

MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

PANORAMA ANTENNAS



- 4x4 4G/5G MiMo Full Band (617-960/1427-6000MHz)
- 4x4 4G/5G MiMo Mid / High Bands (1427-7200MHz)
- 2x2 MiMo WiFi 6E
- Optional GPS/GNSS Active Antenna 26dB LNA

The L[X]M[X]M4[X]-6-60-[X]14-72 range has been designed to provide 4x 4G/5G elements covering the full range of sub-6GHz bands 617-960/1427-6000MHz along with an additional 4x 4G/5G MiMo elements covering a more limited range of mid and high bands from 1427-7125MHz. This configuration is ideal for routers with appropriate RF port configurations and allows 8x 4G/5G elements to be combined into a very compact housing.

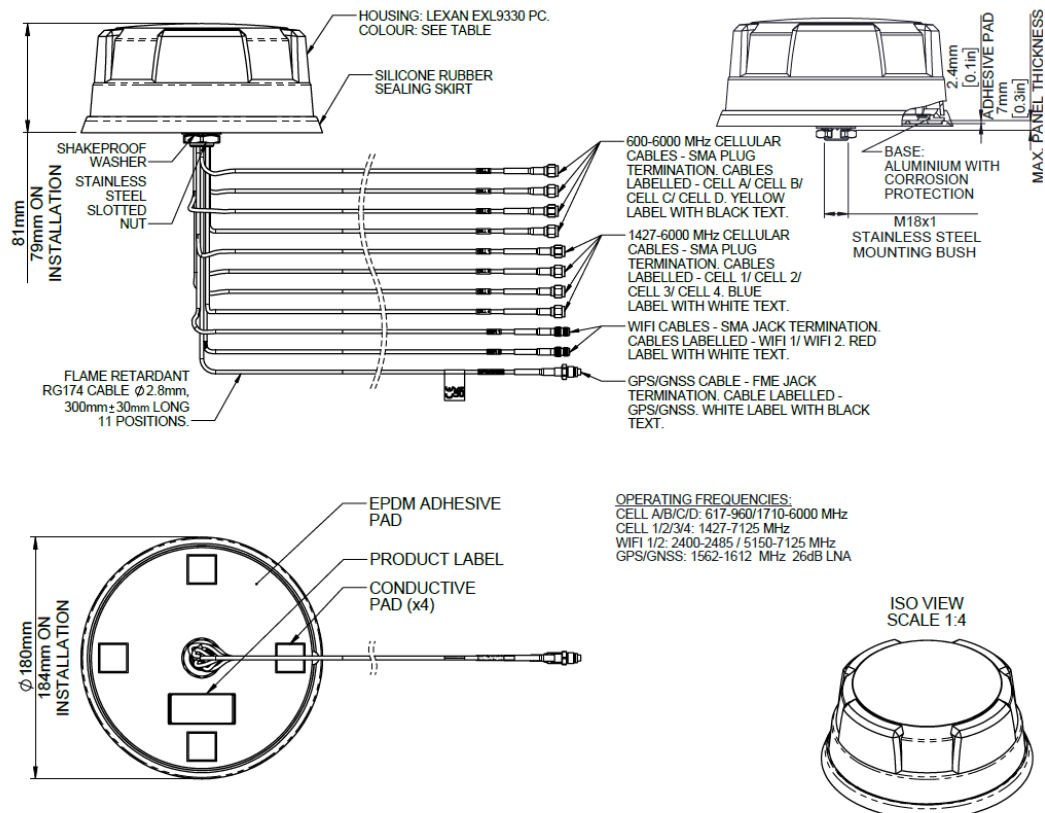
The robust, low profile and flexible platform allows these elements to be combined with a number of other functions including optional GPS/GNSS and optional 2x2 MiMo WiFi 2.4-2.485/5.15-7.2GHz.

The antenna is designed to be panel mounted and can be fitted on a conductive or non- conductive panel. Supplied with integrated flame retardant RG174 cables (Compliant to UN ECE R118.03 and EN45545-2) and a halogen free flame retardant radome the antenna is suitable for many environments and applications.

The LGM variants have an integrated GPS/GNSS module supporting GPS, Glonass, Galileo and Compass with 26dB LNA gain. This GPS module features advanced filtering for LTE B13/14 designed to minimise potential in band interference. The antenna is available with a black or white radome which meets IK10 for vandal resistance and IP69K for ingress protection.

Technical Drawing

L[X]M[X]M4[X]-6-60-[X]14-72 Shown



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Product Data

Part No.

LGMDM4-6-60-Q14-72

LGMDM4B-6-60-Q14-72

Electrical Data

Frequency Range (MHz)	4G/5G Elements	Full Band	4x 617-960 / 1427-6000
	4G/5G Elements	Mid / High	4x 1427-7125
	WiFi Elements		2x 2.4-2.485 / 5.15-7.2GHz
Typical VSWR*	4G/5G Elements	Full Band	<2.5:1
	4G/5G Elements	Mid / High	<2.5:1
	WiFi Elements		<2.5:1
Nominal Impedance			50Ω

GPS/GNSS Data

Frequency Range (MHz)	1559-1612	
VSWR	<2..5:1	-
Gain: LNA	26dB	
Out of band rejection	>40dB (@ > +/- 100MHz f)	
Typical Noise Figure	2.7dB	
Notch Filter rejection @787MHz	23dB	
Operating Voltage	3 - 5V DC	
Typcal Current (mA)	<20	

Mechanical Data

Dimensions (mm)	Height	75 (3")
	Diameter	180 (7.1")
Operating Temp		-40° / +80°C (-40° / +176°F)
Colour	White	Black
Ingress Protection		IP69K
Impact Protection		IK10

Mounting Data

Mounting type	Panel mount
Max panel thickness (mm)	7 (0.27")
Mounting hole (mm)	19 (3/4")

Cable Data

All Cables	Type	RG174 -FR (UN ECE R118.03 Compliant)
	Diameter (mm)	2.8 (0.1")
	Length (m)	0.3 (1')

Terminations

4G/5G	Full Band	4x SMA (m)
4G/5G	Mid /High Bands	4x SMA(m)
WiFi		2x SMA (f)
GPS/GNSS		1x FME (f)

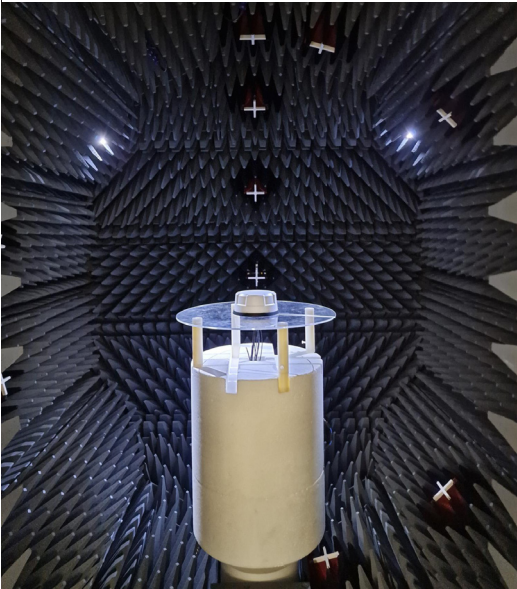
*Typical VSWR measured with 0.3m(1') of FR RG174 cable across 90% of relevant bands in free space

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Electrical Data in Free
Space - Cell A-B-C-D

