

# 4x4 MiMo Omnidirectional Wall / Mast Antenna

WMM4-7-49-[VAR]

PANORAMA ANTENNAS



- 4x4 MiMo 4G/5G - 698-960/1710-4900MHz
- Wall or mast mount
- Integrated low loss cables

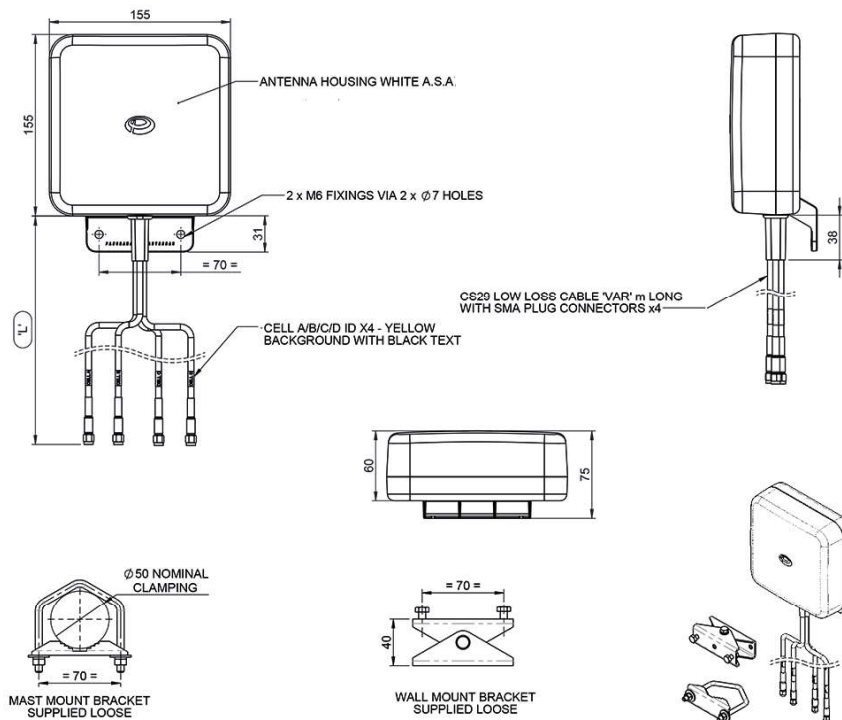
The WMM4-7-49 antenna provides 4x4 MiMo solution for global 4G/5G networks from 698-960/1710-4900MHz. Incorporating four separately fed ultra wideband elements in a single very compact housing the WMM4-7-49 is suitable for a huge range of fixed site and failover applications.

The supplied mounting bracket enables simple wall mounting using the supplied screws and wall plugs and mast mounting using the supplied clamps. The omnidirectional radiation pattern allows easy placement of the antenna without requiring directional alignment.

The antenna is fitted with integrated double shielded CS29 cable which minimises exposed connector joints and simplifies cable management for easy installation.

## Technical Drawing

WMM4-7-49-5SP Shown



# 4x4 MiMo Omnidirectional Wall / Mast Antenna

WMM4-7-49-[VAR]

PANORAMA  ANTENNAS

## Product Data

### Part No.

WMM4-7-49-05NJ

WMM4-7-49-5SP

WMM4-7-49-5FKDJ

### Electrical Data

Frequency Range (MHz)	617-960 / 1710-6000
Operational Band	2G/3G/4G/5G
Typical VSWR*	<3:1
Polarisation	+/-45 degrees
Pattern	Omnidirectional
Impedance	50Ω
Max Input Power (W)	10

### Mechanical Data

Dimensions (mm)	Length	155 (6.1")
	Height Excl Brkt	155 (6.1")
	Depth	75 (2.95")
Operating Temp (°C)	-40° / +80°C ( -40° / 176°F )	
Radome Material	ASA	
Material Approvals	Radome ASA Material - UL 746C F1, UL 94-HB	
Colour	White	
Ingress Protection	IP65	

### Mounting Data

Fixing	Wall / Mast Mount
Max Mast / Rail Diameter (mm)	20-50mm / (0.78 - 1.96")

### Cable Data

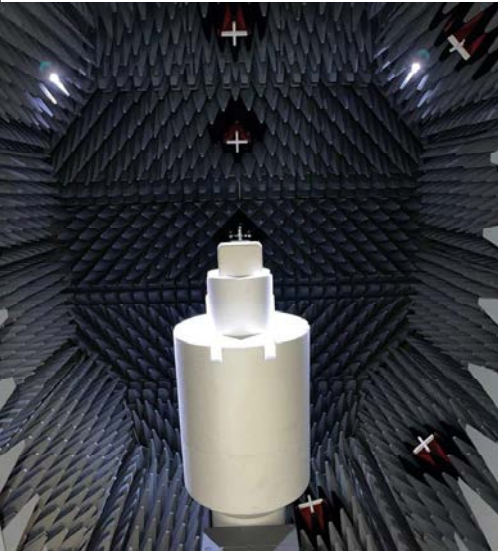
4G/5G Cables	Type	CS29 (double shielded cable)		
	Diameter (mm)	5 (0.19")		
	Length (m)	0.5 (20")	5 (16' 4")	5 (16' 4")
	Termination	N Socket (f)	SMA Plug (m)	FAKRA D Jack

\* Typical VSWR and isolation stated as measured with 0.5m (1.5') of cable in free space

# 4x4 MiMo Omnidirectional Wall / Mast Antenna

WMM4-7-49-[VAR]

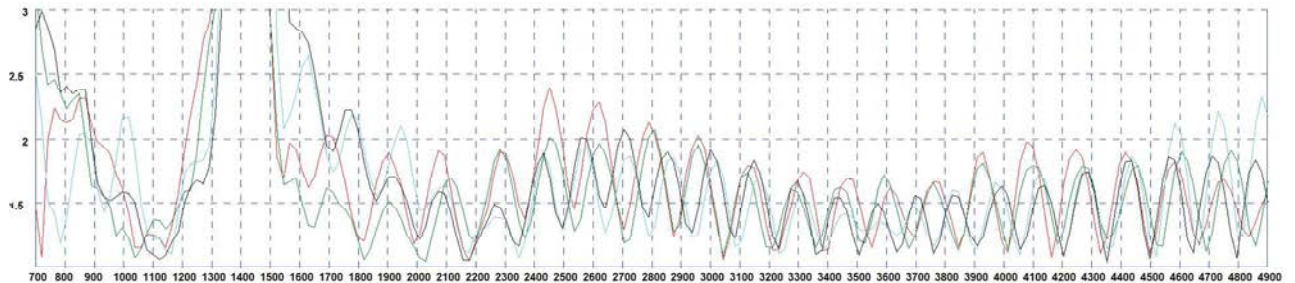
## Electrical Data

Measurement Conditions	4G/5G Antennas				
WMM4-7-49-05NJ measured in free space with 0.5m (20") CS29 pigtailed	Frequency Range (MHz)	LTE Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
	699-798	12,13,14,17,28	Cell A	0.7	45
			Cell B	1.4	35
			Cell C	2.6	57
			Cell D	0.3	39
	807- 862	5,19,20,26,27	Cell A	2.9	48
			Cell B	3.1	44
			Cell C	4.3	64
			Cell D	2.2	48
	880-960	8	Cell A	3.1	60
			Cell B	5.9	57
			Cell C	7.0	64
			Cell D	2.8	58
	1427-1518	11,21,74,75,76	Cell A	3.8	48
			Cell B	5.2	49
			Cell C	2.4	40
			Cell D	0.8	34
	1710-1920	2,3,4,9,25,35,39,66	Cell A	4.2	63
			Cell B	3.9	64
			Cell C	3.8	55
			Cell D	2.9	60
	1920-2170	1,23	Cell A	4.8	73
			Cell B	6.9	74
			Cell C	6.5	71
			Cell D	3.2	71
	2300-2400	30,40	Cell A	4.6	76
			Cell B	6.4	78
			Cell C	4.1	76
			Cell D	2.5	77
	2496-2690	7,38,41	Cell A	5.3	78
			Cell B	5.1	80
			Cell C	4.4	79
			Cell D	4.1	76
	3300-4200	22,42,43,48,77,78,79	Cell A	6.6	75
			Cell B	5.0	76
			Cell C	5.2	76
			Cell D	6.8	77
	4400-5000	79	Cell A	6.7	72
			Cell B	7.0	69
			Cell C	7.2	65
			Cell D	7.7	70

