (LTE, Band 66, n66)	1710.00	1.34	-8.57	-2.34	1.28
	1745.00	1.34	-8.97	-1.92	1.61
	1780.00	1.34	-9.94	-1.26	1.72
FCC Part 24, 27 (LTE Band 71, n71)	663.00	0.71	-15.86	-4.33	-6.43
	680.50	0.71	-12.41	-3.81	-5.78
	698.00	0.71	-12.94	-4.95	-4.98
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								

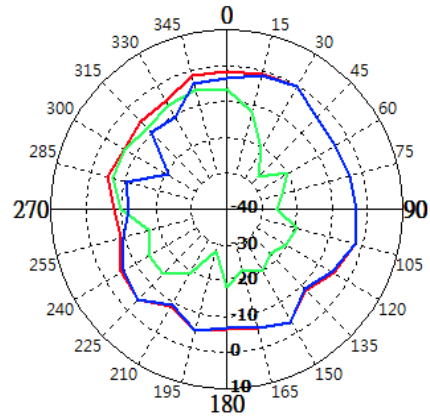
## Section 2. Radiation characteristics of antenna

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

Main antenna: 1920.00 MHz

— TOTAL  
— H\_POL  
— V\_POL

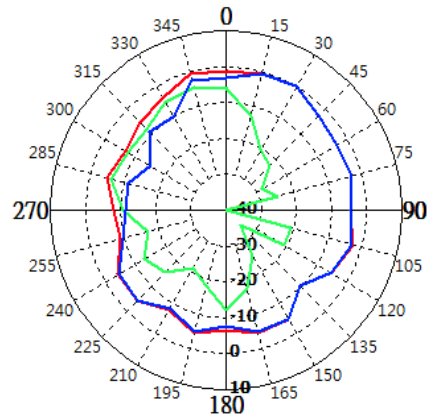
1920.00 MHz	
Horizontal Peak (dBi)	-5.24
Vertical Peak(dBi)	-0.12



Main antenna: 1950.00 MHz

— TOTAL  
— H\_POL  
— V\_POL

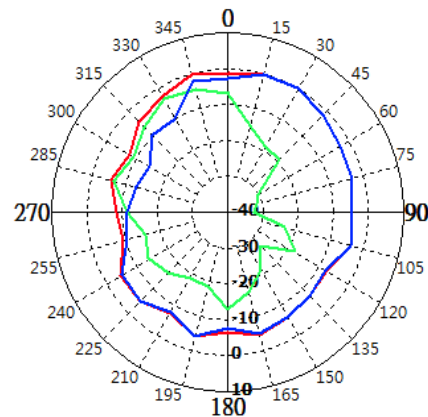
1950.00 MHz	
Horizontal Peak (dBi)	-4.53
Vertical Peak(dBi)	-0.65



Main antenna: 1980.00 MHz

— TOTAL  
— H\_POL  
— V\_POL

1980.00 MHz	
Horizontal Peak (dBi)	-2.72
Vertical Peak(dBi)	-5.10

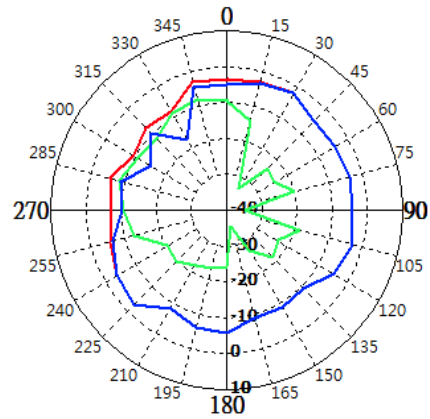


**Radiation characteristic in 1850MHz ~ 1910MHz (FCC Part 24 PCS, Band 2, n2)**

**Main antenna: 1850.00 MHz**

- TOTAL
- H\_POL
- V\_POL

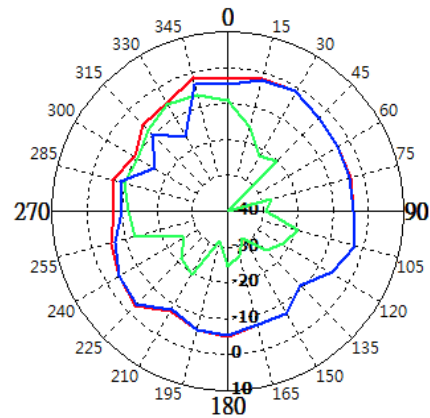
1850.00 MHz	
Horizontal Peak (dBi)	-8.43
Vertical Peak(dBi)	-1.62



**Main antenna: 1880.00 MHz**

- TOTAL
- H\_POL
- V\_POL

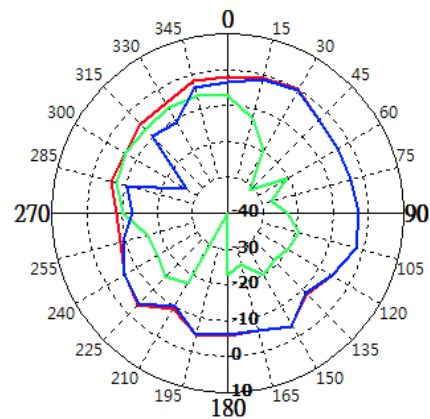
1880.00 MHz	
Horizontal Peak (dBi)	-4.83
Vertical Peak(dBi)	-2.08



**Main antenna: 1910.00 MHz**

- TOTAL
- H\_POL
- V\_POL

1910.00 MHz	
Horizontal Peak (dBi)	-6.45
Vertical Peak(dBi)	0.67

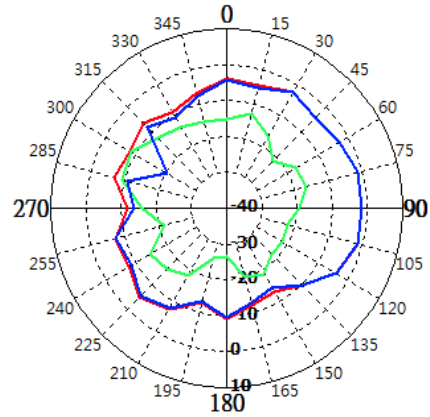


**Radiation characteristic in 1710MHz ~ 1785MHz (EU/ANZ/CN/JP: UE-UTRA, Band 3, n3)**

**Main antenna: 1710.00 MHz**

- TOTAL
- H\_POL
- V\_POL

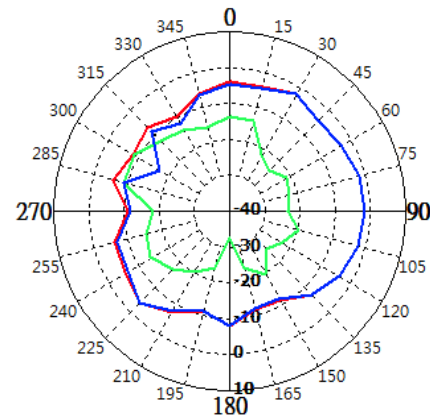
1710.00 MHz	
Horizontal Peak (dBi)	-8.57
Vertical Peak(dBi)	-2.34



**Main antenna: 1747.50 MHz**

- TOTAL
- H\_POL
- V\_POL

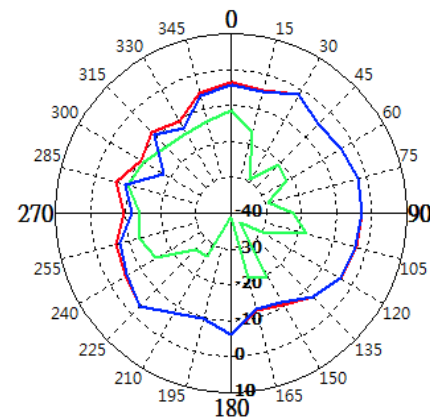
1747.50 MHz	
Horizontal Peak (dBi)	-8.72
Vertical Peak(dBi)	-1.38



**Main antenna: 1785.00 MHz**

- TOTAL
- H\_POL
- V\_POL

1785.00 MHz	
Horizontal Peak (dBi)	-9.94
Vertical Peak(dBi)	-1.26

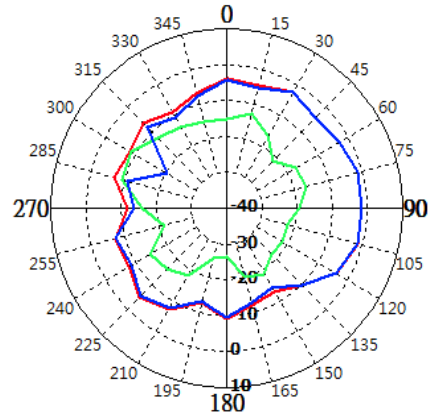


**Radiation characteristic in 1710MHz ~ 1755MHz (FCC Part 27 UMTS(AWS), Band 4)**

**Main antenna: 1710.00 MHz**

- TOTAL
- H\_POL
- V\_POL

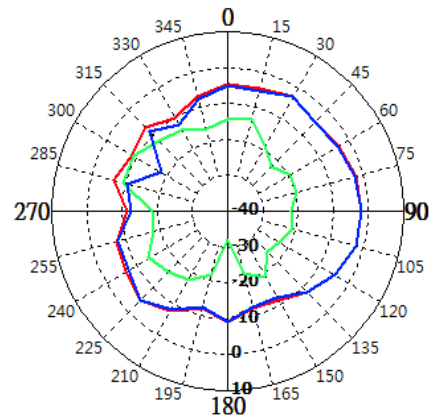
1710.00 MHz	
Horizontal Peak (dBi)	-8.57
Vertical Peak(dBi)	-2.34