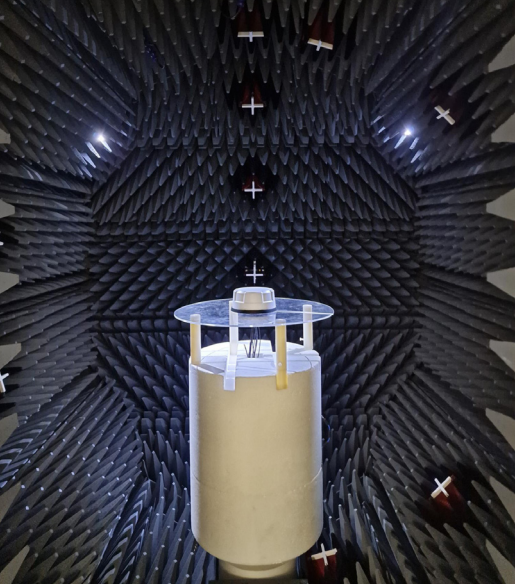
Measurement Conditions	4G/5G - Full Band Antennas				
Measured in free space with 0,3m (1') of FR RG174 Cable	Frequency Range (MHz)	LTE Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
	617-698	71,105	Cell A	1.0	56
			Cell B	1.6	55
			Cell C	1.0	56
			Cell D	1.8	53
	699-798	12,13, 14 17,28	Cell A	1.8	51
			Cell B	1.7	53
			Cell C	1.4	56
			Cell D	1.8	55
	807- 862	5,19,20,26,27	Cell A	2.4	51
			Cell B	2.7	52
			Cell C	2.3	56
			Cell D	2.3	55
	880-960	8	Cell A	3.0	55
			Cell B	2.7	56
			Cell C	2.4	57
			Cell D	2.9	56
	1427-1518	11, 21, 74,75,76	Cell A	2.4	47
			Cell B	2.1	51
			Cell C	2.6	57
			Cell D	2.0	55
	1710-1920	2,3,4,9,25,35, 39,66	Cell A	4.3	74
			Cell B	4.1	71
			Cell C	3.6	73
			Cell D	3.8	73
	1920-2170	1,23	Cell A	4.6	71
			Cell B	4.5	71
			Cell C	3.6	68
			Cell D	4.1	71
	2300-2400	30,40	Cell A	3.1	65
			Cell B	3.1	68
			Cell C	3.5	69
			Cell D	3.9	68
	2496-2690	7,38,41	Cell A	4.3	70
			Cell B	4.8	71
			Cell C	4.4	71
			Cell D	3.8	69
	3300-4200	22,42,43,48,77, 78,79	Cell A	4.9	61
			Cell B	4.9	59
			Cell C	5.0	62
			Cell D	5.5	61
	4400-5000	79	Cell A	4.7	63
			Cell B	4.5	56
			Cell C	5.2	61
			Cell D	4.8	61

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Electrical Data in Free
Space - Cell 1-2-3-4

Measurement Conditions	4G/5G - Mid / High Band Antennas				
Measured in free space with 0,3m (1') of FR RG174 Cable	Frequency Range (MHz)	LTE Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
	1427-1518	11, 21, 74,75,76	Cell 1	2.5	44
			Cell 2	2.4	48
			Cell 3	1.2	46
			Cell 4	1.8	45
	1710-1920	2,3,4,9,25,35,39,66	Cell 1	3.2	57
			Cell 2	3.4	62
			Cell 3	4.1	57
			Cell 4	4.9	60
	1920-2170	1,23	Cell 1	4.6	65
			Cell 2	5.1	62
			Cell 3	5.1	66
			Cell 4	5.7	67
	2300-2400	30,40	Cell 1	3.6	52
			Cell 2	3.5	48
			Cell 3	4.4	54
			Cell 4	5.5	54
	2496-2690	7,38,41	Cell 1	5.0	55
			Cell 2	4.4	55
			Cell 3	4.9	54
			Cell 4	5.7	58
	3300-4200	22,42,43,48,77,78,79	Cell 1	5.8	59
			Cell 2	5.2	54
			Cell 3	5.4	57
			Cell 4	5.1	54
	4400-5000	79	Cell 1	6.9	58
			Cell 2	5.6	57
			Cell 3	6.8	61
			Cell 4	6.4	58
	5925-7125	96, 102,104	Cell 1	7.3	54
			Cell 2	7.3	48
			Cell 3	7.9	56
			Cell 4	7.1	52

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Electrical Data in Free
Space - WiFi 1 - WiFi 2

Measurement Conditions	WiFi Bands 1-2				
Measured in free space with 0.3m (1') of FR-RG174 cable.	Frequency Range (MHz)	WiFi Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
	2396-2485	2.4GHz	WiFi 1	6.0	56
			WiFi 2	6.1	58
	5150-5250	UNII-1	WiFi 1	5.4	51
			WiFi 2	4.8	49
	5250-5350	UNII-2A	WiFi 1	5.5	54
			WiFi 2	4.6	52
	5350-5470	UNII-2B	WiFi 1	5.5	53
			WiFi 2	4.3	53
	5470-5725	UNII-2C	WiFi 1	5.0	57
			WiFi 2	6.5	57
	5725-5850	UNII-3	WiFi 1	5.7	60
			WiFi 2	5.6	54
	5850-5925	UNII-4	WiFi 1	5.0	55
			WiFi 2	5.8	55
	5925-6425	UNII-5	WiFi 1	7.1	54
			WiFi 2	6.7	47
	6425-6525	UNII-6	WiFi 1	5.2	48
			WiFi 2	4.7	41
	6525-6875	UNII-7	WiFi 1	5.9	40
			WiFi 2	4.8	43
	6875-7125	UNII-8	WiFi 1	4.1	31
			WiFi 2	4.3	40

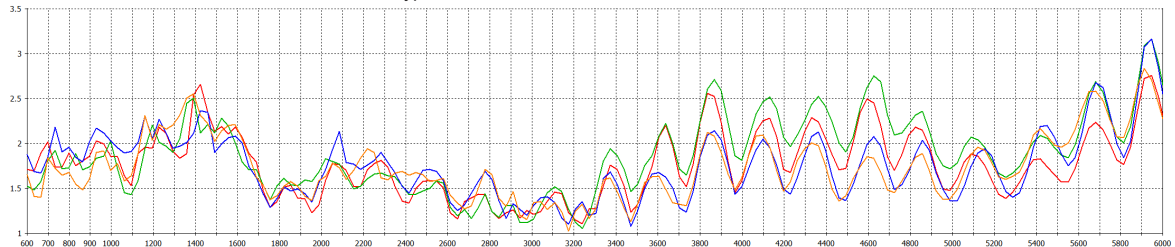
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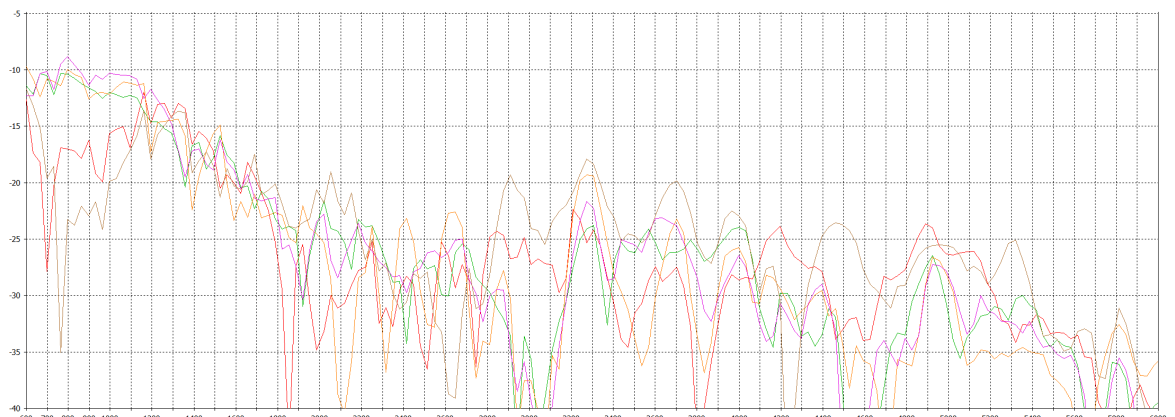
Electrical Data in Free
Space - Cell A-B-C-D