# 4x4 MiMo Omnidirectional Wall / Mast Antenna

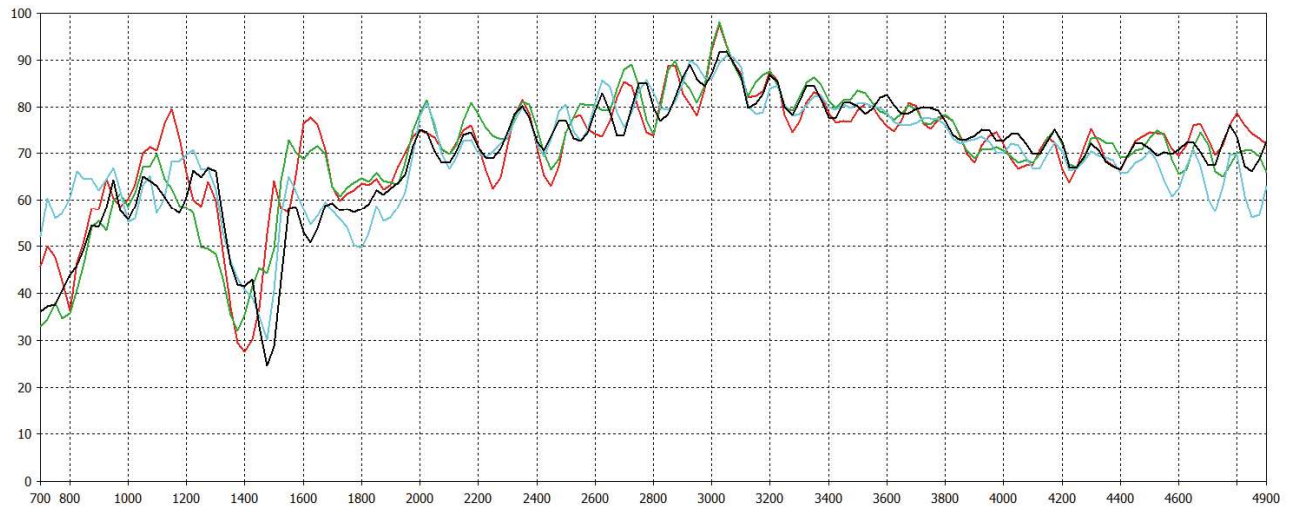
WMM4-7-49-[VAR]

Typical VSWR \*



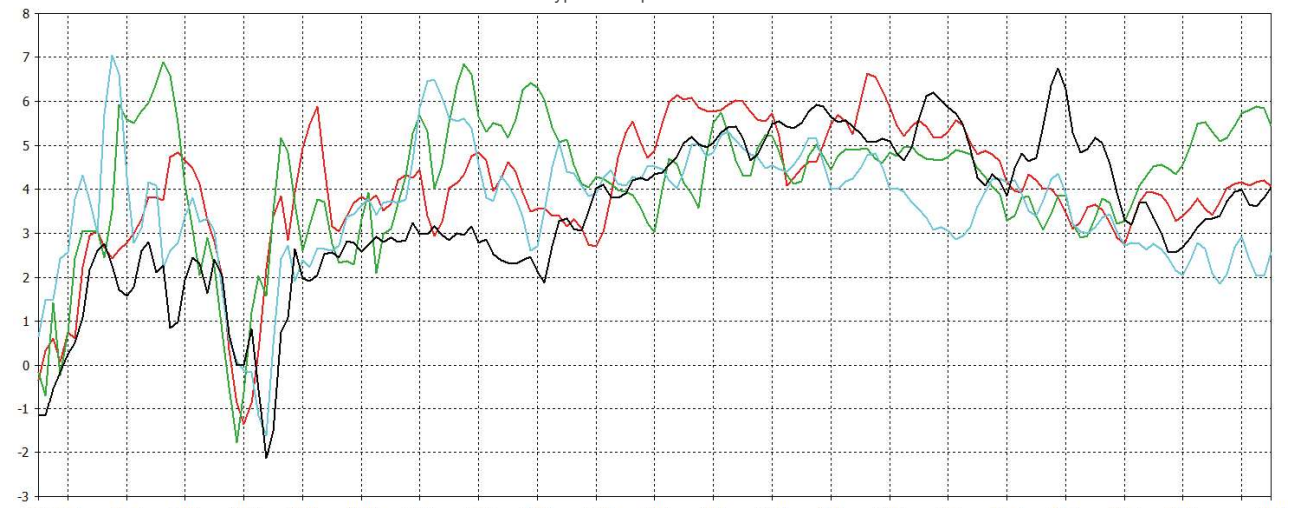
\*VSWR measured with 0.5m (1.5') of CS29 cable

Typical Efficiency\*



\*Efficiency measured with 0.5m (1.5') of CS29 cable

Typical Swept Peak Gain\*



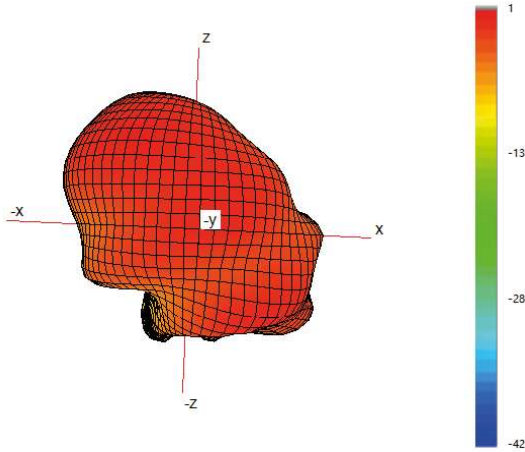
\* Swept peak gain measured with 0.5m (1.5') of CS29 cable

# 4x4 MiMo Omnidirectional Wall / Mast Antenna

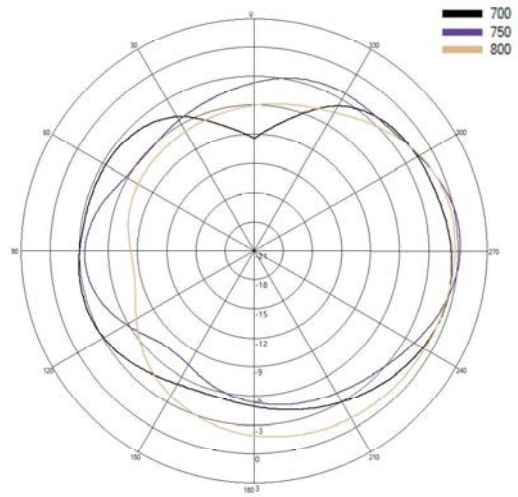
WMM4-7-49-[VAR]

## 3D Patterns -Cell A

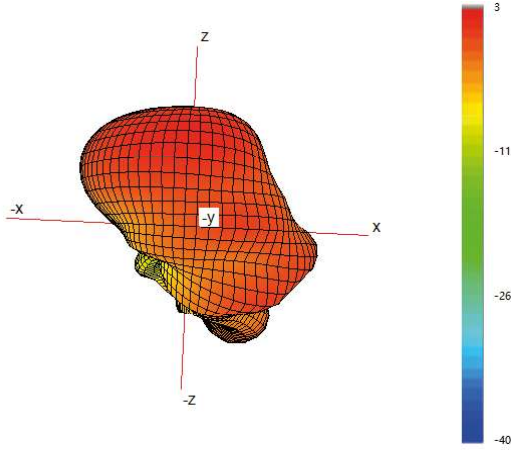
Typical 3D Pattern- Cell A - 750 MHz



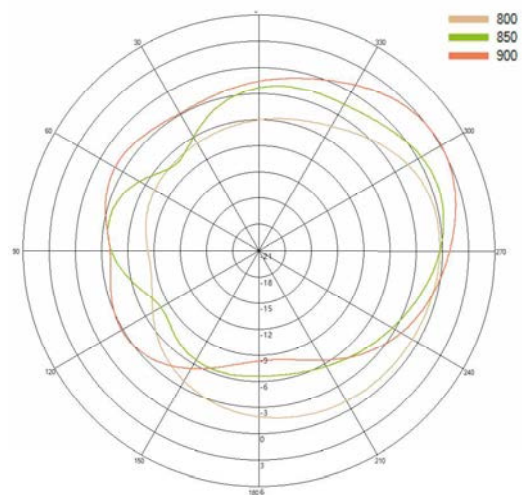
Typical H Plane- Cell A - Patterns- 700-800MHz