**Main antenna: 1732.50 MHz**

- TOTAL
- H\_POL
- V\_POL

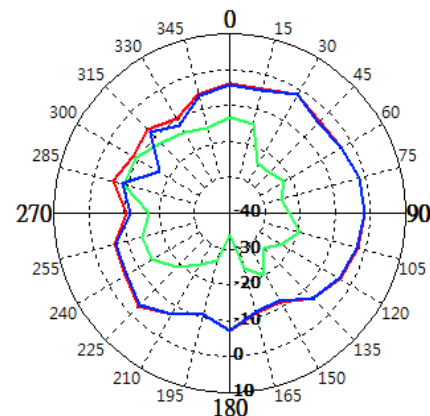
1732.50 MHz	
Horizontal Peak (dBi)	-8.69
Vertical Peak(dBi)	-2.57



**Main antenna: 1755.00 MHz**

- TOTAL
- H\_POL
- V\_POL

1755.00 MHz	
Horizontal Peak (dBi)	-8.50
Vertical Peak(dBi)	-1.54



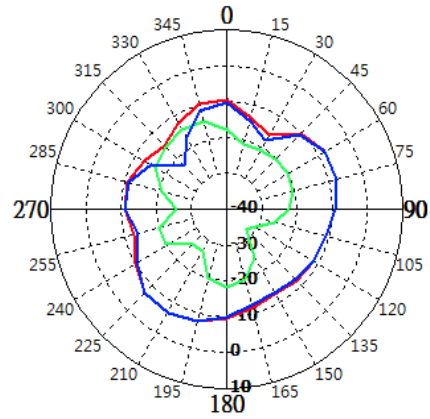


**Radiation characteristic in 824MHz ~ 849MHz (FCC Part 22 Cellular, Band 5, n5)**

**Main antenna: 824.00 MHz**

- TOTAL
- H\_POL
- V\_POL

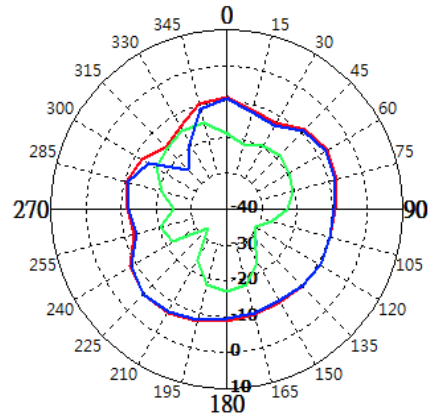
824.00 MHz	
Horizontal Peak (dBi)	-10.86
Vertical Peak(dBi)	-6.24



**Main antenna: 836.50 MHz**

- TOTAL
- H\_POL
- V\_POL

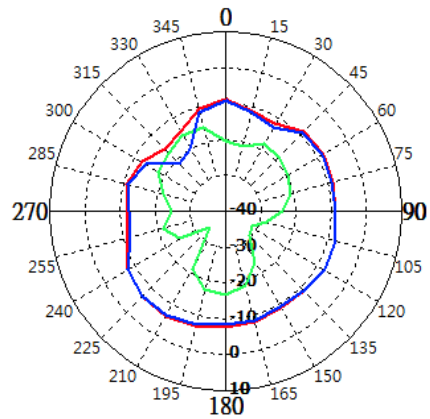
836.50 MHz	
Horizontal Peak (dBi)	-11.57
Vertical Peak(dBi)	-6.80



**Main antenna: 849.0 MHz**

- TOTAL
- H\_POL
- V\_POL

849.0 MHz	
Horizontal Peak (dBi)	-11.26
Vertical Peak(dBi)	-5.63

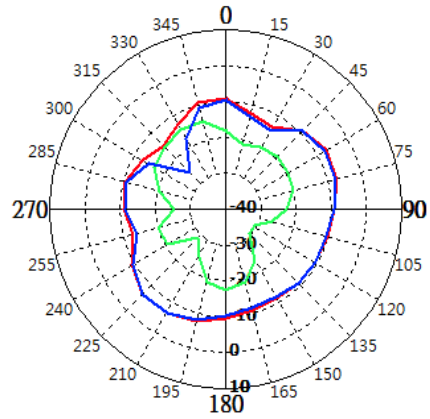


**Radiation characteristic in 830MHz ~ 840MHz (Japan UMTS, Band 6)**

**Main antenna: 830.00 MHz**

- TOTAL
- H\_POL
- V\_POL

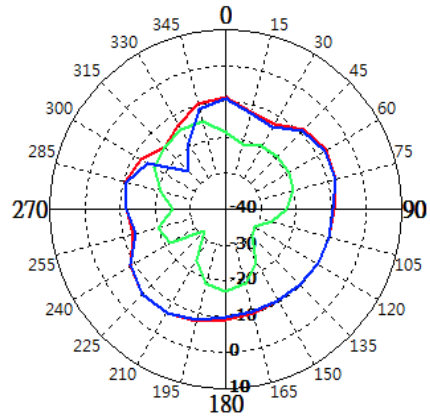
830.00 MHz	
Horizontal Peak (dBi)	-9.47
Vertical Peak(dBi)	-7.48



**Main antenna: 835.0 MHz**

- TOTAL
- H\_POL
- V\_POL

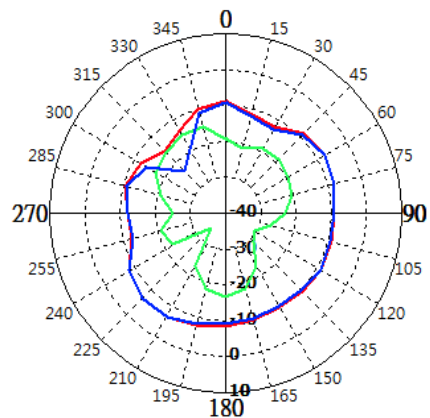
835.0 MHz	
Horizontal Peak (dBi)	-9.84
Vertical Peak(dBi)	-5.90



**Main antenna: 840.0 MHz**

- TOTAL
- H\_POL
- V\_POL

840.0 MHz	
Horizontal Peak (dBi)	-11.24
Vertical Peak(dBi)	-5.70

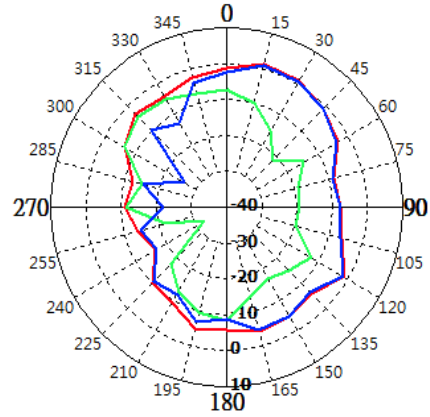


**Radiation characteristic in 2500MHz ~ 2570MHz (CA/EU/ANZ UE-UTRA, Band 7, n7)**

**Main antenna: 2500.00 MHz**

- TOTAL
- H\_POL
- V\_POL

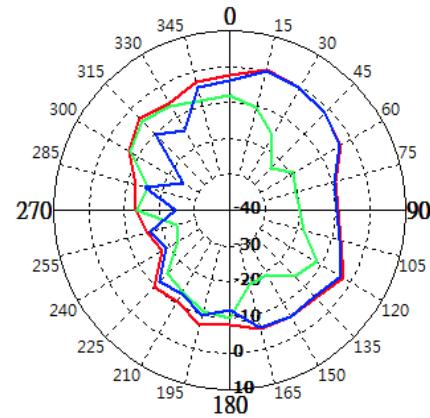
2500.00 MHz	
Horizontal Peak (dBi)	-3.89
Vertical Peak(dBi)	0.68



**Main antenna: 2535.00 MHz**

- TOTAL
- H\_POL
- V\_POL

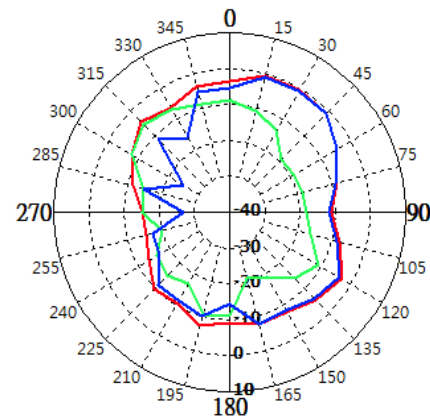
2535.00 MHz	
Horizontal Peak (dBi)	-5.15
Vertical Peak(dBi)	-0.07