Typical VSWR- 4G/5G Full Band Elements*



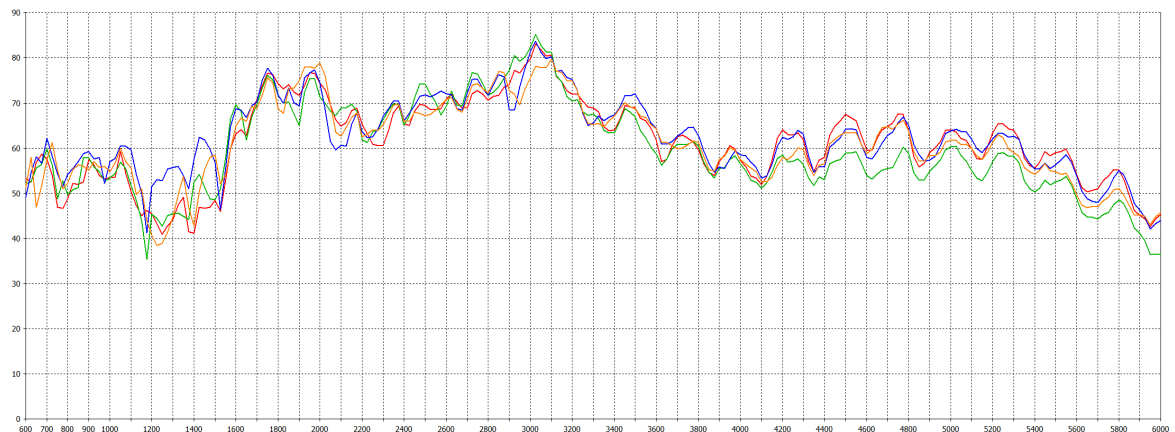
* VSWR measured in free space with 0.3m (1') of FR RG174 cable.

Typical Isolation - 4G/5G Full Band Elements*



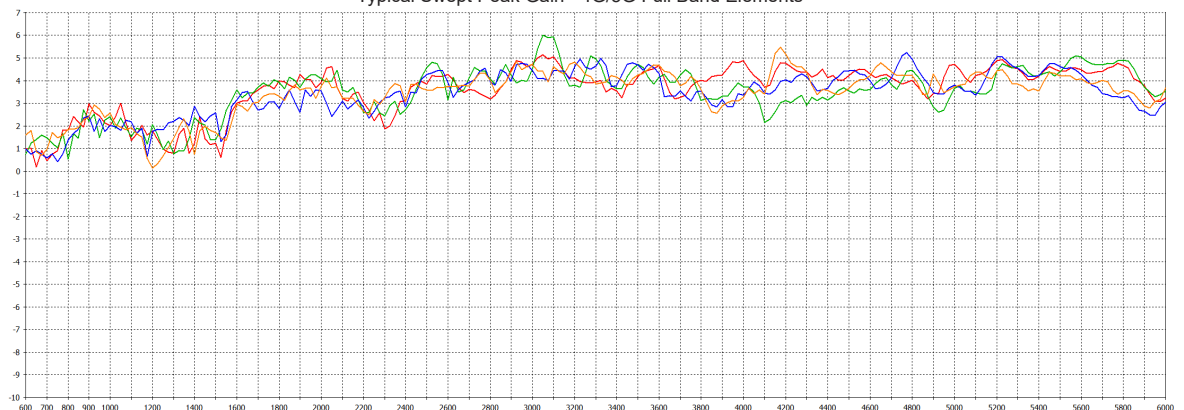
* Isolation measured in free space with 0.3m (1') of FR RG174 cable.

Typical Efficiency - 4G/5G Full Band Elements*



* Efficiency measured in free space with 0.3m (1') of FR RG174 cable.

Typical Swept Peak Gain - 4G/5G Full Band Elements*



*Swept peak gain measured in free space with 0.3m (1') of FR RG174 cable.

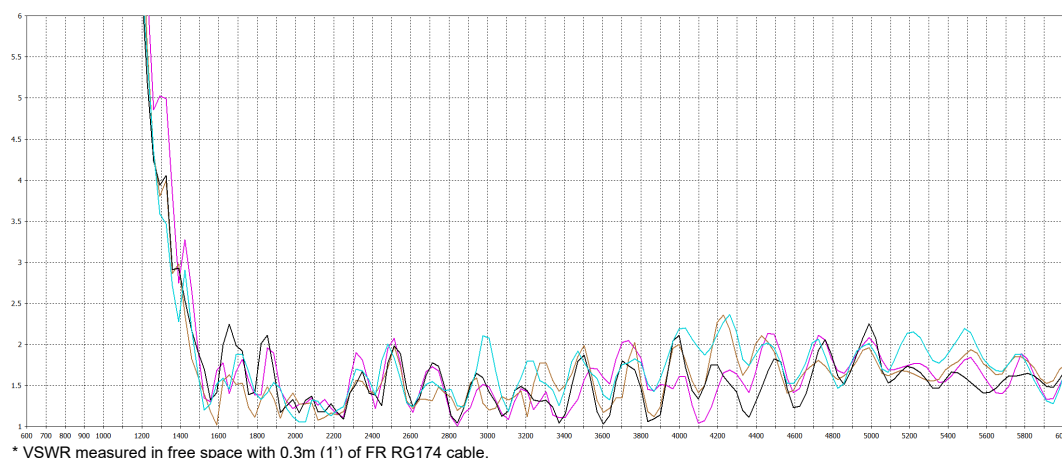
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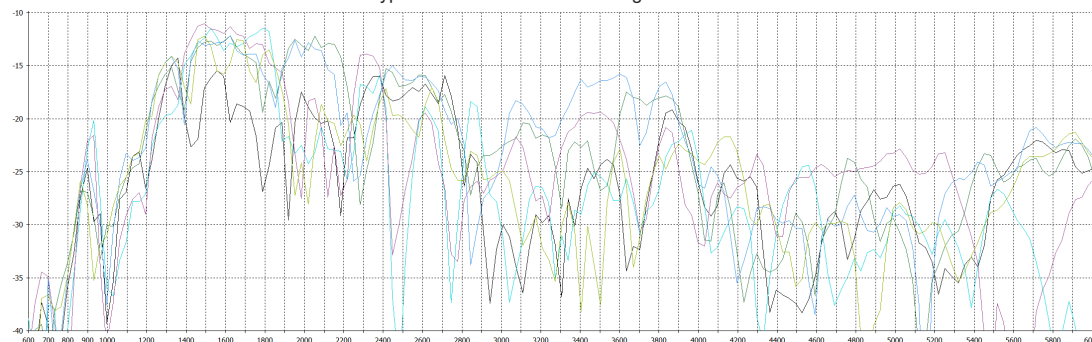
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Electrical Data in Free
Space - Cell 1-2-3-4

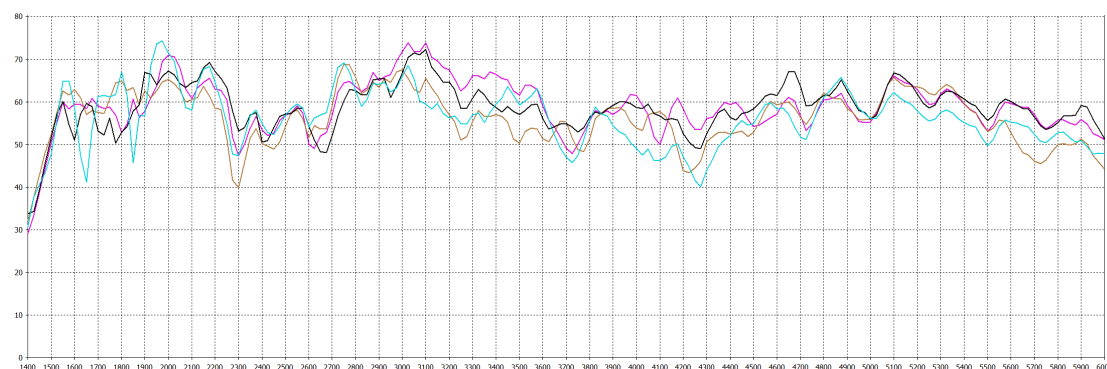
Typical VSWR- 4G/5G Mid/High Band Elements*