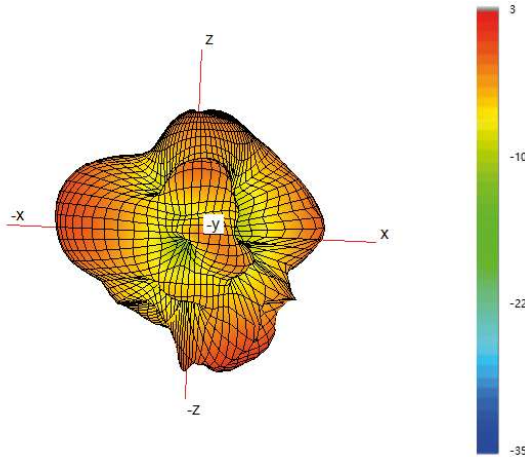
Typical 3D Pattern- Cell A - 850 MHz



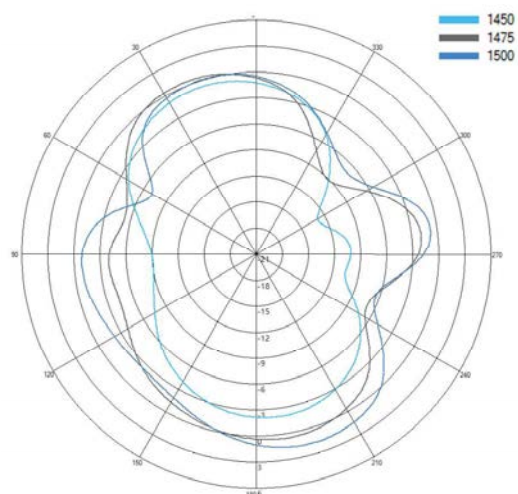
Typical H Plane- Cell A - Patterns- 800-900MHz



Typical 3D Pattern- Cell A - 1475 MHz



Typical H Plane- Cell A - Patterns- 1450-1500 MHz

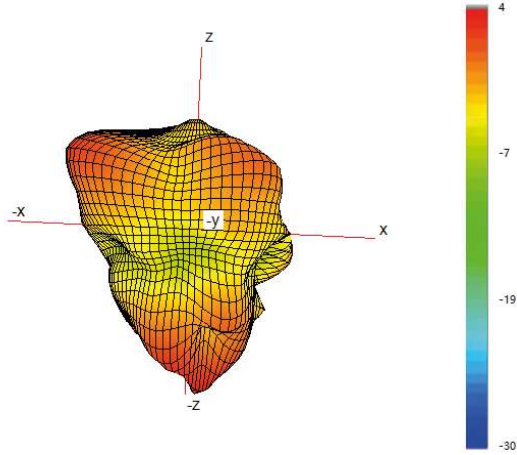


# 4x4 MiMo Omnidirectional Wall / Mast Antenna

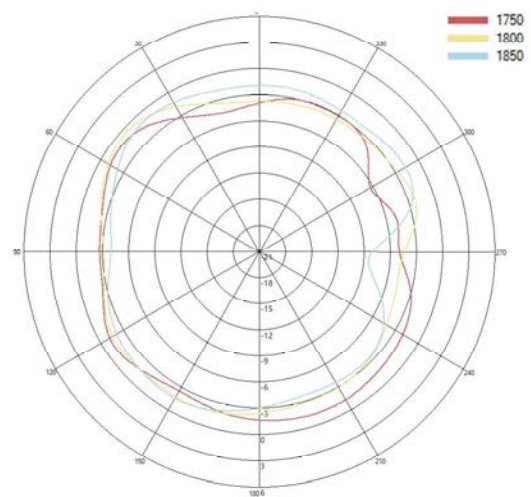
WMM4-7-49-[VAR]

## 3D Patterns Cell A

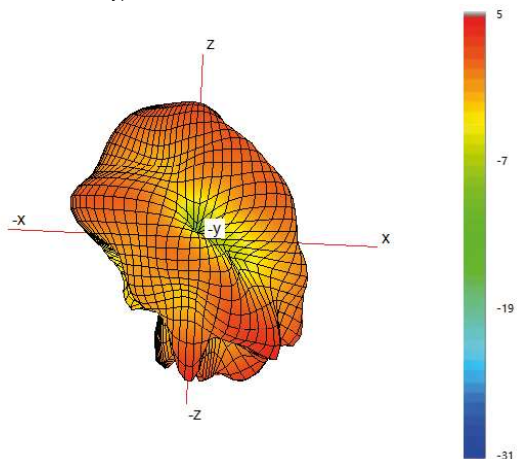
Typical 3D Pattern- Cell A - 1800 MHz



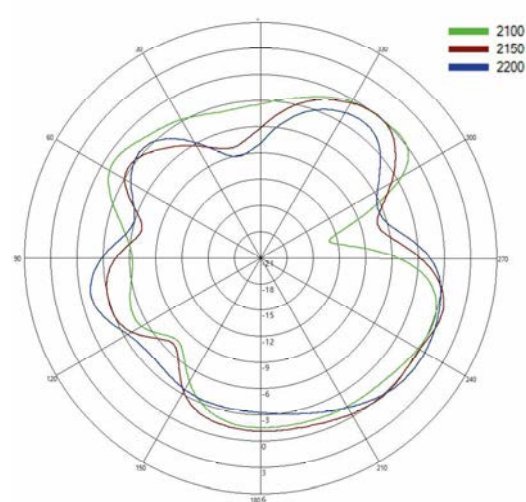
Typical H Plane- Cell A- Patterns- 1750-1850 MHz



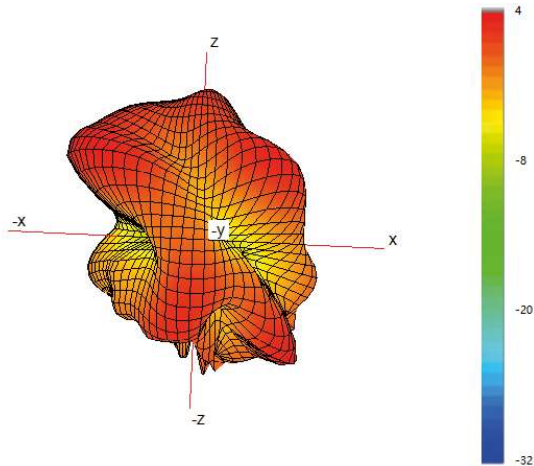
Typical 3D Pattern- Cell A - 2150 MHz



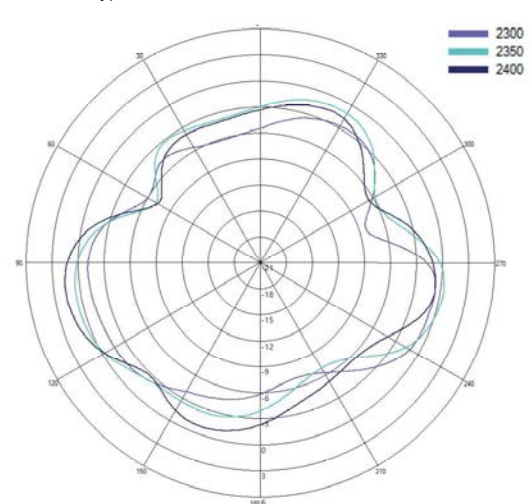
Typical H Plane- Cell A- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell A - 2350 MHz



Typical H Plane- Cell A - Patterns- 2300-2400 MHz

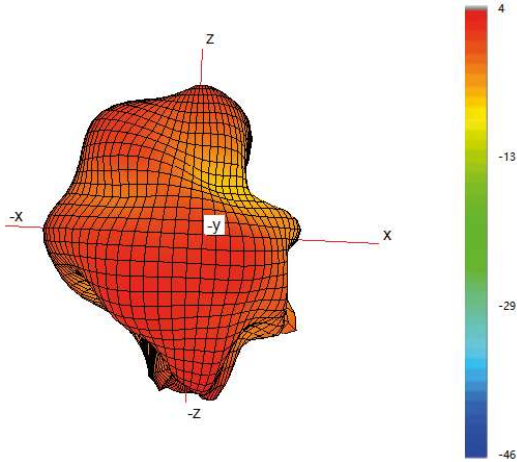


# 4x4 MiMo Omnidirectional Wall / Mast Antenna

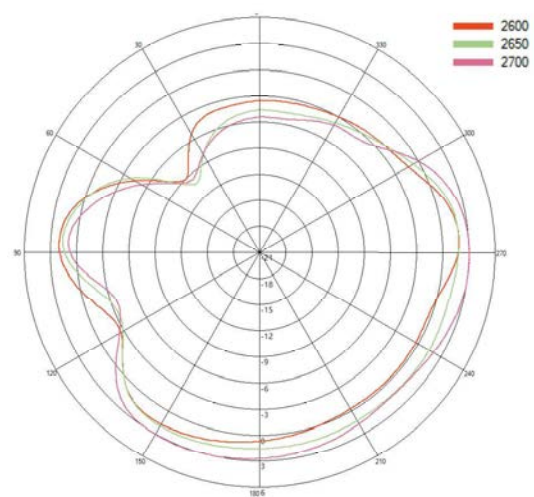
WMM4-7-49-[VAR]