**Main antenna: 2570.00 MHz**

- TOTAL
- H\_POL
- V\_POL

2570.00 MHz	
Horizontal Peak (dBi)	-4.88
Vertical Peak(dBi)	-1.89

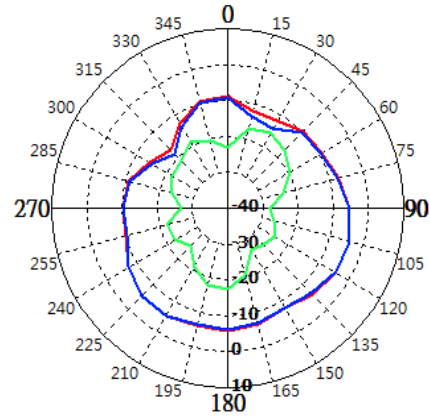


## Radiation characteristic in 880MHz ~ 915MHz (EU/ANZ/JP: Band 8, n8)

### Main antenna: 880.00 MHz

- TOTAL
- H\_POL
- V\_POL

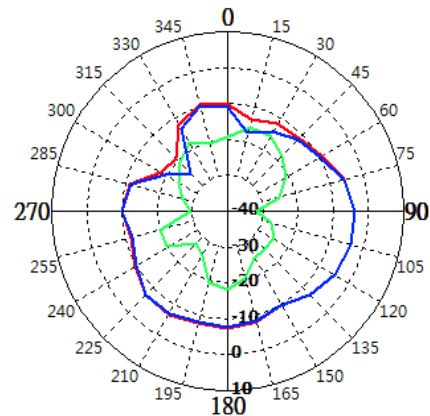
880.00 MHz	
Horizontal Peak (dBi)	-11.24
Vertical Peak(dBi)	-3.53



### Main antenna: 897.50 MHz

- TOTAL
- H\_POL
- V\_POL

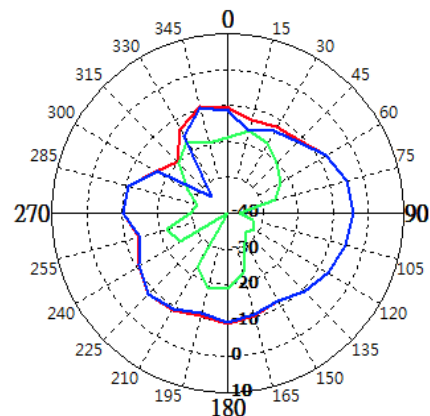
897.50 MHz	
Horizontal Peak (dBi)	-12.44
Vertical Peak(dBi)	-4.24



### Main antenna: 915.00 MHz

- TOTAL
- H\_POL
- V\_POL

915.00 MHz	
Horizontal Peak (dBi)	-12.04
Vertical Peak(dBi)	-4.86

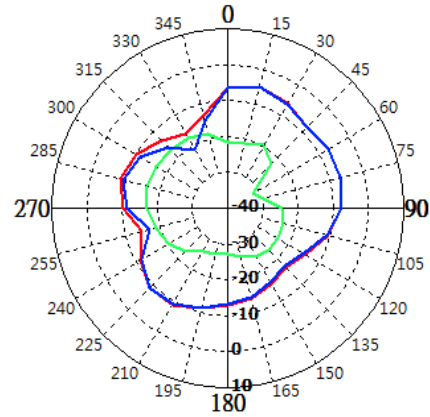


**Radiation characteristic in 699MHz ~ 716MHz (FCC Part 27 UE-UTRA, Band 12, n12)**

**Main antenna: 699.00 MHz**

- TOTAL
- H\_POL
- V\_POL

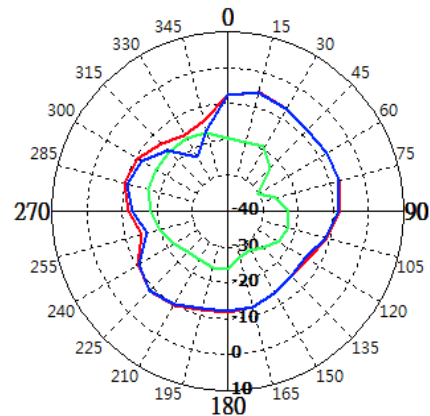
<b>699.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-12.94</b>
<b>Vertical Peak(dBi)</b>	<b>-4.95</b>



**Main antenna: 707.50 MHz**

- TOTAL
- H\_POL
- V\_POL

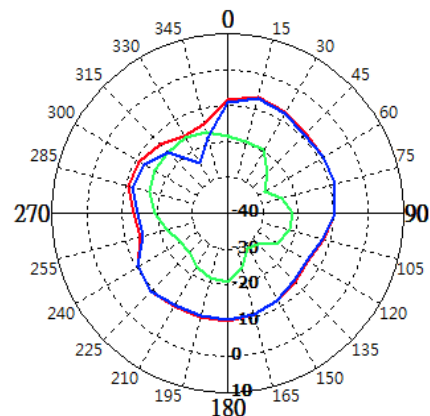
<b>707.50 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-12.65</b>
<b>Vertical Peak(dBi)</b>	<b>-6.28</b>



**Main antenna: 716.00 MHz**

- TOTAL
- H\_POL
- V\_POL

<b>716.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-11.12</b>
<b>Vertical Peak(dBi)</b>	<b>-6.67</b>

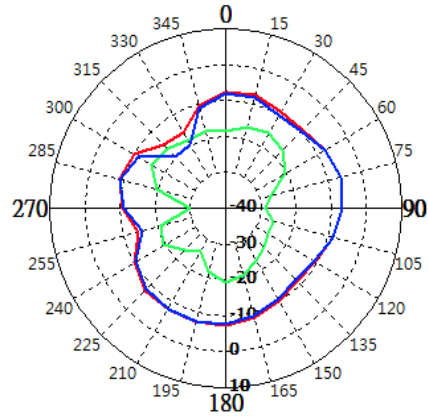


**Radiation characteristic in 776MHz ~ 787MHz (FCC Part 27 UE-UTRA, Band 13)**

**Main antenna: 777.00 MHz**

- TOTAL
- H\_POL
- V\_POL

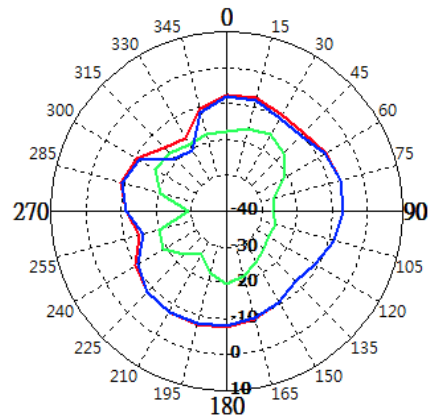
777.00 MHz	
Horizontal Peak (dBi)	-12.35
Vertical Peak(dBi)	-6.96



**Main antenna: 782.00 MHz**

- TOTAL
- H\_POL
- V\_POL

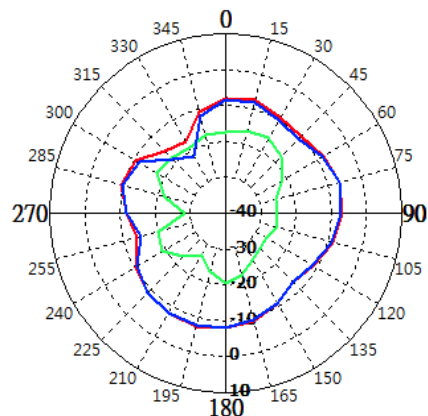
782.00 MHz	
Horizontal Peak (dBi)	-1-3.91
Vertical Peak(dBi)	-6.24



**Main antenna: 787.00 MHz**

- TOTAL
- H\_POL
- V\_POL

787.00 MHz	
Horizontal Peak (dBi)	-12.08
Vertical Peak(dBi)	-6.75

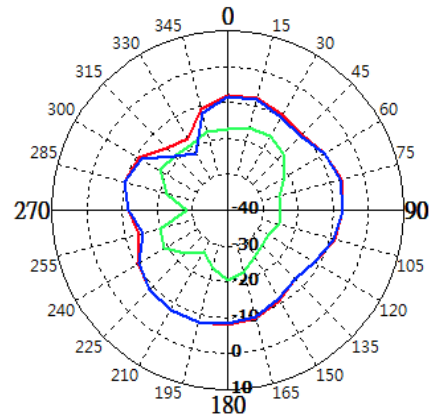


**Radiation characteristic in 788MHz ~ 798MHz (FCC Part 90 UE-UTRA, Band 14)**

**Main antenna: 788.00 MHz**

- TOTAL
- H\_POL
- V\_POL

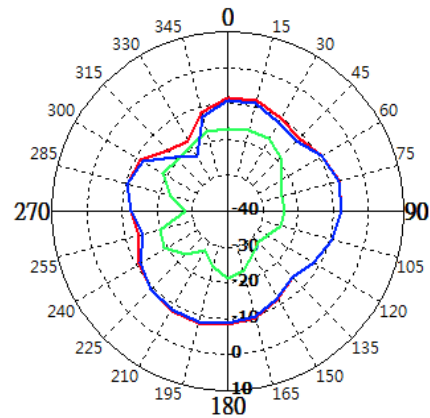
788.00 MHz	
Horizontal Peak (dBi)	-12.76
Vertical Peak(dBi)	-6.82