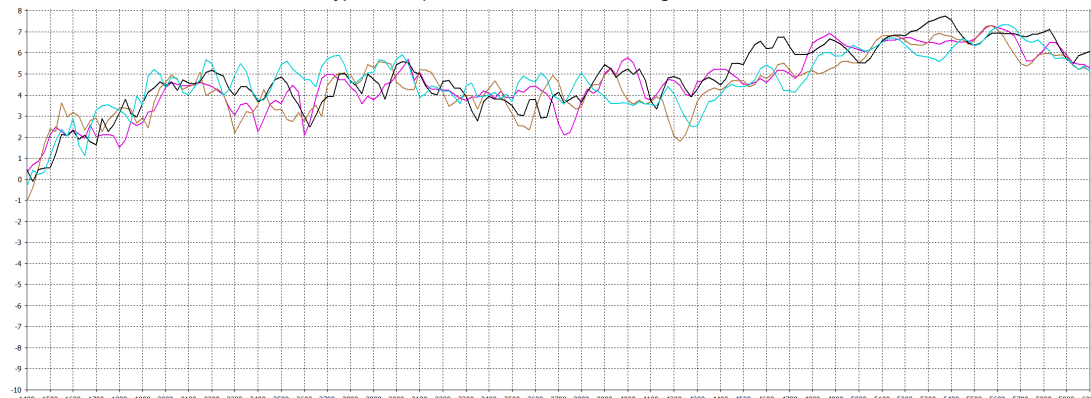
Typical Isolation - 4G/5G Mid/High Band Elements*



Typical Efficiency - 4G/5G Mid/High Band Elements*



Typical Swept Peak Gain - 4G/5G Mid/High Band Elements*



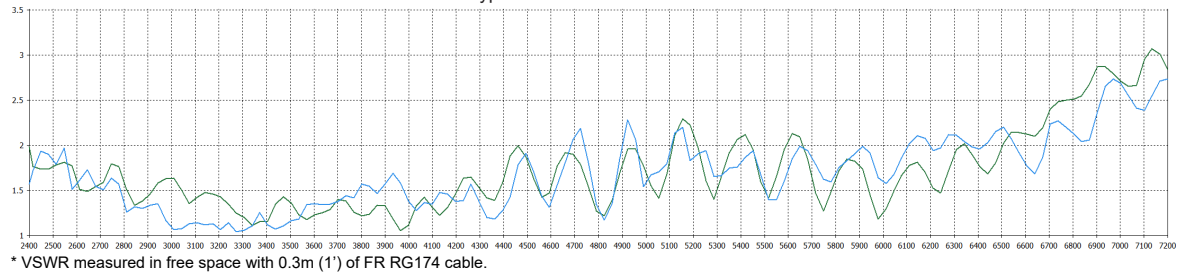
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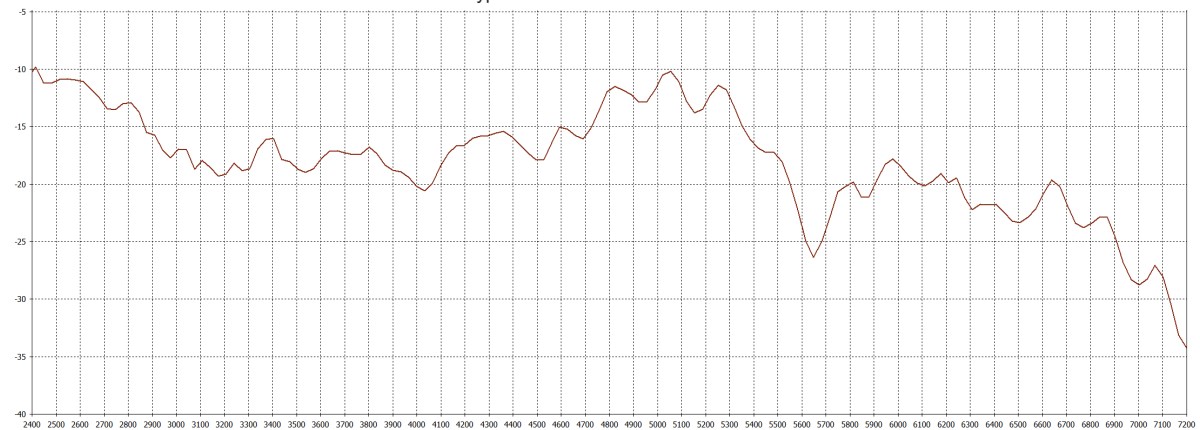
Electrical Data in Free
Space. - WiFi 1- WiFi 2

Typical VSWR- WiFi Elements*



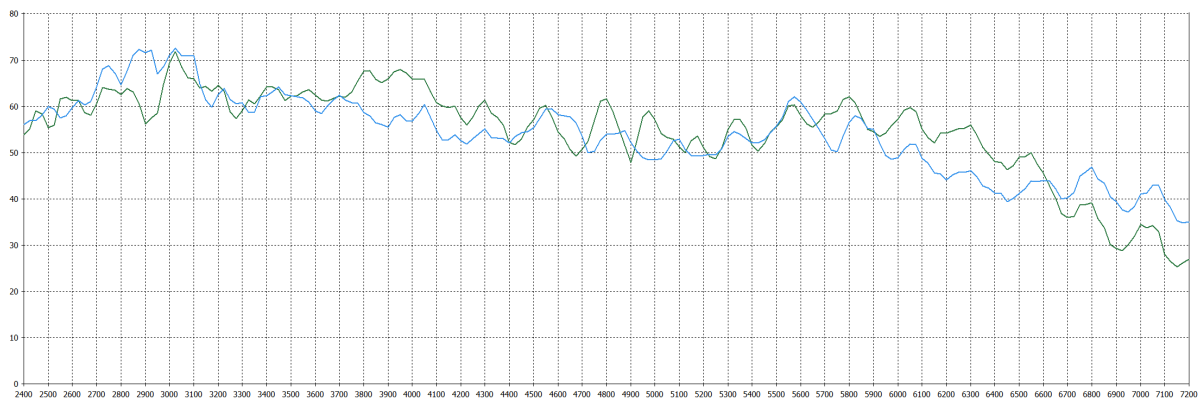
* VSWR measured in free space with 0.3m (1') of FR RG174 cable.

Typical Isolation - WiFi Elements*



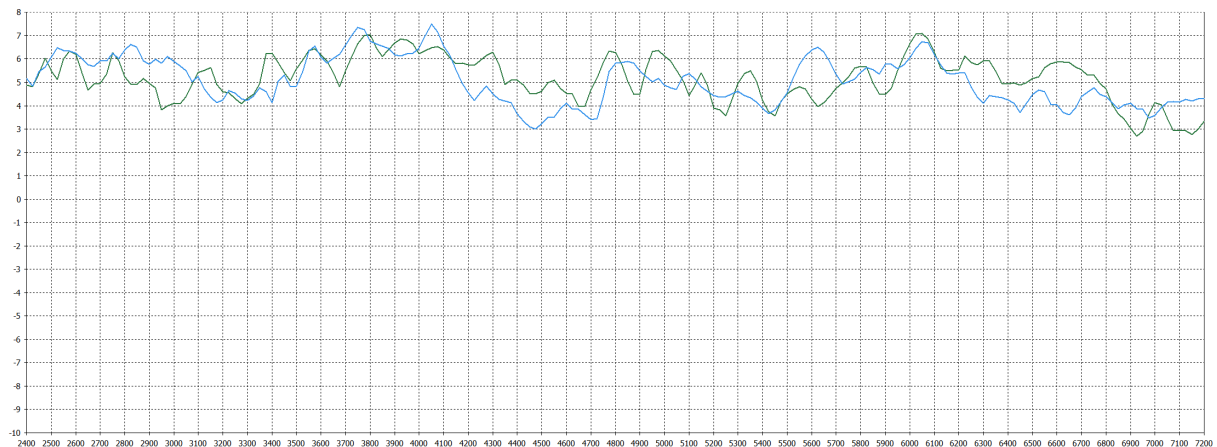
*Isolation measured in free space with 0.3m (1') of FR RG174 cable.