## 3D Patterns -Cell A

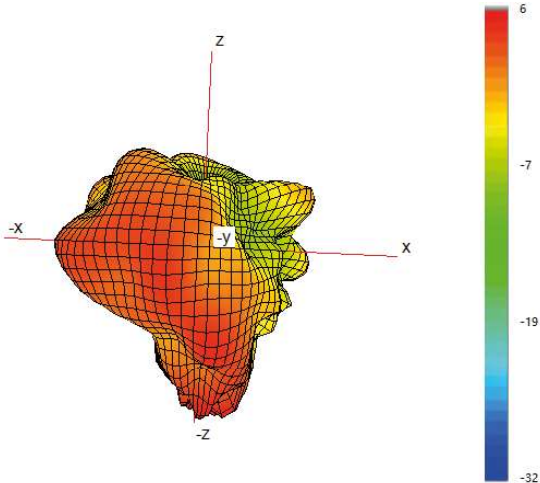
Typical 3D Pattern- Cell A - 2650 MHz



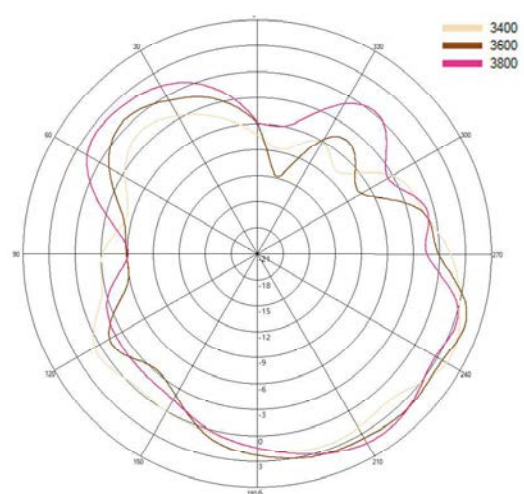
Typical H Plane- Cell A - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell A - 3600 MHz



Typical H Plane- Cell A - Patterns- 3400-3800 MHz

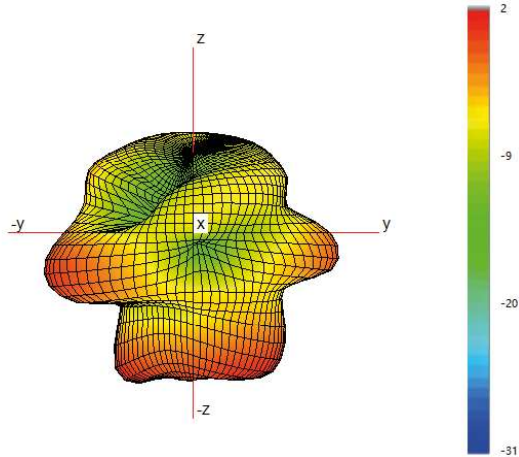


# 4x4 MiMo Omnidirectional Wall / Mast Antenna

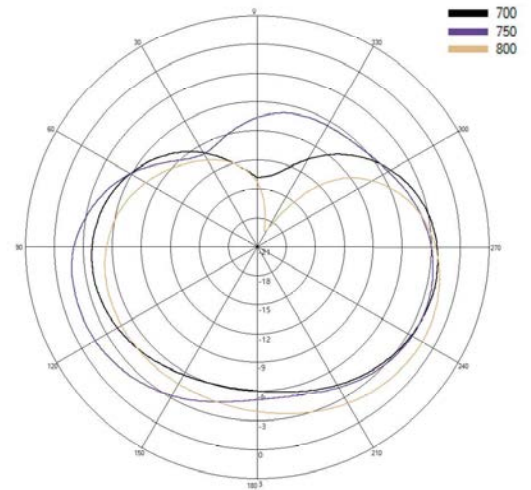
WMM4-7-49-[VAR]

## 3D Patterns Cell B

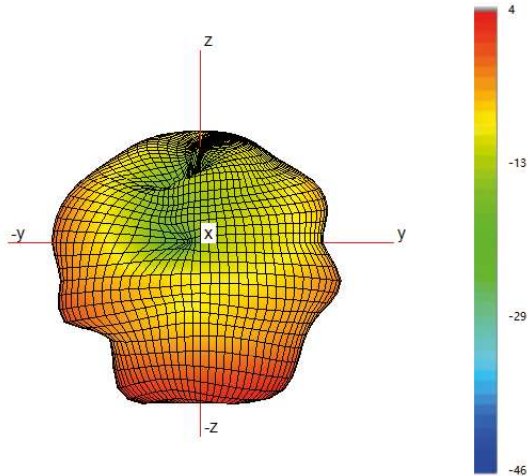
Typical 3D Pattern- Cell B - 750 MHz



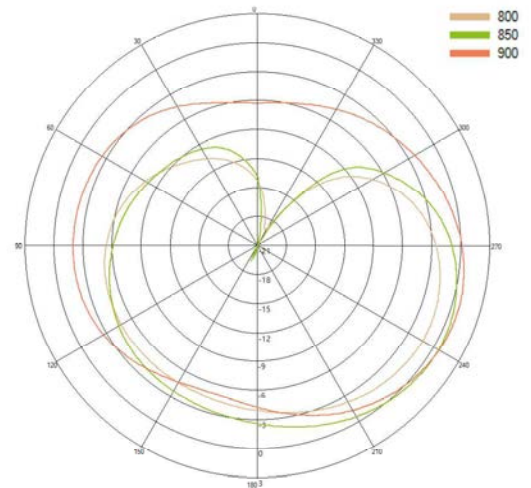
Typical H Plane- Cell B - Patterns- 700-800MHz



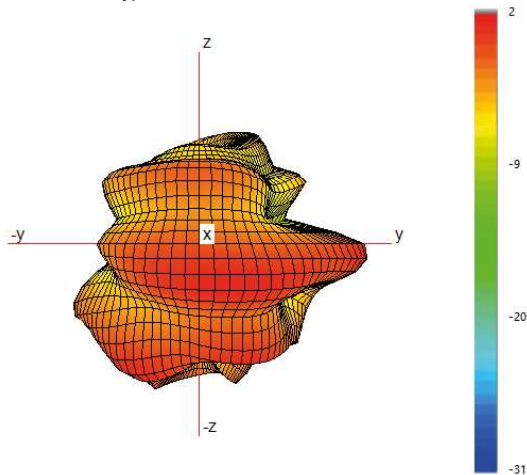
Typical 3D Pattern- Cell B - 850 MHz



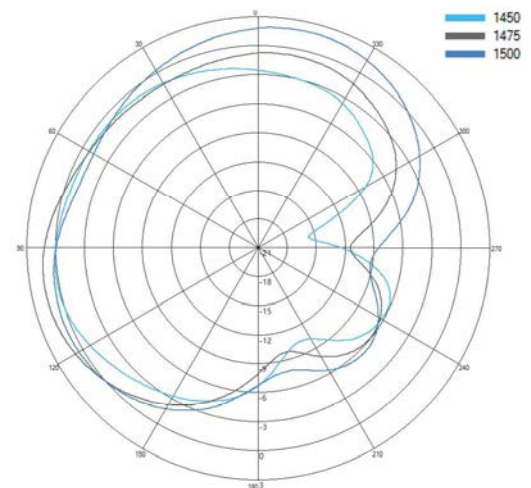
Typical H Plane- Cell B - Patterns- 800-900MHz



Typical 3D Pattern- Cell B - 1475 MHz



Typical H Plane- Cell B- Patterns- 1450-1500 MHz



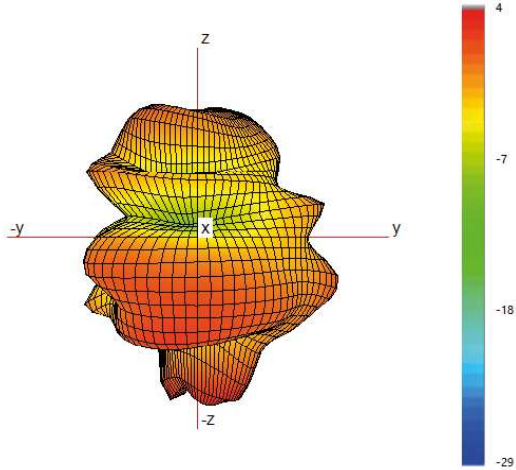


# 4x4 MiMo Omnidirectional Wall / Mast Antenna

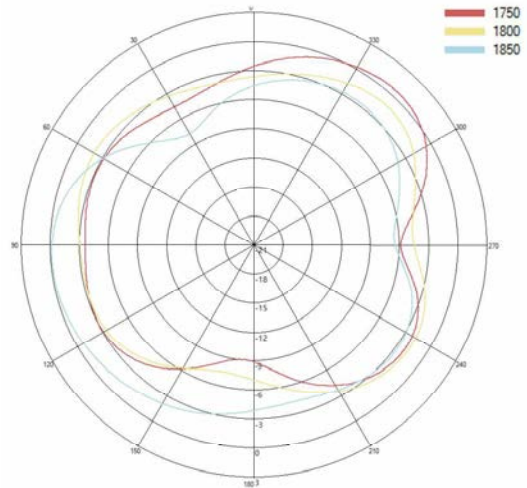
WMM4-7-49-[VAR]