**Main antenna: 793.00 MHz**

- TOTAL
- H\_POL
- V\_POL

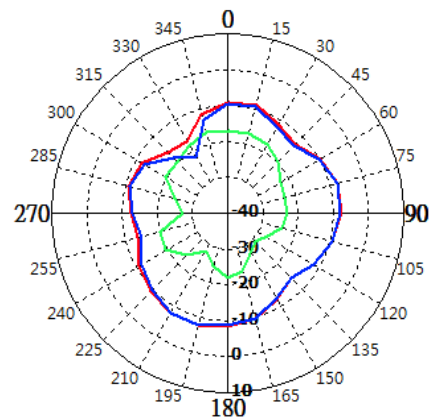
793.00 MHz	
Horizontal Peak (dBi)	-13.27
Vertical Peak(dBi)	-6.37



**Main antenna: 798.00 MHz**

- TOTAL
- H\_POL
- V\_POL

798.00 MHz	
Horizontal Peak (dBi)	-11.67
Vertical Peak(dBi)	-7.55

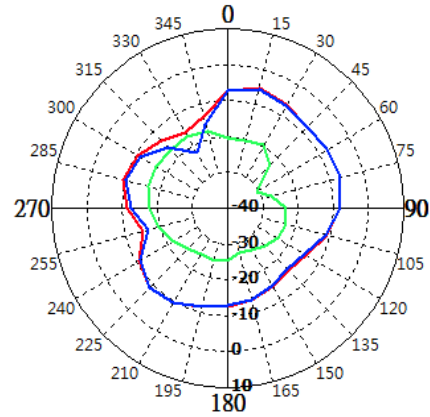


**Radiation characteristic in 704MHz ~ 716MHz (FCC Part 27H UE-UTRA, Band 17)**

**Main antenna: 704.00 MHz**

- TOTAL
- H\_POL
- V\_POL

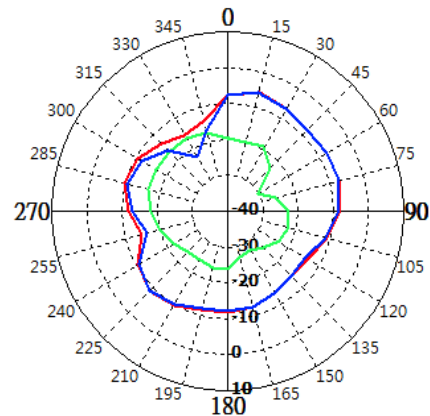
704.00 MHz	
Horizontal Peak (dBi)	-11.73
Vertical Peak(dBi)	-4.93



**Main antenna: 710.00 MHz**

- TOTAL
- H\_POL
- V\_POL

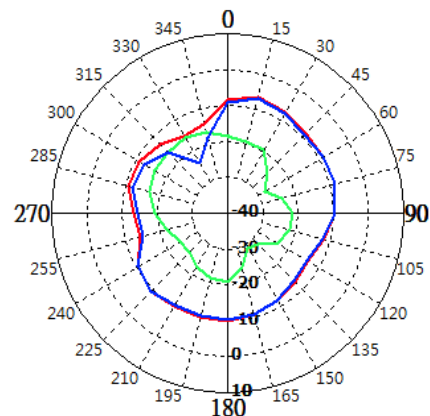
710.00 MHz	
Horizontal Peak (dBi)	-12.65
Vertical Peak(dBi)	-6.28



**Main antenna: 716.00 MHz**

- TOTAL
- H\_POL
- V\_POL

716.00 MHz	
Horizontal Peak (dBi)	-11.12
Vertical Peak(dBi)	-6.67



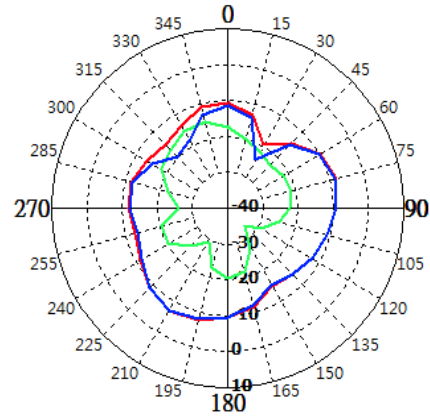


**Radiation characteristic in 815MHz ~ 830MHz (Japan, Band 18)**

**Main antenna: 815.00 MHz**

- TOTAL
- H\_POL
- V\_POL

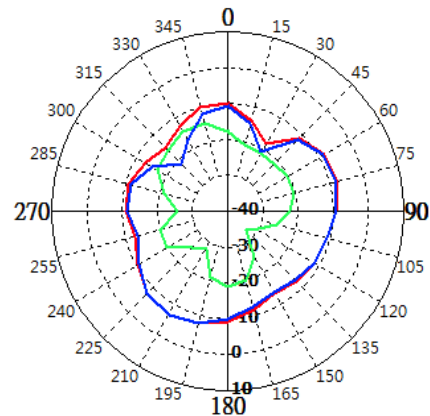
<b>815.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-10.84</b>
<b>Vertical Peak(dBi)</b>	<b>-6.49</b>



**Main antenna: 822.50 MHz**

- TOTAL
- H\_POL
- V\_POL

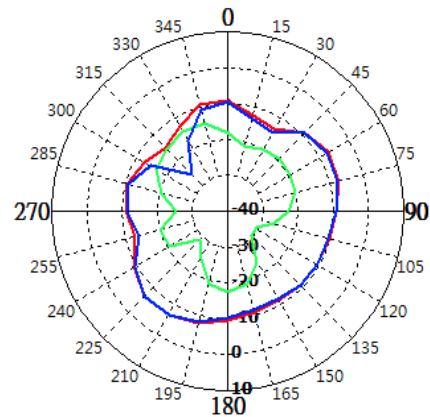
<b>822.50 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-10.71</b>
<b>Vertical Peak(dBi)</b>	<b>-6.32</b>



**Main antenna: 830.00 MHz**

- TOTAL
- H\_POL
- V\_POL

<b>830.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-9.47</b>
<b>Vertical Peak(dBi)</b>	<b>-7.48</b>

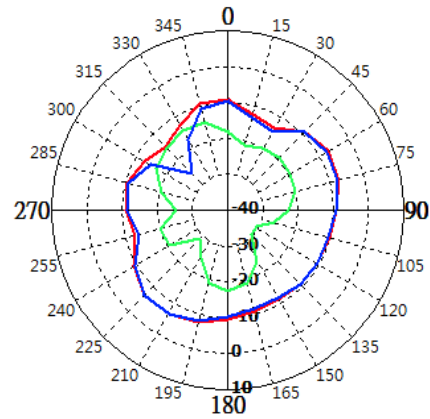


## Radiation characteristic in 830MHz ~ 845MHz (Japan, Band 19)

### Main antenna: 830.00 MHz

— TOTAL  
— H\_POL  
— V\_POL

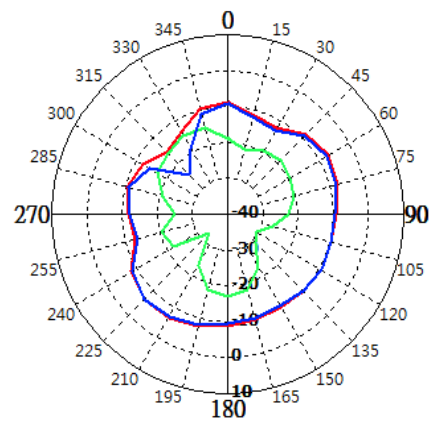
830.00 MHz	
Horizontal Peak (dBi)	-9.47
Vertical Peak(dBi)	-7.48



### Main antenna: 837.50 MHz

— TOTAL  
— H\_POL  
— V\_POL

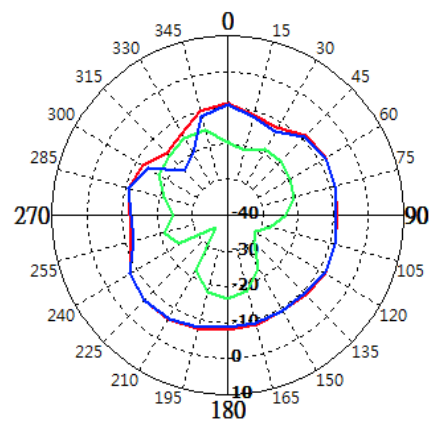
837.50 MHz	
Horizontal Peak (dBi)	-11.57
Vertical Peak(dBi)	-6.80



### Main antenna: 845.00 MHz

— TOTAL  
— H\_POL  
— V\_POL

845.00 MHz	
Horizontal Peak (dBi)	-11.53
Vertical Peak(dBi)	-6.13

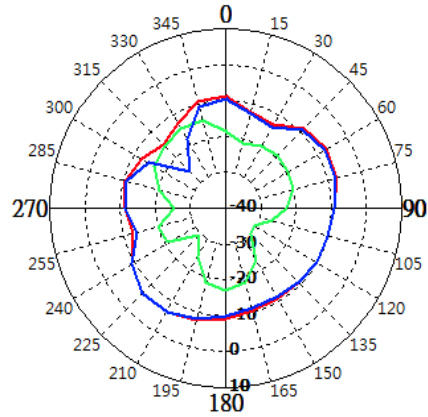


**Radiation characteristic in 832MHz ~ 862MHz (EU UE-UTRA, Band 20, n20)**

**Main antenna: 832.00 MHz**

- TOTAL
- H\_POL
- V\_POL

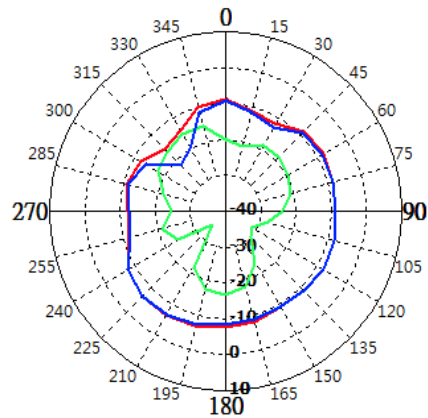
<b>832.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-9.46</b>
<b>Vertical Peak(dBi)</b>	<b>-7.32</b>