Typical Efficiency - WiFi Elements*



* Efficiency measured in free space with 0.3m (1') of FR RG174 cable.

Typical Swept Peak Gain - WiFi Elements*



*Swept peak gain measured in free space with 0.3m (1') of FR RG174 cable.

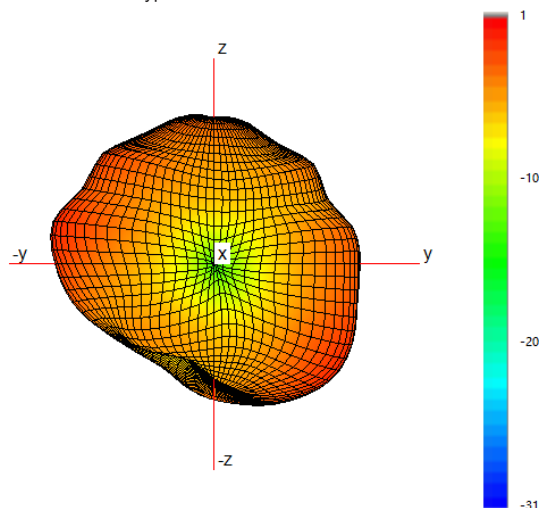
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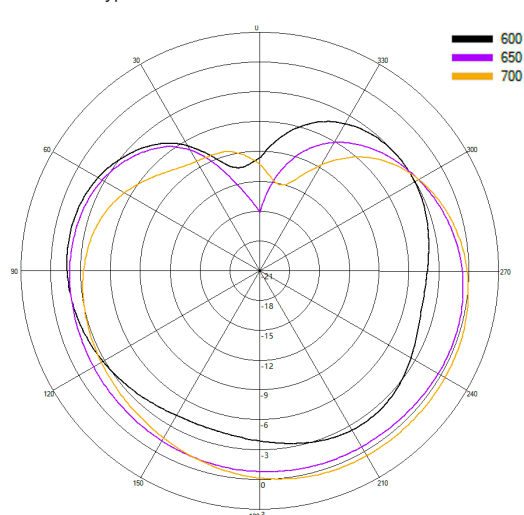
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3D Patterns Cell A in
Free Space

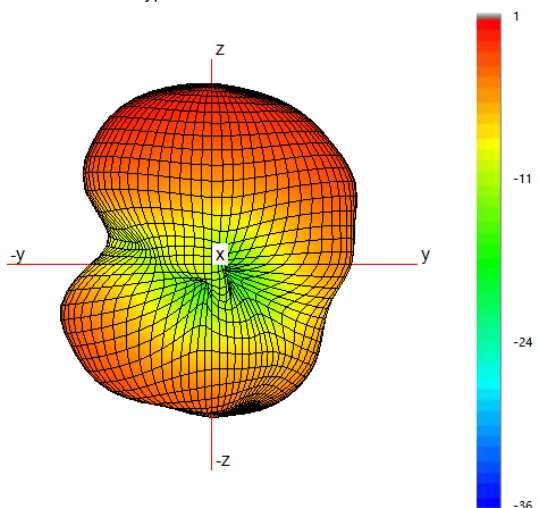
Typical 3D Pattern- Cell A - 650 MHz



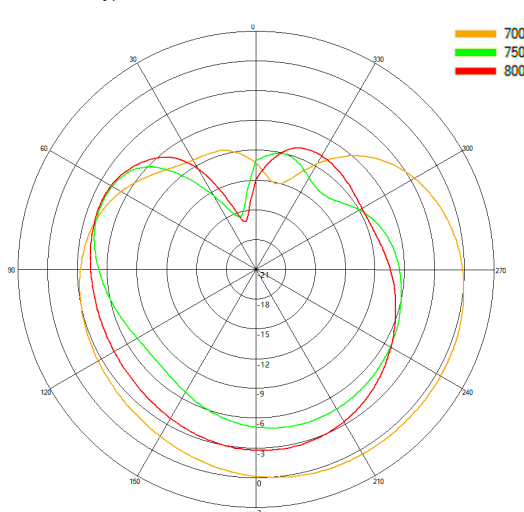
Typical H Plane- Cell A - Patterns- 600-700MHz



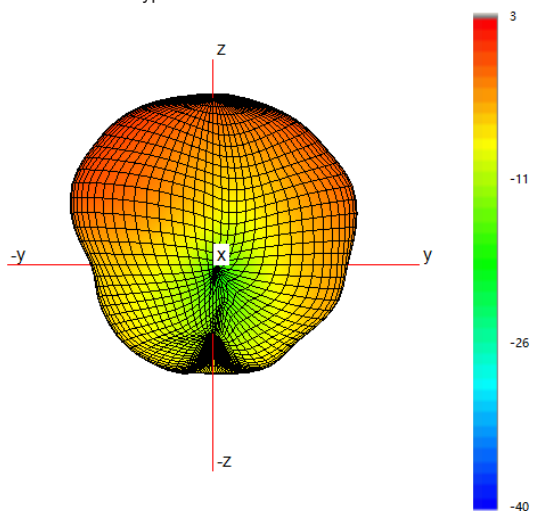
Typical 3D Pattern- Cell A - 750 MHz



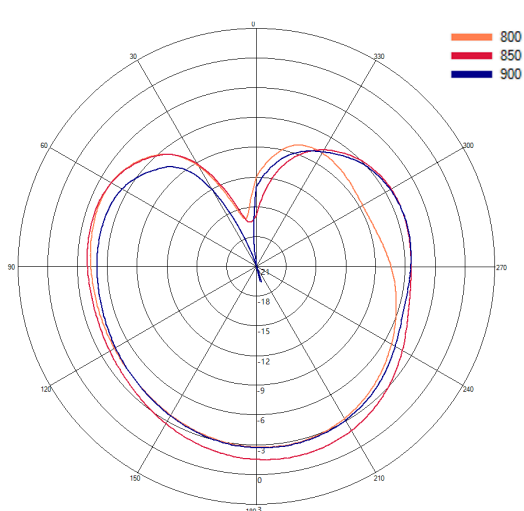
Typical H Plane- Cell A - Patterns- 700-800MHz



Typical 3D Pattern- Cell A - 850 MHz



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



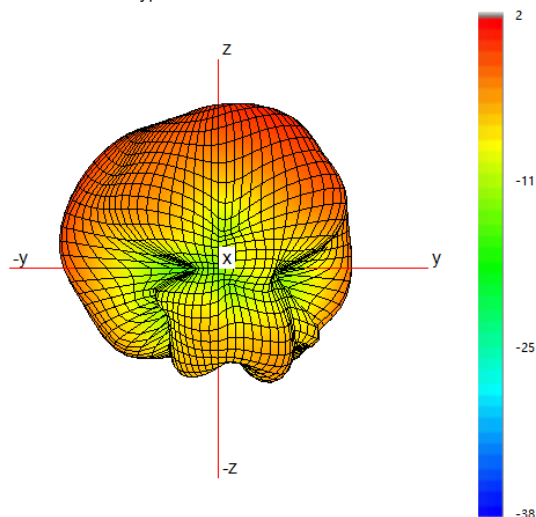
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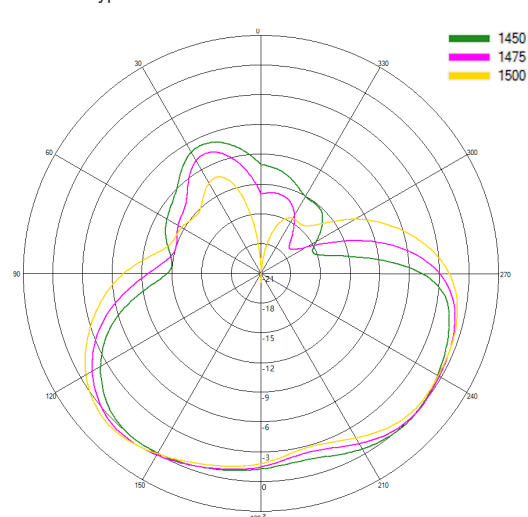
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3D Patterns Cell A in
Free Space