## 3D Patterns - Cell B

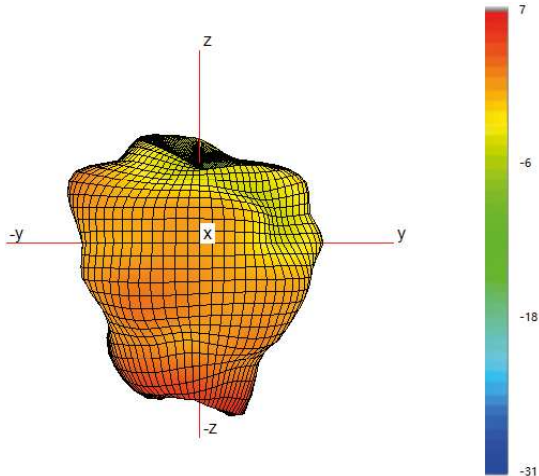
Typical 3D Pattern- Cell B - 1800 MHz



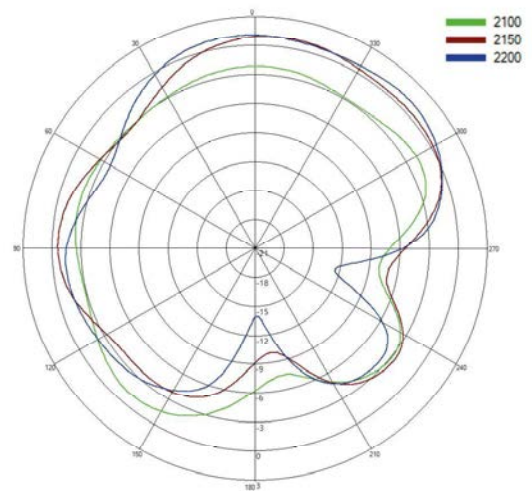
Typical H Plane- Cell B- Patterns- 1750-1850 MHz



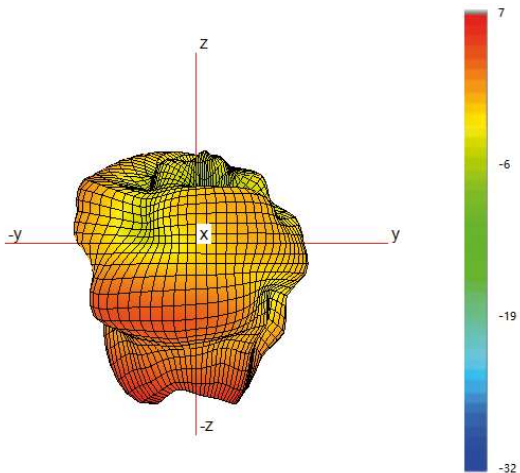
Typical 3D Pattern- Cell B - 2150 MHz



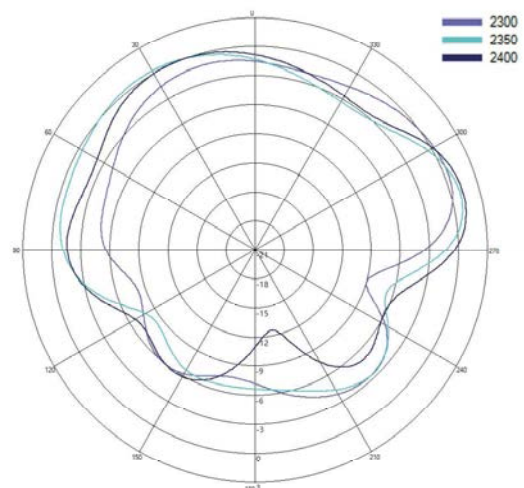
Typical H Plane- Cell B- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell B - 2350 MHz



Typical H Plane- Cell B - Patterns- 2300-2400 MHz

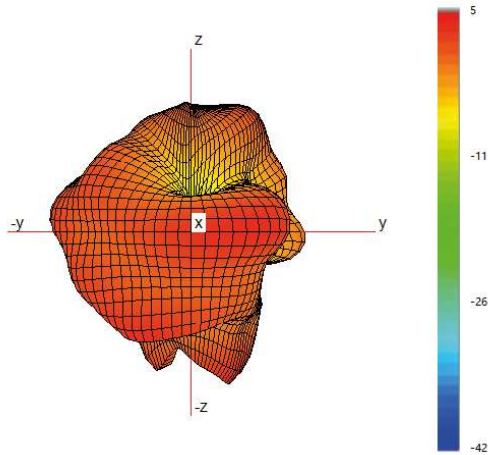


# 4x4 MiMo Omnidirectional Wall / Mast Antenna

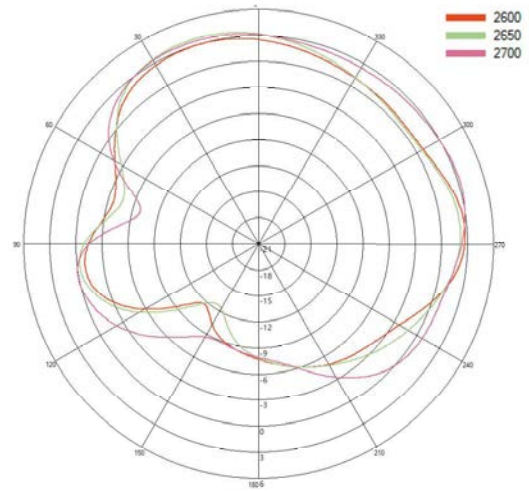
WMM4-7-49-[VAR]

## 3D Patterns Cell B

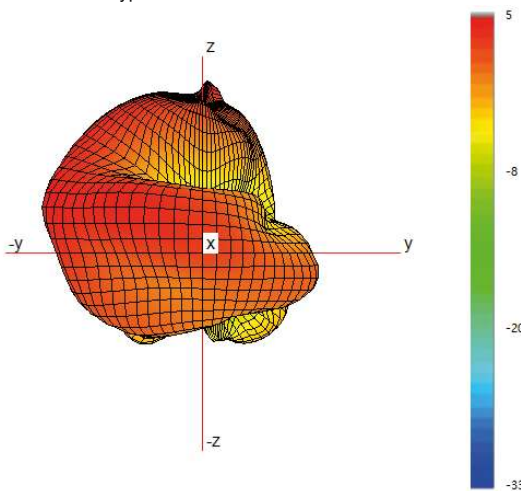
Typical 3D Pattern- Cell B - 2650 MHz



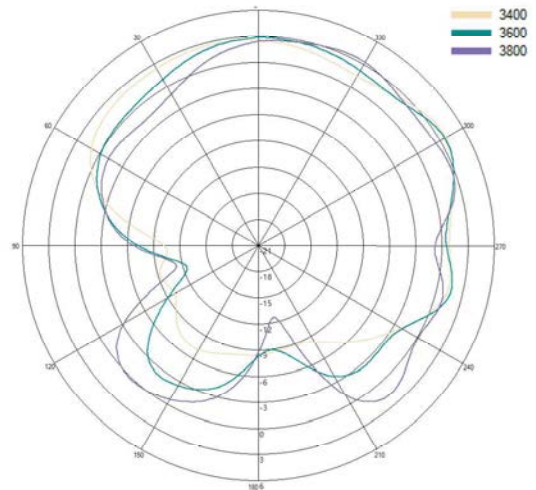
Typical H Plane- Cell B - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell B - 3600 MHz



Typical H Plane- Cell B - Patterns- 3400-3800 MHz

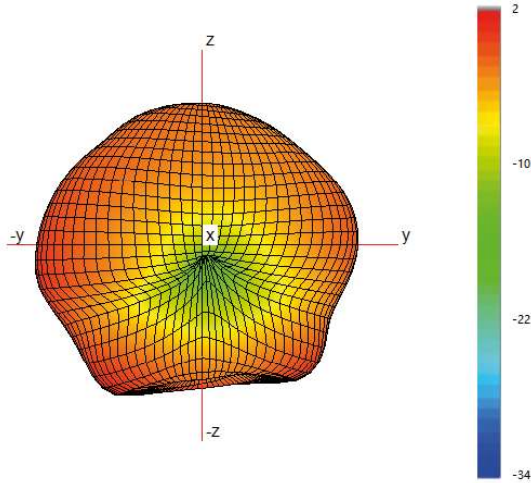


# 4x4 MiMo Omnidirectional Wall / Mast Antenna

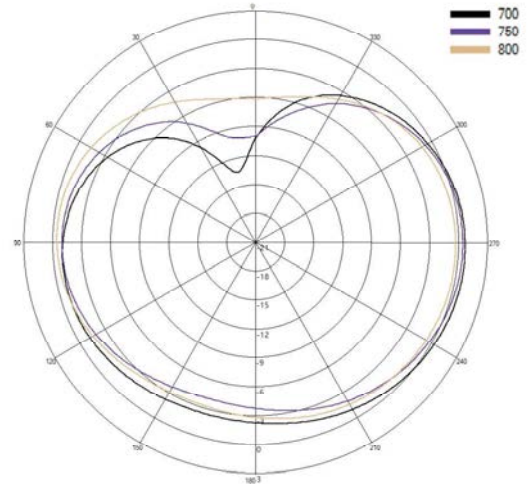
WMM4-7-49-[VAR]