**Main antenna: 847.00 MHz**

- TOTAL
- H\_POL
- V\_POL

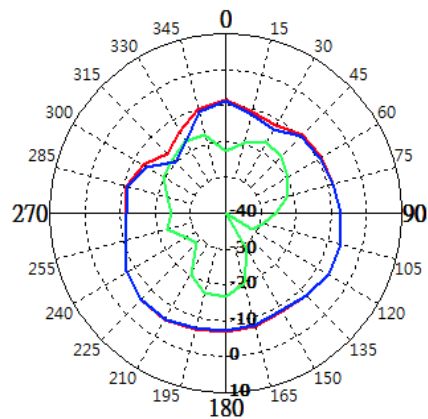
<b>847.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-11.39</b>
<b>Vertical Peak(dBi)</b>	<b>-5.50</b>



**Main antenna: 862.00 MHz**

- TOTAL
- H\_POL
- V\_POL

<b>862.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-11.26</b>
<b>Vertical Peak(dBi)</b>	<b>-3.93</b>

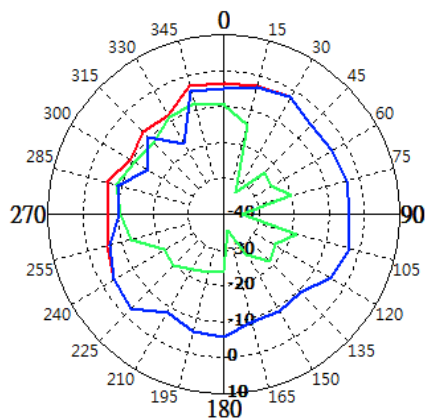


## Radiation characteristic in 1850MHz ~ 1915MHz (FCC Part 24 UE-UTRA, Band 25)

### Main antenna: 1850.00 MHz

- TOTAL
- H\_POL
- V\_POL

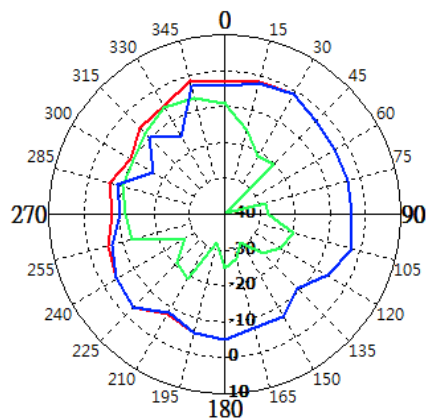
<b>1850.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-8.43</b>
<b>Vertical Peak(dBi)</b>	<b>-1.62</b>



### Main antenna: 1882.50 MHz

- TOTAL
- H\_POL
- V\_POL

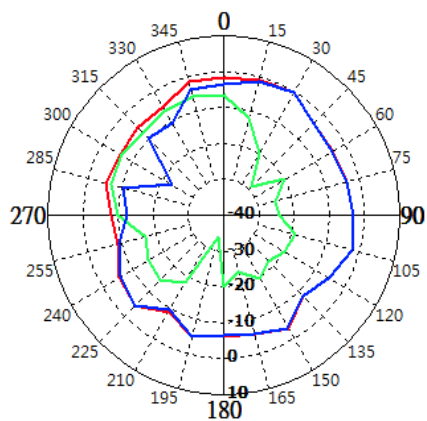
<b>1882.50 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-5.78</b>
<b>Vertical Peak(dBi)</b>	<b>--3.12</b>



### Main antenna: 1915.00 MHz

- TOTAL
- H\_POL
- V\_POL

<b>1915.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-2.82</b>
<b>Vertical Peak(dBi)</b>	<b>-0.14</b>

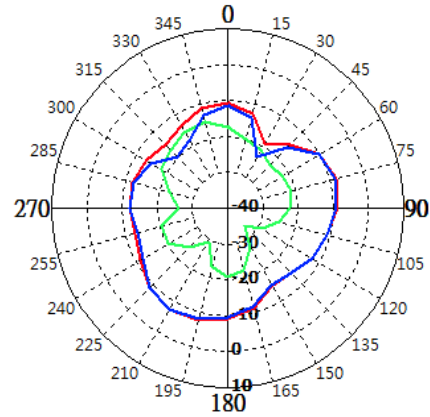


**Radiation characteristic in 814MHz ~ 849MHz (FCC Part 90, 22H UE-UTRA, Band 26)**

**Main antenna: 814.00 MHz**

- TOTAL
- H\_POL
- V\_POL

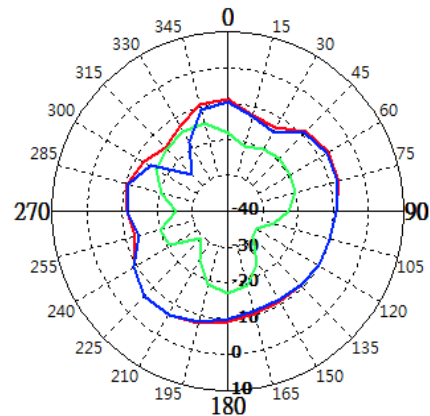
<b>814.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-10.65</b>
<b>Vertical Peak(dBi)</b>	<b>-7.60</b>



**Main antenna: 831.50 MHz**

- TOTAL
- H\_POL
- V\_POL

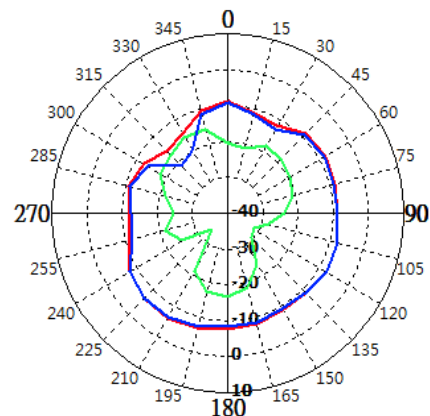
<b>831.50 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-10.18</b>
<b>Vertical Peak(dBi)</b>	<b>-6.41</b>



**Main antenna: 849.00 MHz**

- TOTAL
- H\_POL
- V\_POL

<b>849.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-11.26</b>
<b>Vertical Peak(dBi)</b>	<b>-5.63</b>

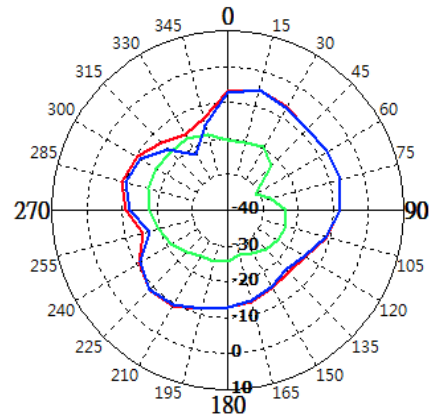


**Radiation characteristic in 703MHz ~ 748MHz (EU/ANZ/Japan UE-UTRA, Band 28, 28)**

**Main antenna: 703.00 MHz**

- TOTAL
- H\_POL
- V\_POL

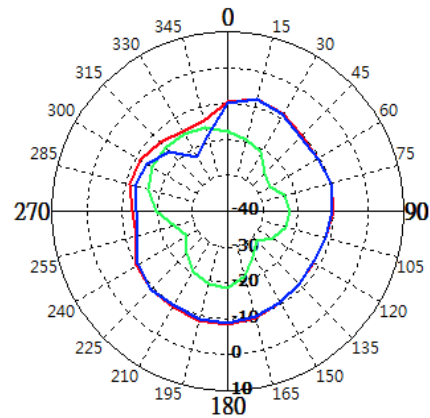
703.00 MHz	
Horizontal Peak (dBi)	-12.96
Vertical Peak(dBi)	-5.34



**Main antenna: 725.50 MHz**

- TOTAL
- H\_POL
- V\_POL

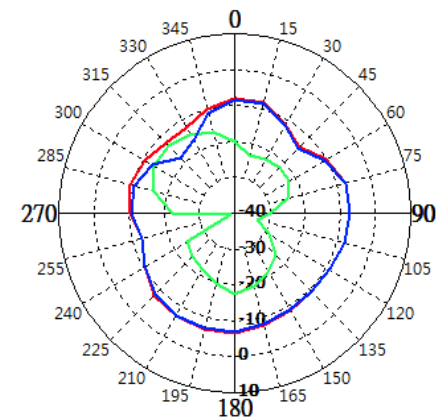
725.50 MHz	
Horizontal Peak (dBi)	-10.55
Vertical Peak(dBi)	-7.59