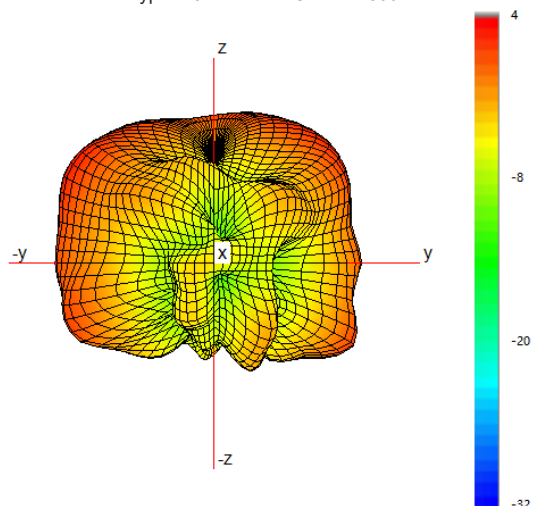
Typical 3D Pattern- Cell A - 1475 MHz



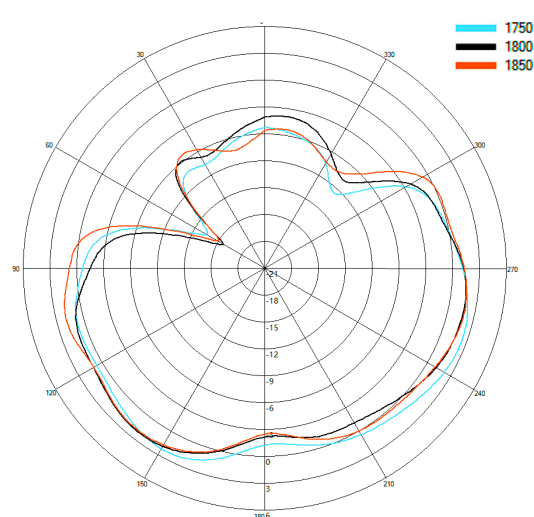
Typical H Plane- Cell A- Patterns- 1450-1500 MHz



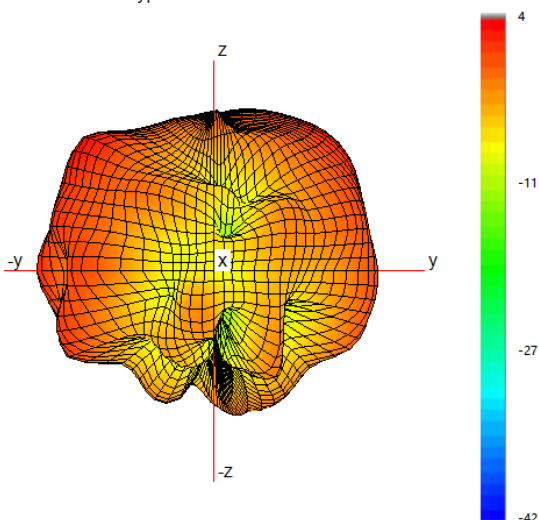
Typical 3D Pattern- Cell A - 1800 MHz



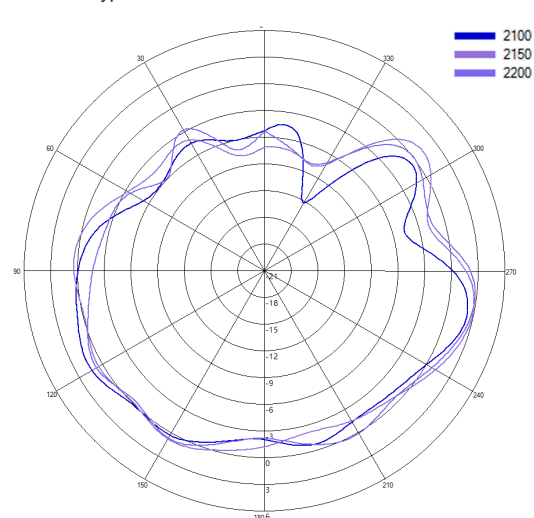
Typical H Plane- Cell A- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell A - 2150 MHz



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



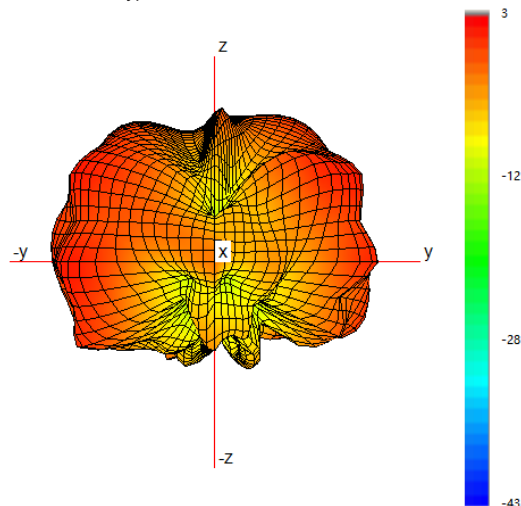
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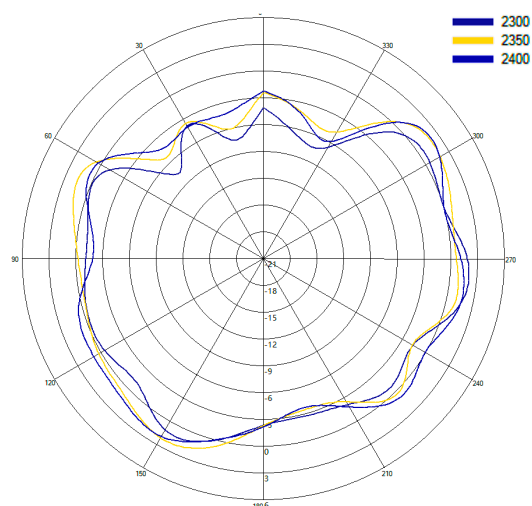
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3D Patterns Cell A in Free Space

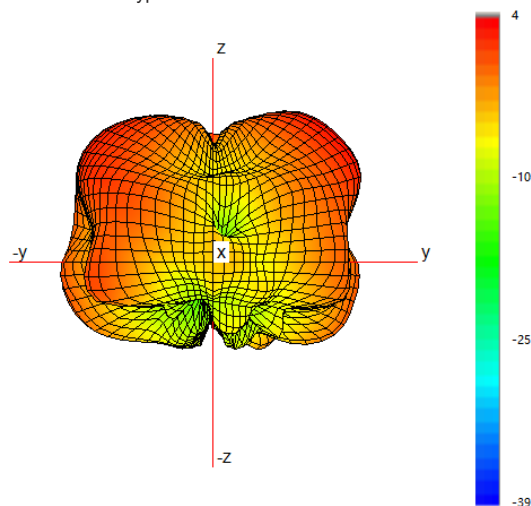
Typical 3D Pattern- Cell A - 2350 MHz



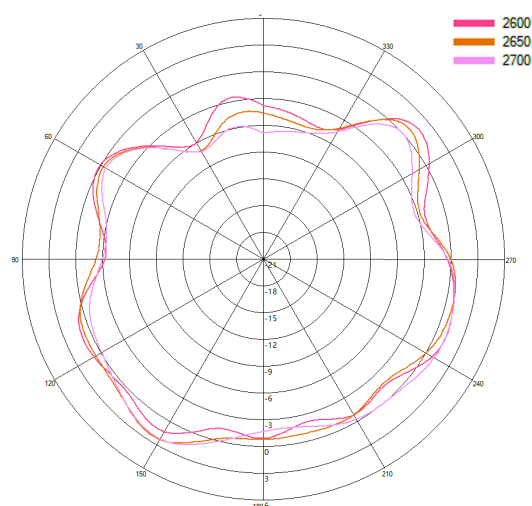
Typical H Plane- Cell A - Patterns- 2300-2400 MHz