## 3D Patterns - Cell C

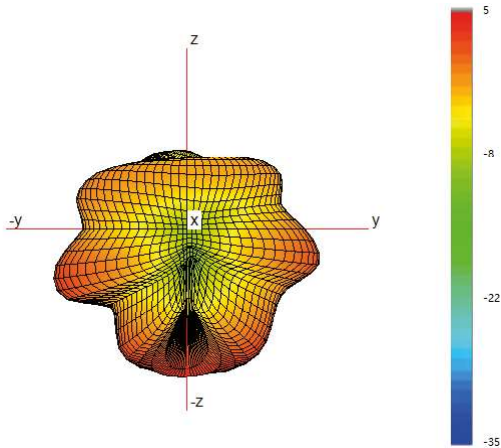
Typical 3D Pattern- Cell C - 750 MHz



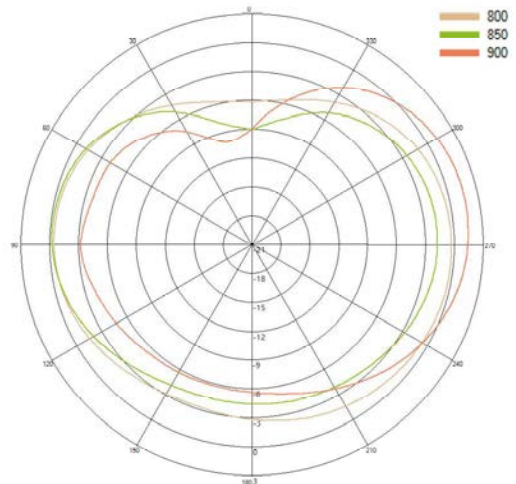
Typical H Plane- Cell C - Patterns- 700-800MHz



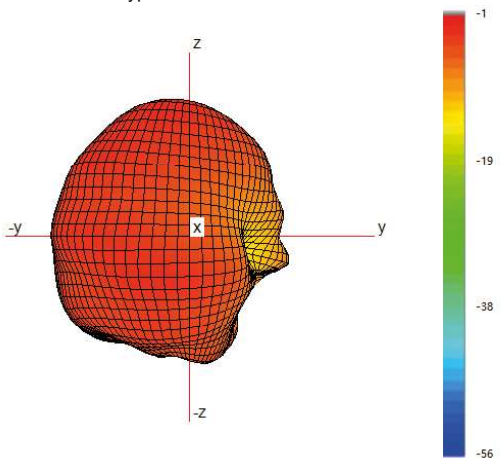
Typical 3D Pattern- Cell C - 850 MHz



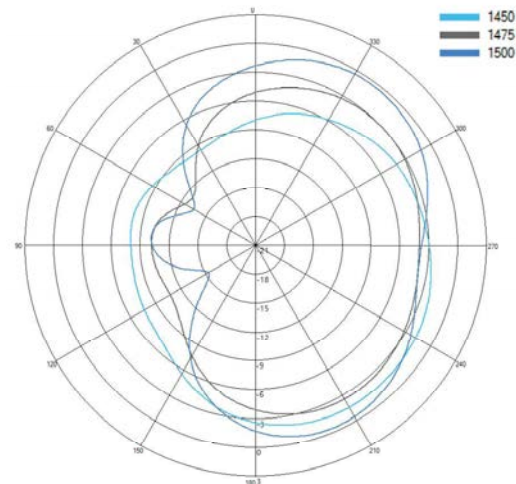
Typical H Plane- Cell C - Patterns- 800-900MHz



Typical 3D Pattern- Cell C - 1475 MHz



Typical H Plane- Cell C - Patterns- 1450-1500 MHz

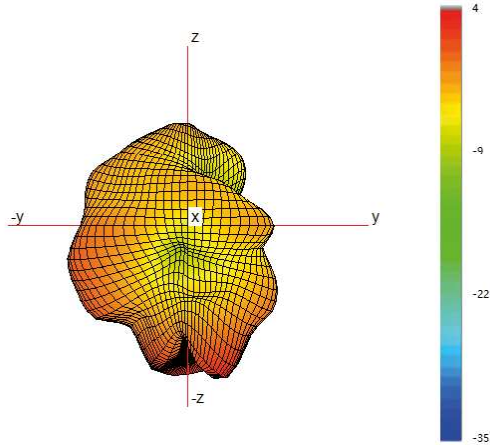


# 4x4 MiMo Omnidirectional Wall / Mast Antenna

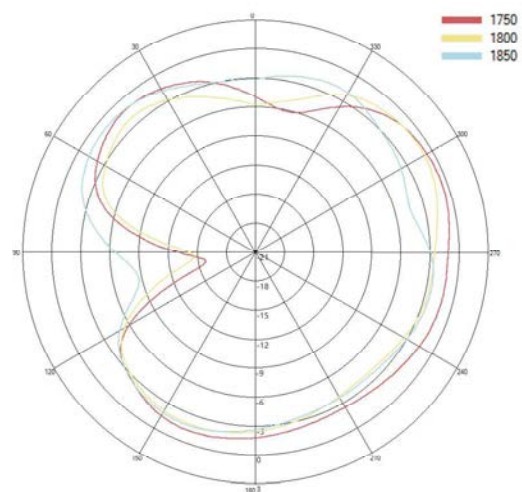
WMM4-7-49-[VAR]

## 3D Patterns Cell C

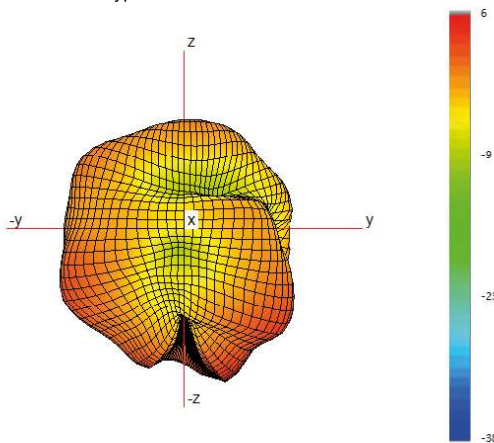
Typical 3D Pattern- Cell C - 1800 MHz



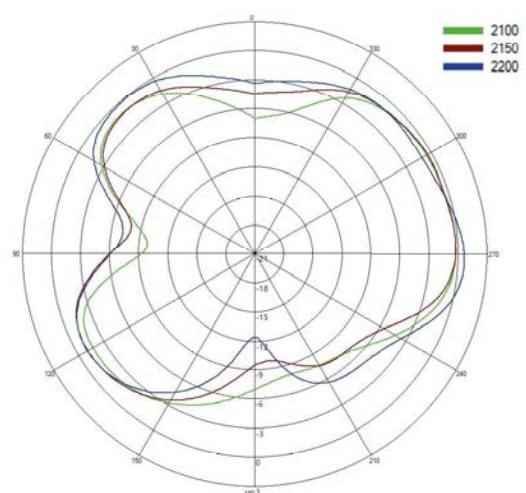
Typical H Plane- Cell C- Patterns- 1750-1850 MHz



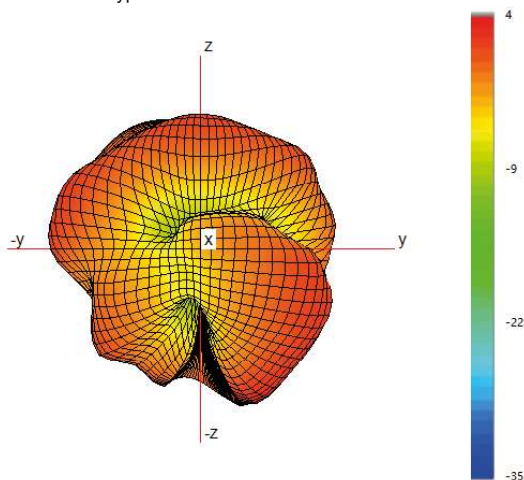
Typical 3D Pattern- Cell C - 2150 MHz



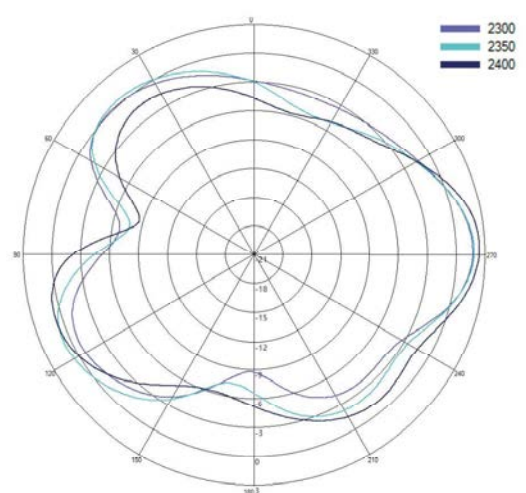
Typical H Plane- Cell C- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell C - 2350 MHz