**Main antenna: 748.00 MHz**

- TOTAL
- H\_POL
- V\_POL

748 MHz	
Horizontal Peak (dBi)	-9.17
Vertical Peak(dBi)	-7.45



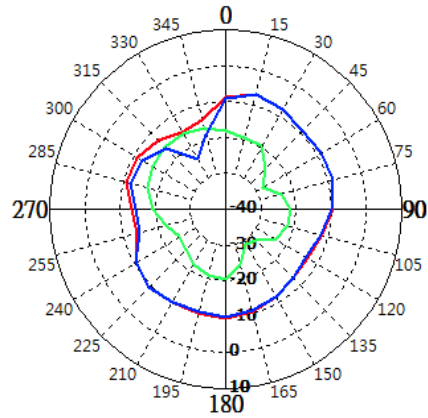
**Radiation characteristic in 717MHz ~ 728MHz (FCC Part 27 UE-UTRA, Band 29)**

\* Down link only

**Main antenna: 717.00 MHz**

- TOTAL
- H\_POL
- V\_POL

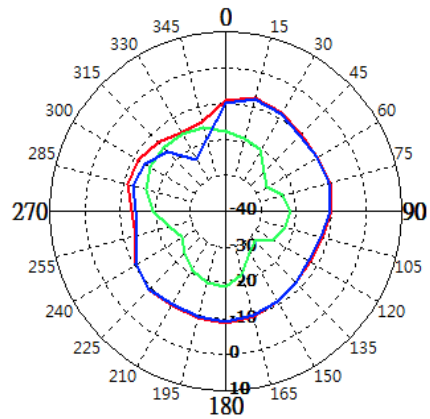
717.00 MHz	
Horizontal Peak (dBi)	-11.55
Vertical Peak(dBi)	-6.37



**Main antenna: 722.50 MHz**

- TOTAL
- H\_POL
- V\_POL

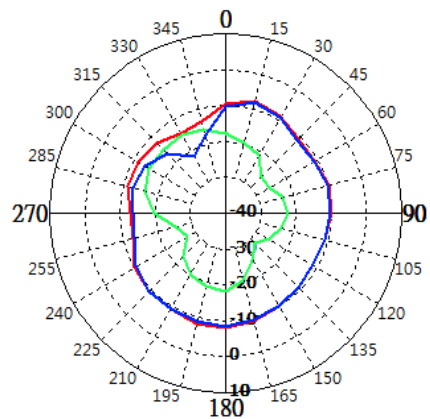
722.50 MHz	
Horizontal Peak (dBi)	-12.16
Vertical Peak(dBi)	-7.64



**Main antenna: 728.00 MHz**

- TOTAL
- H\_POL
- V\_POL

728.00 MHz	
Horizontal Peak (dBi)	-10.91
Vertical Peak(dBi)	-8.91

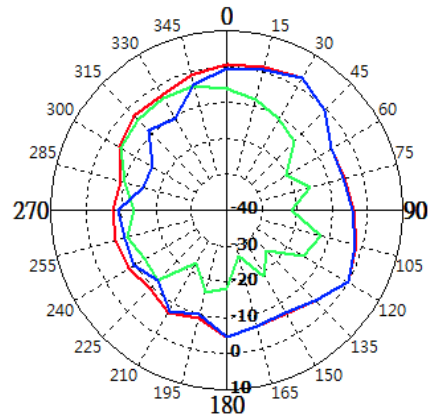


**Radiation characteristic in 2305MHz ~ 2315MHz (FCC Part 27 UE-UTRA, Band 30)**

**Main antenna: 2305.00 MHz**

- TOTAL
- H\_POL
- V\_POL

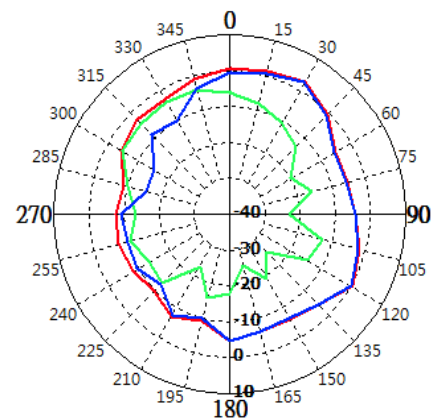
2305.00 MHz	
Horizontal Peak (dBi)	-4.32
Vertical Peak(dBi)	-1.73



**Main antenna: 2310.00 MHz**

- TOTAL
- H\_POL
- V\_POL

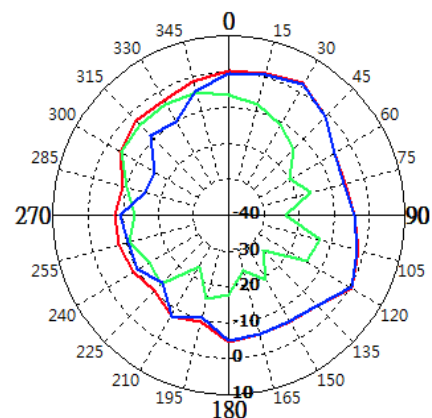
2310.00 MHz	
Horizontal Peak (dBi)	-4.29
Vertical Peak(dBi)	--4.71



**Main antenna: 2315.00 MHz**

- TOTAL
- H\_POL
- V\_POL

2315.00 MHz	
Horizontal Peak (dBi)	-3.82
Vertical Peak(dBi)	-2.04



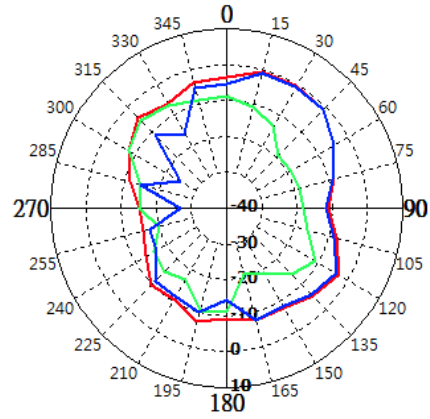


**Radiation characteristic in 2570MHz ~ 2620MHz (EU/CN UE-UTRA, Band 38,n38)**

**Main antenna: 2570.00 MHz**

- TOTAL
- H\_POL
- V\_POL

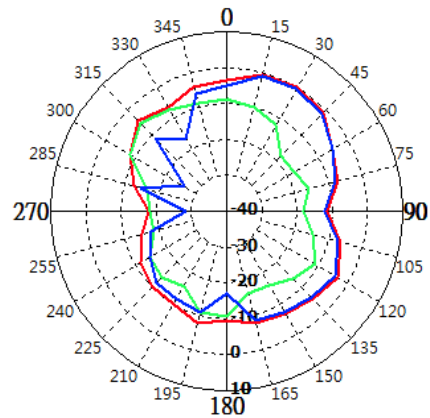
2570.00 MHz	
Horizontal Peak (dBi)	-4.88
Vertical Peak(dBi)	-1.89



**Main antenna: 2595.00 MHz**

- TOTAL
- H\_POL
- V\_POL

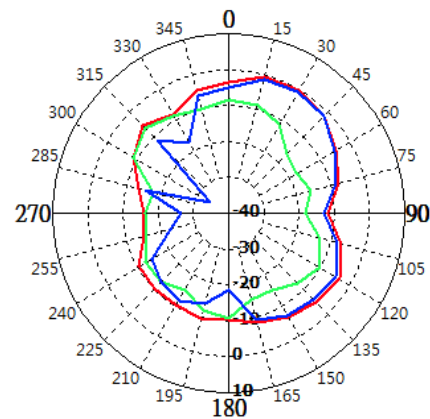
2595.00 MHz	
Horizontal Peak (dBi)	-4.66
Vertical Peak(dBi)	0.15



**Main antenna: 2620.00 MHz**

- TOTAL
- H\_POL
- V\_POL

2620.00 MHz	
Horizontal Peak (dBi)	-6.52
Vertical Peak(dBi)	-0.95

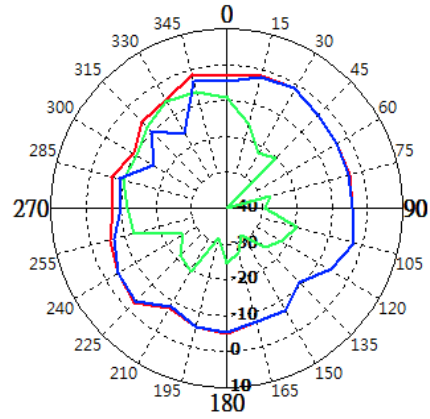


**Radiation characteristic in 1880MHz ~ 1920MHz (CN TD-SCDMA, Band 39)**

**Main antenna: 1880.00 MHz**

- TOTAL
- H\_POL
- V\_POL

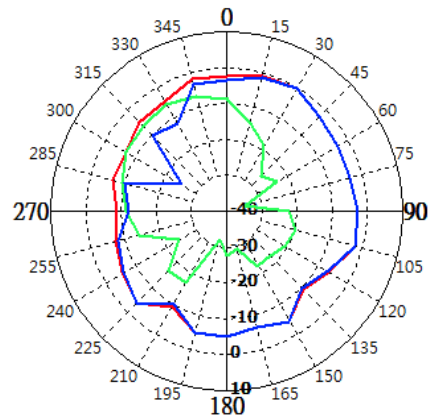
1880.00 MHz	
Horizontal Peak (dBi)	-4.83
Vertical Peak(dBi)	-2.08