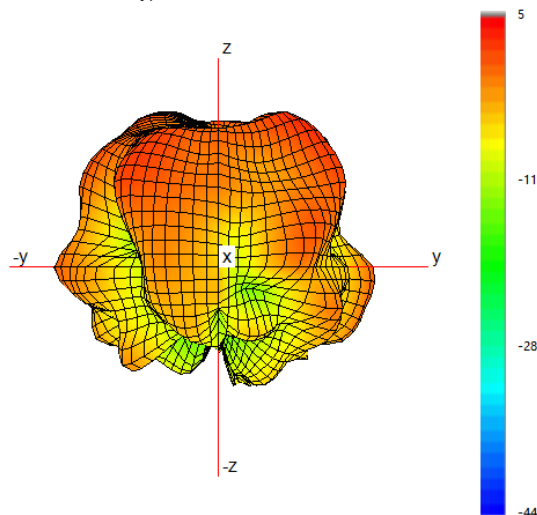
Typical 3D Pattern- Cell A - 2650 MHz



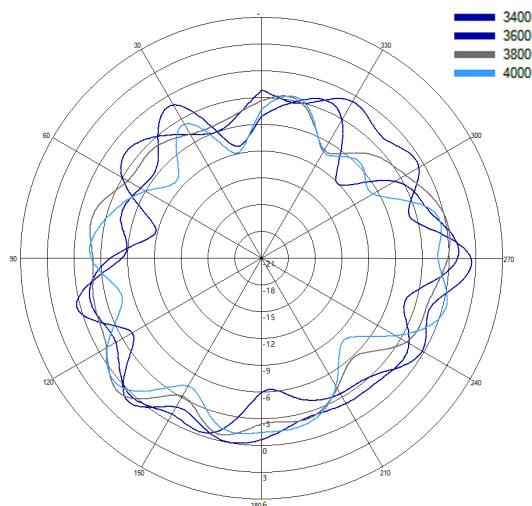
Typical H Plane- Cell A - Patterns- 2600-2700 MHz



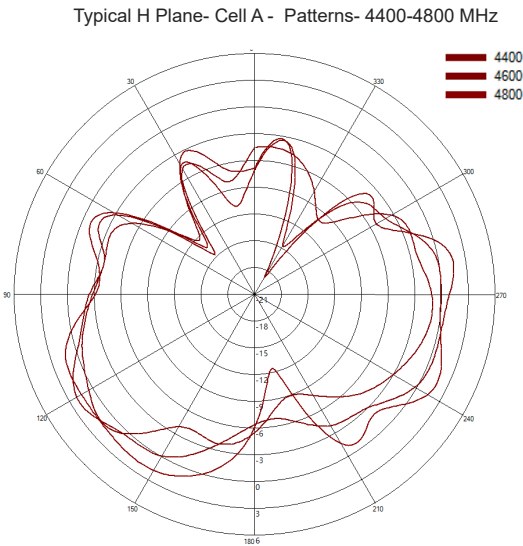
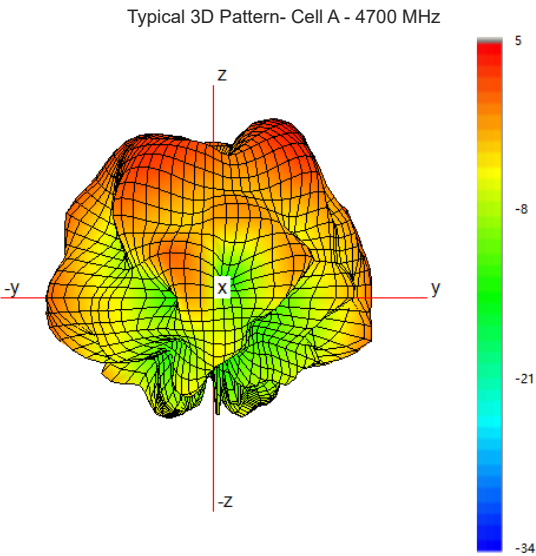
Typical 3D Pattern- Cell A - 3600 MHz



Typical H Plane- Cell A - Patterns- 3400-4000 MHz



3D Patterns Cell
A in Free Space



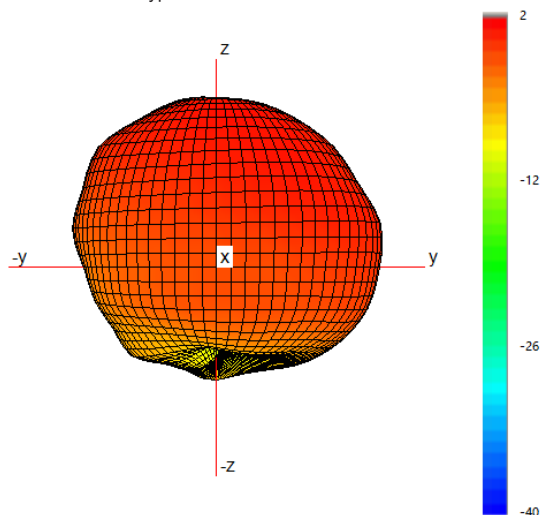
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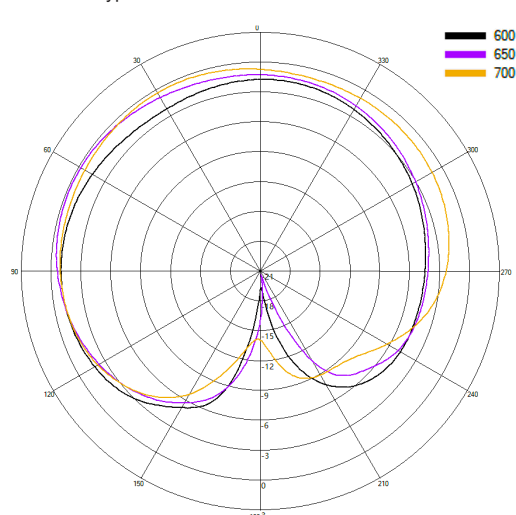
PANORAMA ANTENNAS

3D Patterns Cell B in Free Space

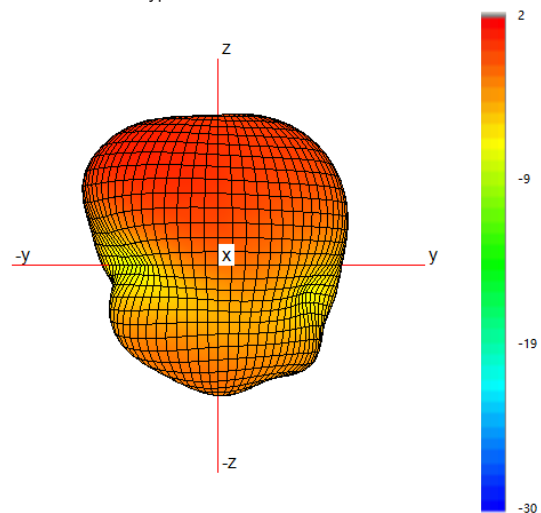
Typical 3D Pattern- Cell B - 650 MHz



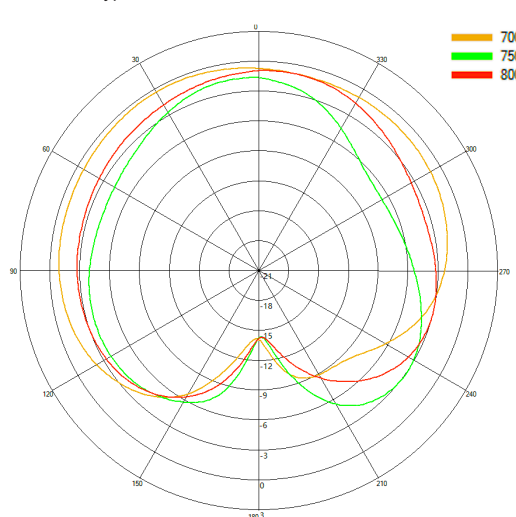
Typical H Plane- Cell B - Patterns- 600-700MHz