Typical H Plane- Cell C - Patterns- 2300-2400 MHz

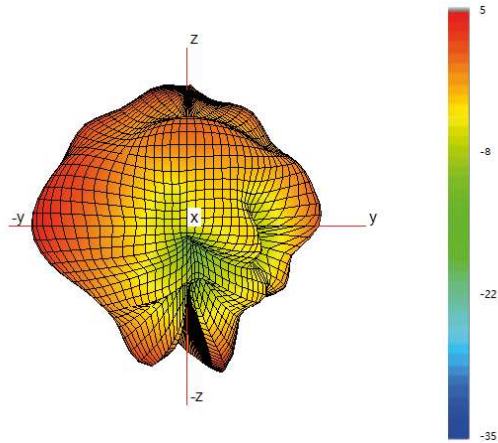


# 4x4 MiMo Omnidirectional Wall / Mast Antenna

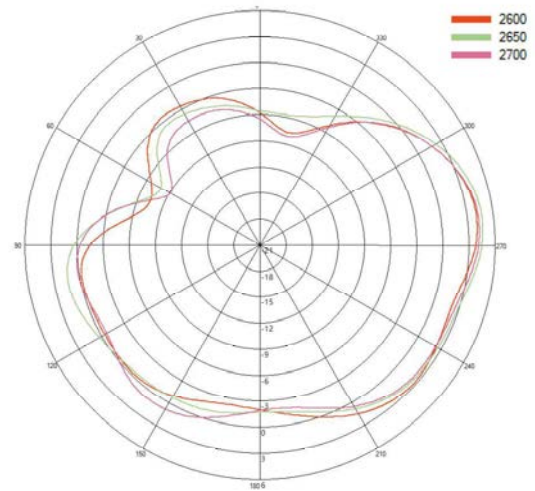
WMM4-7-49-[VAR]

## 3D Patterns -Cell C

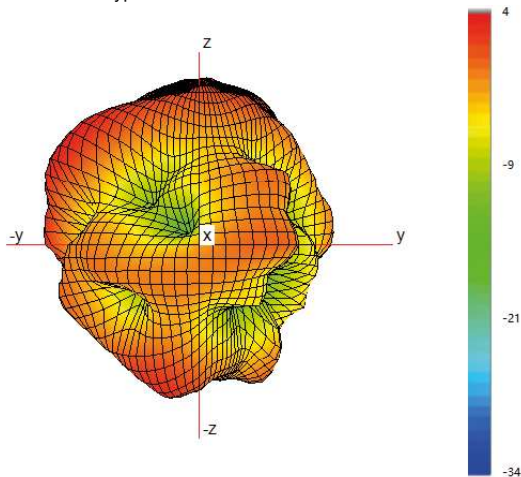
Typical 3D Pattern- Cell C - 2650 MHz



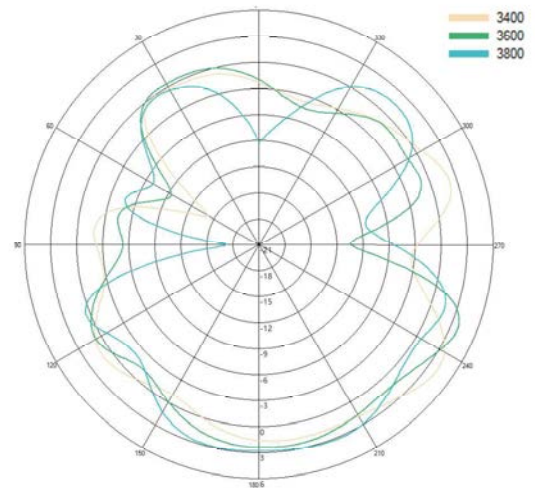
Typical H Plane- Cell C - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell C - 3600 MHz



Typical H Plane- Cell C - Patterns- 3400-3800 MHz

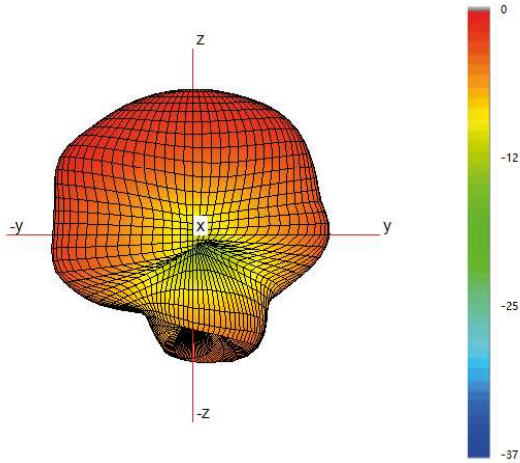


# 4x4 MiMo Omnidirectional Wall / Mast Antenna

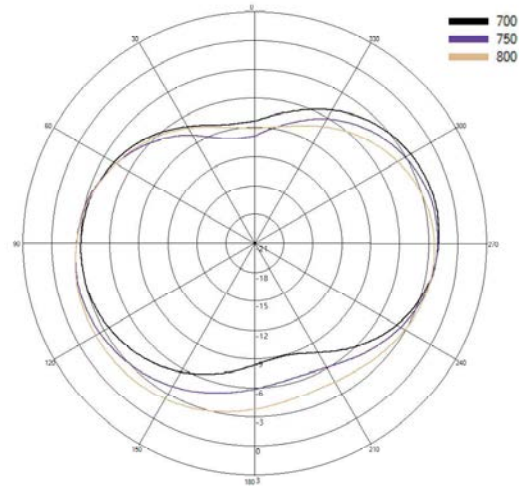
WMM4-7-49-[VAR]

3D Patterns Cell D

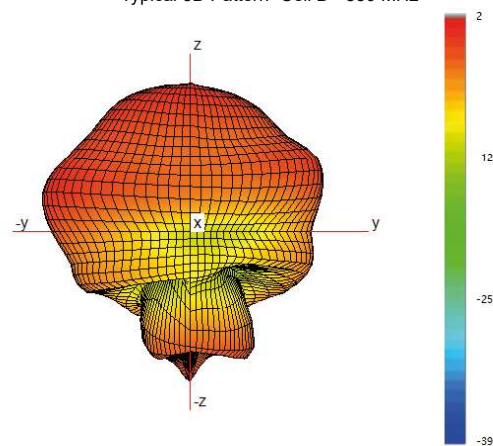
Typical 3D Pattern- Cell D - 750 MHz



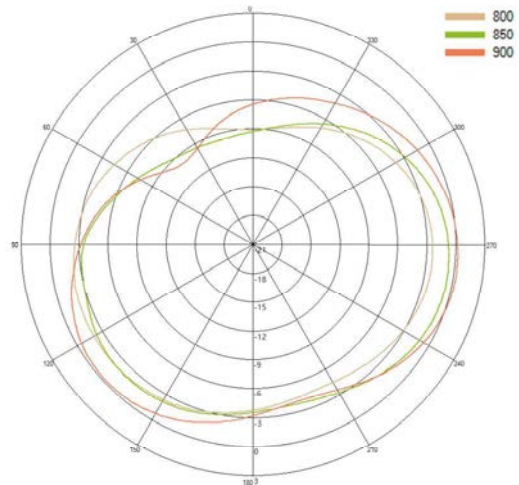
Typical H Plane- Cell D - Patterns- 700-800MHz



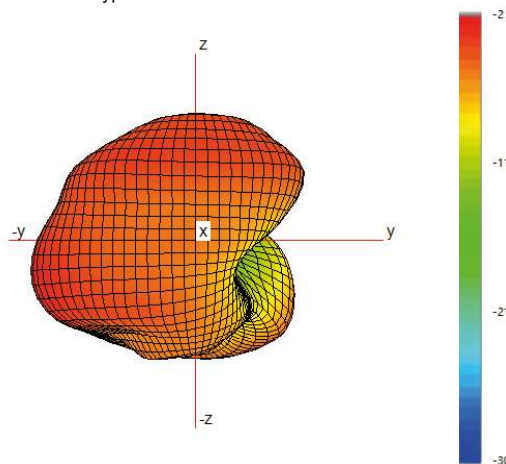
Typical 3D Pattern- Cell D - 850 MHz



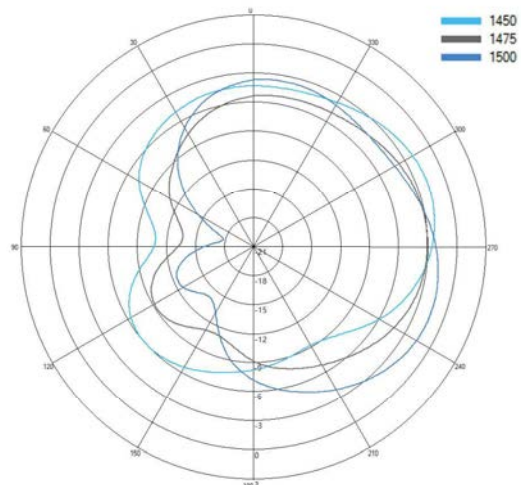
Typical H Plane- Cell D - Patterns- 800-900MHz