**Main antenna: 1900.00 MHz**

- TOTAL
- H\_POL
- V\_POL

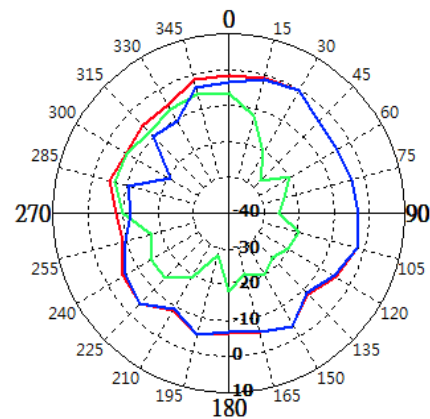
1900.00 MHz	
Horizontal Peak (dBi)	-4.70
Vertical Peak(dBi)	-0.84



**Main antenna: 1920.00 MHz**

- TOTAL
- H\_POL
- V\_POL

1920.00 MHz	
Horizontal Peak (dBi)	-5.24
Vertical Peak(dBi)	-0.12

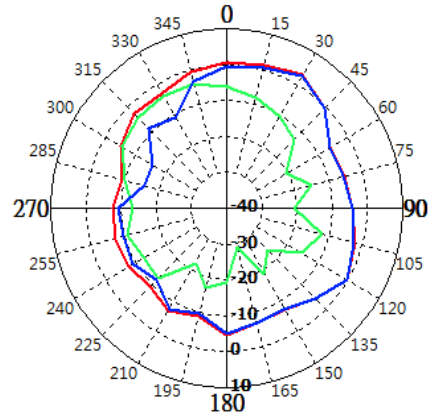


**Radiation characteristic in 2300MHz ~ 2400MHz (EU/ANZ/CN UE-UTRA, Band 40)**

**Main antenna: 2300.00 MHz**

- TOTAL
- H\_POL
- V\_POL

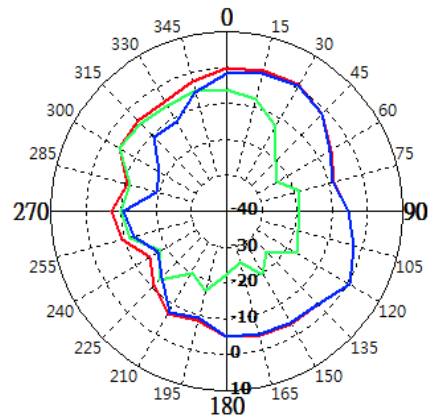
<b>2300.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-4.33</b>
<b>Vertical Peak(dBi)</b>	<b>-3.25</b>



**Main antenna: 2350.00 MHz**

- TOTAL
- H\_POL
- V\_POL

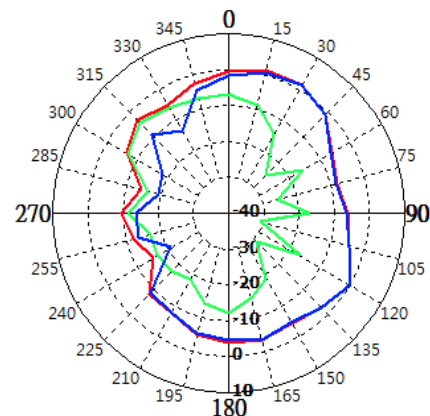
<b>2350.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-5.21</b>
<b>Vertical Peak(dBi)</b>	<b>-0.03</b>



**Main antenna: 2400.00 MHz**

- TOTAL
- H\_POL
- V\_POL

<b>2400.00 MHz</b>	
<b>Horizontal Peak (dBi)</b>	<b>-3.76</b>
<b>Vertical Peak(dBi)</b>	<b>-0.44</b>

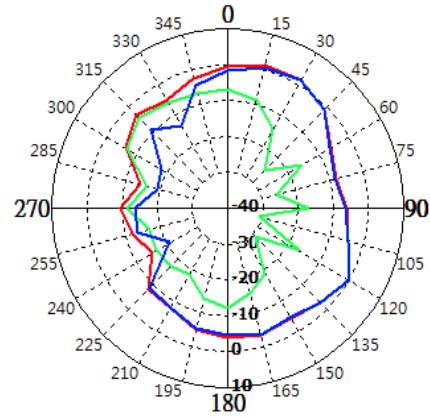


**Radiation characteristic in 2496MHz ~ 2690MHz (FCC Part 27 UE-UTRA, Band 41, n41)**

**Main antenna: 2496.00 MHz**

- TOTAL
- H\_POL
- V\_POL

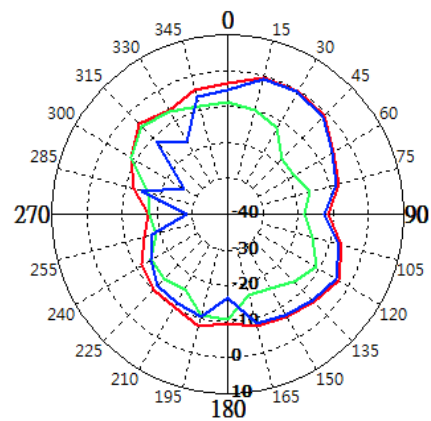
2496.00 MHz	
Horizontal Peak (dBi)	-5.16
Vertical Peak(dBi)	-3.81



**Main antenna: 2593.00 MHz**

- TOTAL
- H\_POL
- V\_POL

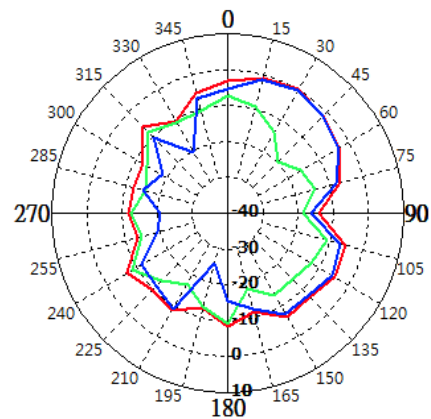
2593.00 MHz	
Horizontal Peak (dBi)	-5.35
Vertical Peak(dBi)	--4.67



**Main antenna: 2690.00 MHz**

- TOTAL
- H\_POL
- V\_POL

2690.00 MHz	
Horizontal Peak (dBi)	-7.49
Vertical Peak(dBi)	0.63

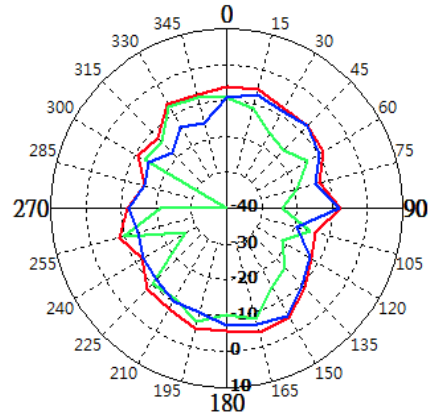


**Radiation characteristic in 3400MHz ~ 3600MHz (FCC Part 96 CA/EU/Japan LTE, Band 42)**

**Main antenna: 3400.00 MHz**

- TOTAL
- H\_POL
- V\_POL

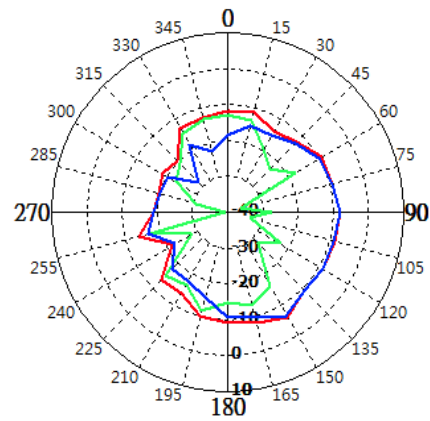
3400.00 MHz	
Horizontal Peak (dBi)	-7.05
Vertical Peak(dBi)	-6.37



**Main antenna: 3500.00 MHz**

- TOTAL
- H\_POL
- V\_POL

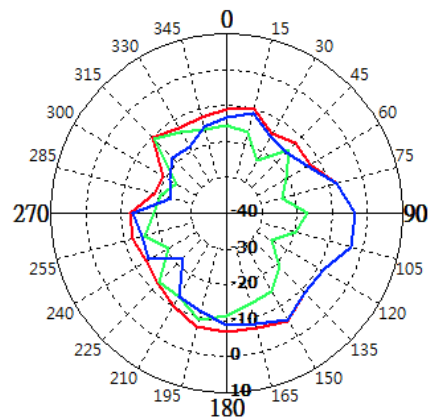
3500.00 MHz	
Horizontal Peak (dBi)	-12.11
Vertical Peak(dBi)	-7.41



**Main antenna: 3600.00 MHz**

- TOTAL
- H\_POL
- V\_POL

3600.00 MHz	
Horizontal Peak (dBi)	-9.45
Vertical Peak(dBi)	-3.07

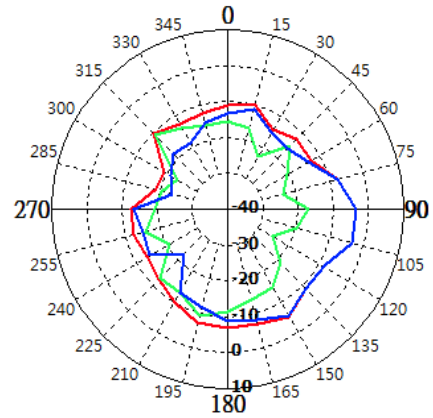


## Radiation characteristic in 3600MHz ~ 3800MHz (CE LTE, Band 43)

### Main antenna: 3600.00 MHz

— TOTAL  
— H\_POL  
— V\_POL

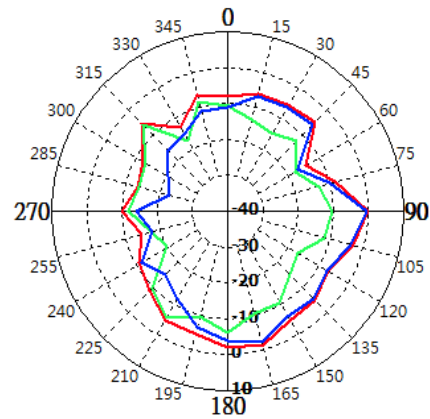
3600.00 MHz	
Horizontal Peak (dBi)	-9.45
Vertical Peak(dBi)	-3.07



### Main antenna: 3700.00 MHz

— TOTAL  
— H\_POL  
— V\_POL

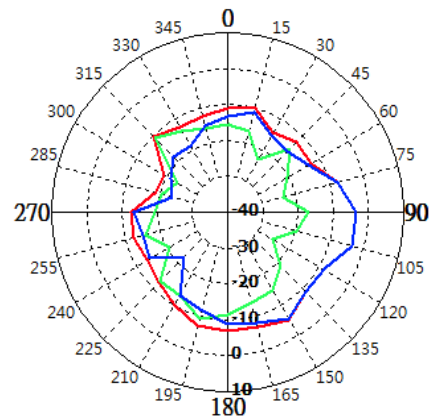
3700.00 MHz	
Horizontal Peak (dBi)	-5.32
Vertical Peak(dBi)	-0.85



### Main antenna: 3800.00 MHz

— TOTAL  
— H\_POL  
— V\_POL

3800.00 MHz	
Horizontal Peak (dBi)	-4.17
Vertical Peak(dBi)	--3.81

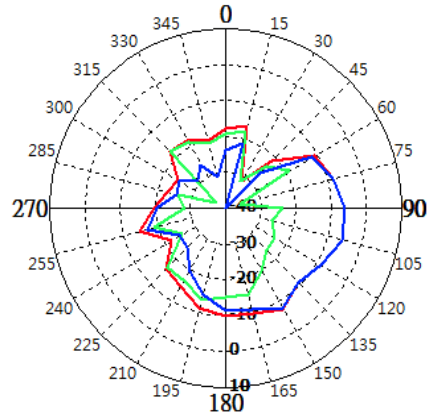


**Radiation characteristic in 3550MHz ~ 3700MHz (FCC Part 96 LTE, Band 48)**

**Main antenna: 3550.00 MHz**

- TOTAL
- H\_POL
- V\_POL

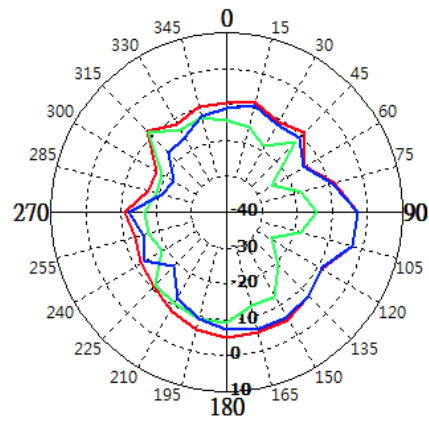
3550.00 MHz	
Horizontal Peak (dBi)	-13.08
Vertical Peak(dBi)	-5.30



**Main antenna: 3625.00 MHz**

- TOTAL
- H\_POL
- V\_POL

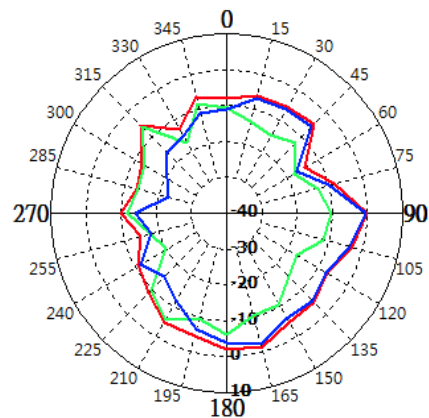
3625.00 MHz	
Horizontal Peak (dBi)	-8.91
Vertical Peak(dBi)	-3.71



**Main antenna: 3700.00 MHz**

- TOTAL
- H\_POL
- V\_POL

3700.00 MHz	
Horizontal Peak (dBi)	-5.32
Vertical Peak(dBi)	-0.85

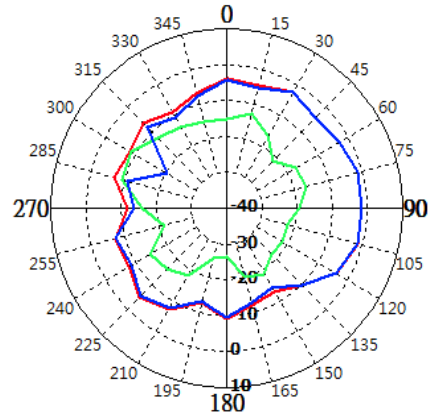


**Radiation characteristic in 1710MHz ~ 1780MHz (FCC Part 27 LTE, Band 66, n66)**

**Main antenna: 1710.00 MHz**

- TOTAL
- H\_POL
- V\_POL

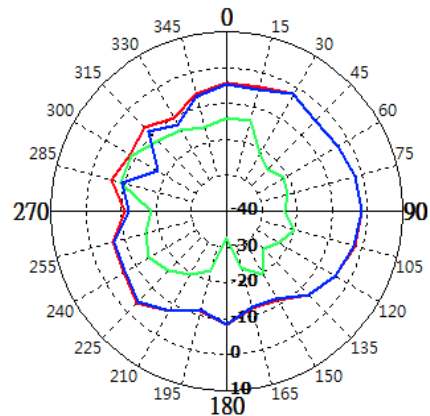
1710.00 MHz	
Horizontal Peak (dBi)	-8.57
Vertical Peak(dBi)	-2.34



**Main antenna: 1745.00 MHz**

- TOTAL
- H\_POL
- V\_POL

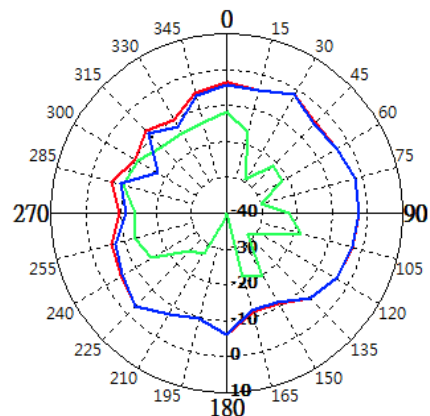
1745.00 MHz	
Horizontal Peak (dBi)	-8.97
Vertical Peak(dBi)	-1.92



**Main antenna: 1780.00 MHz**

- TOTAL
- H\_POL
- V\_POL

1780.00 MHz	
Horizontal Peak (dBi)	-9.94
Vertical Peak(dBi)	-1.26



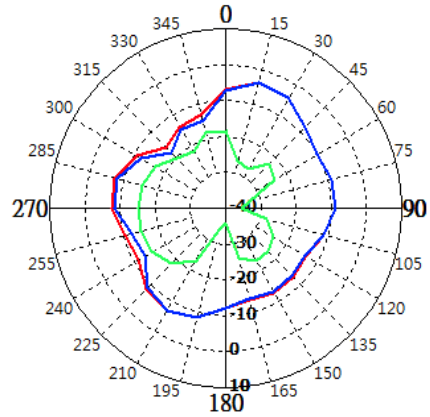


**Radiation characteristic in 663MHz ~ 698MHz (FCC Part 24, 27 LTE, Band 71, n71)**

**Main antenna: 663.00 MHz**

- TOTAL
- H\_POL
- V\_POL

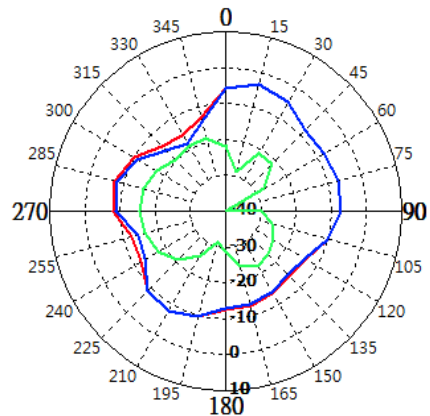
663.00 MHz	
Horizontal Peak (dBi)	-11.86
Vertical Peak(dBi)	-4.33



**Main antenna: 680.50 MHz**

- TOTAL
- H\_POL
- V\_POL

680.50 MHz	
Horizontal Peak (dBi)	-12.41
Vertical Peak(dBi)	-3.81



**Main antenna: 698.00 MHz**

- TOTAL
- H\_POL
- V\_POL

698.00 MHz	
Horizontal Peak (dBi)	-12.94
Vertical Peak(dBi)	-4.95