Typical 3D Pattern- Cell D - 1475 MHz



Typical H Plane- Cell D - Patterns- 1450-1500 MHz

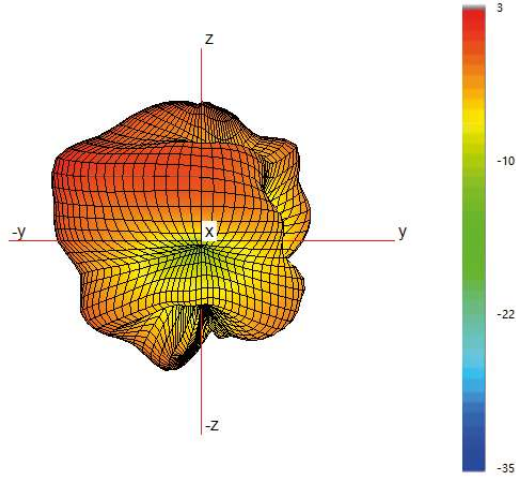


# 4x4 MiMo Omnidirectional Wall / Mast Antenna

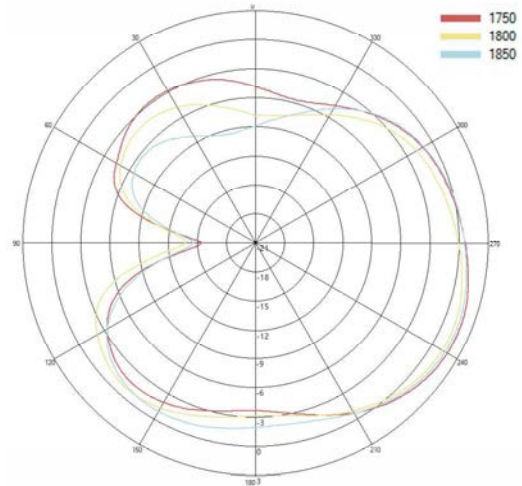
WMM4-7-49-[VAR]

## 3D Patterns - Cell D

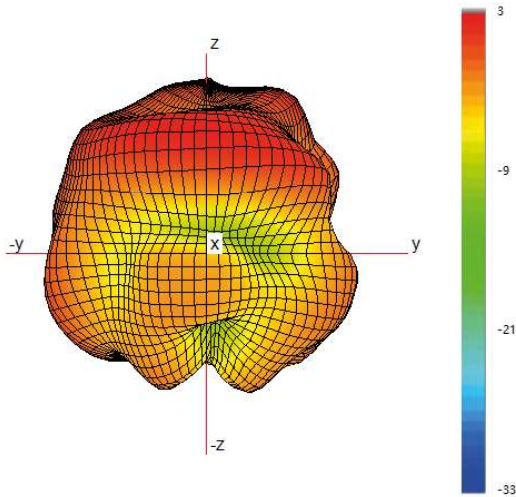
Typical 3D Pattern- Cell D - 1800 MHz



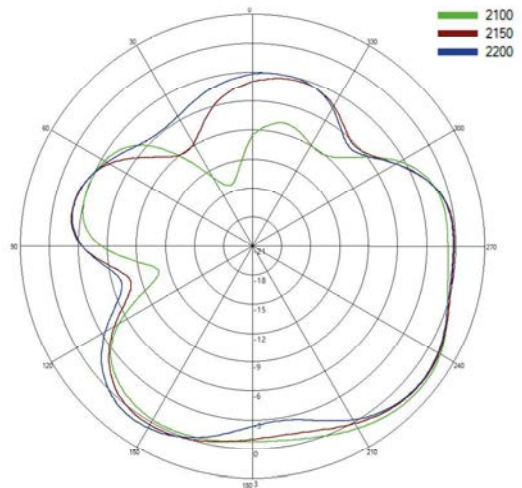
Typical H Plane- Cell D- Patterns- 1750-1850 MHz



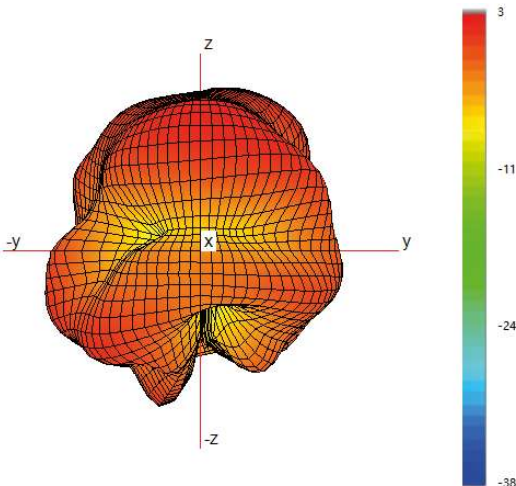
Typical 3D Pattern- Cell D - 2150 MHz



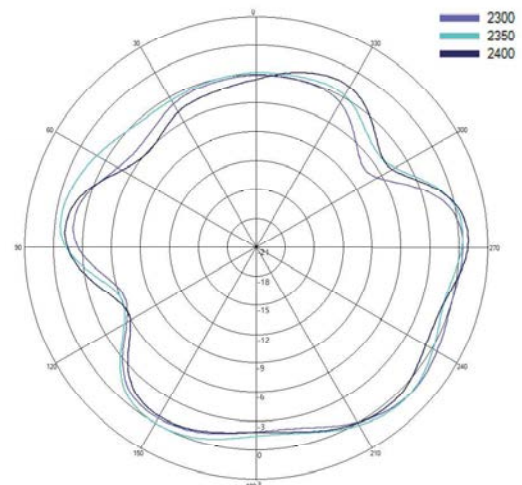
Typical H Plane- Cell D- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell D - 2350 MHz



Typical H Plane- Cell D - Patterns- 2300-2400 MHz

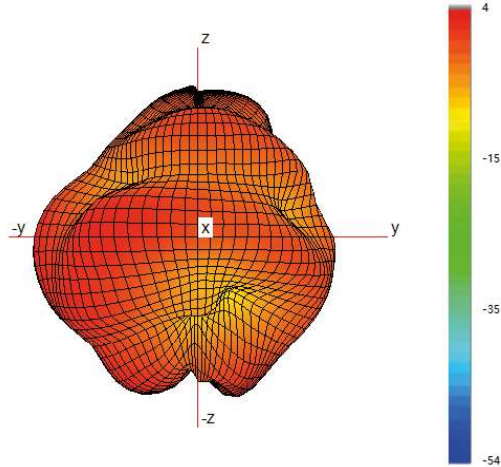


# 4x4 MiMo Omnidirectional Wall / Mast Antenna

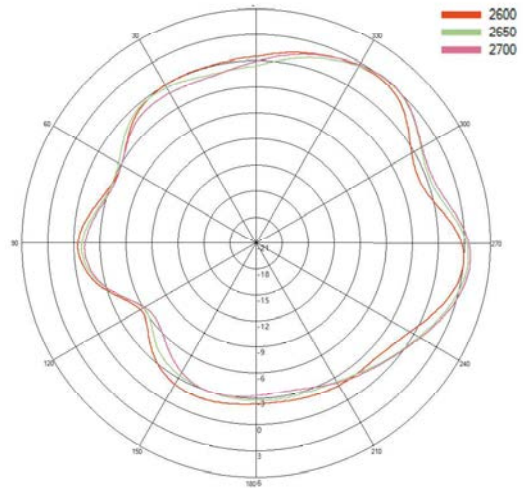
WMM4-7-49-[VAR]

## 3D Patterns Cell D

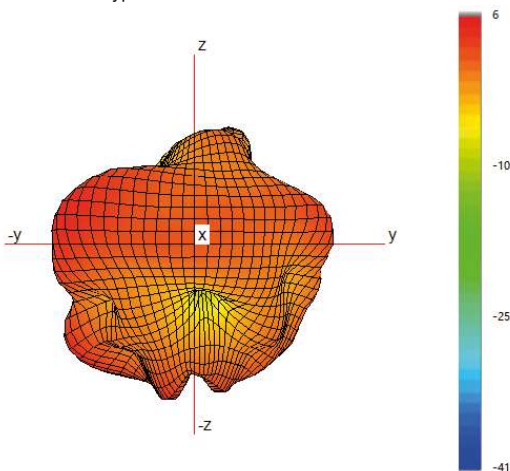
Typical 3D Pattern- Cell D - 2650 MHz



Typical H Plane- Cell D - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell D - 3600 MHz



Typical H Plane- Cell D - Patterns- 3400-3800 MHz