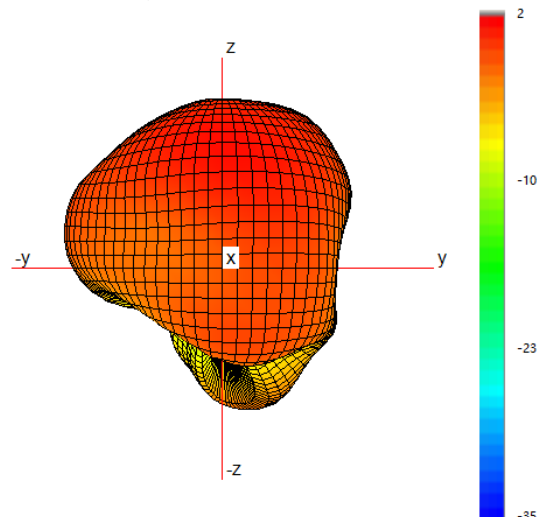
Typical 3D Pattern- Cell B - 750 MHz



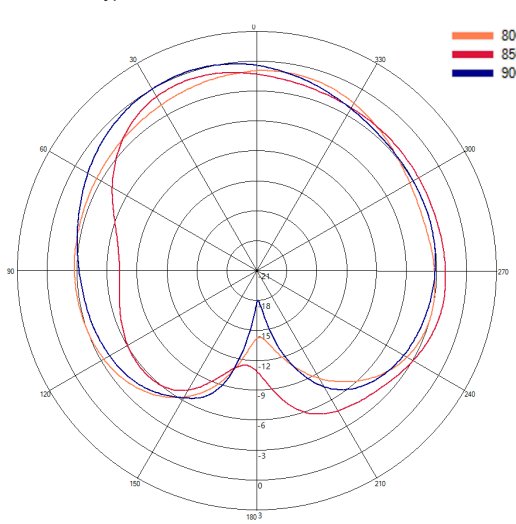
Typical H Plane- Cell B - Patterns- 700-800MHz



Typical 3D Pattern- Cell B - 850 MHz



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



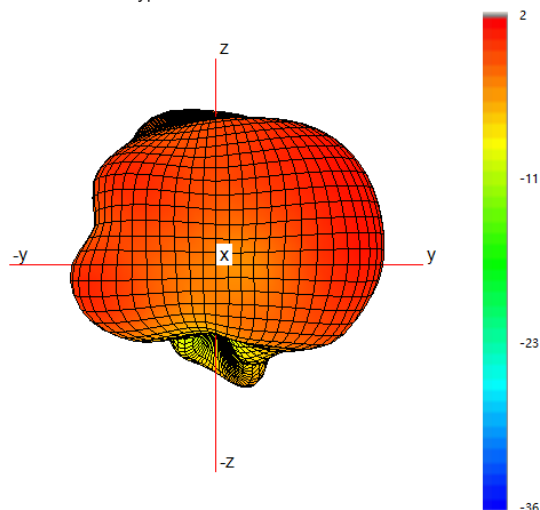
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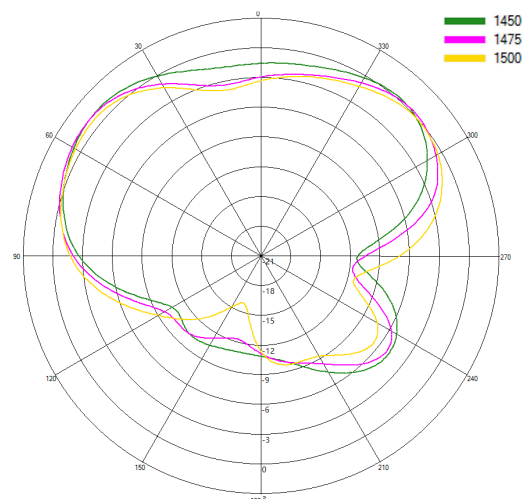
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3D Patterns Cell B in
Free Space

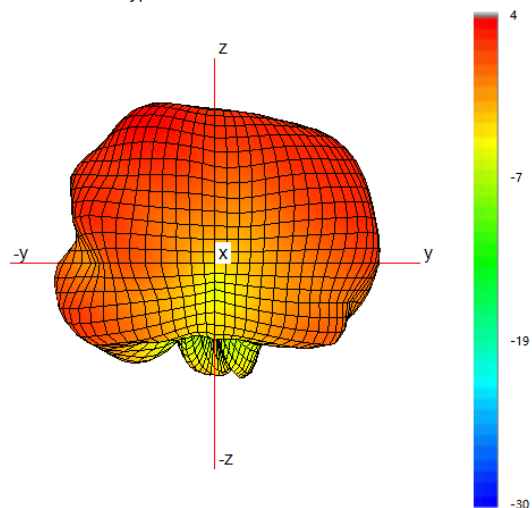
Typical 3D Pattern- Cell B - 1475 MHz



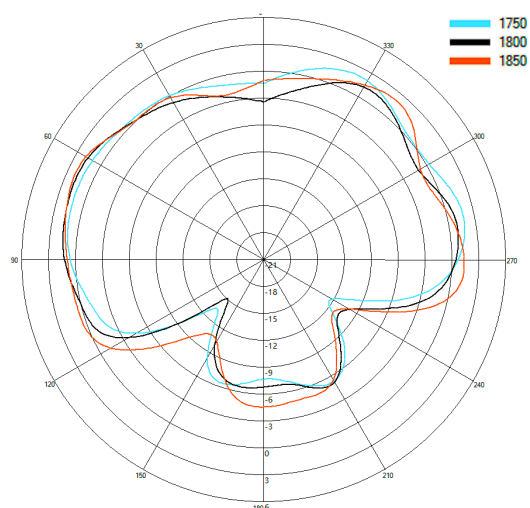
Typical H Plane- Cell B- Patterns- 1450-1500 MHz



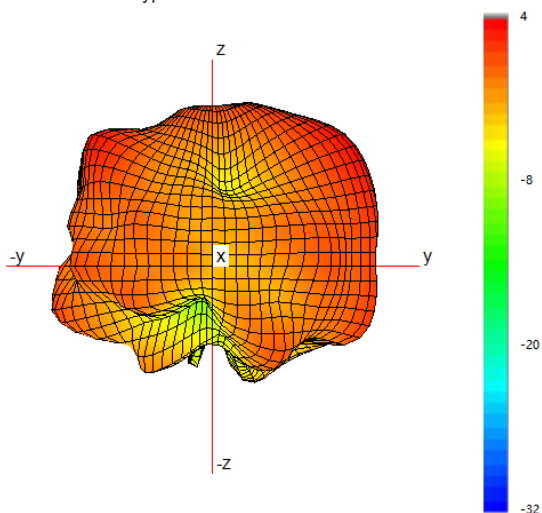
Typical 3D Pattern- Cell B - 1800 MHz



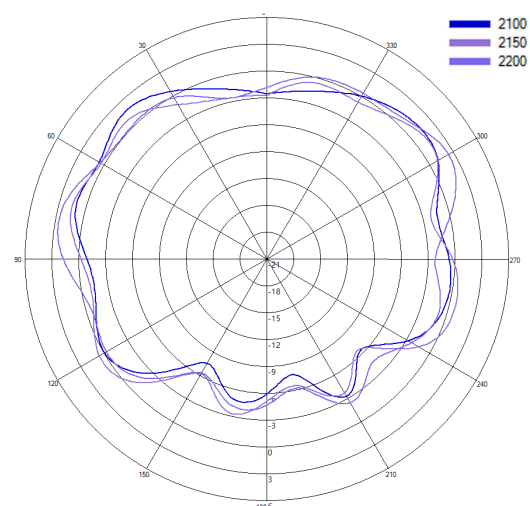
Typical H Plane- Cell B- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell B - 2150 MHz



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



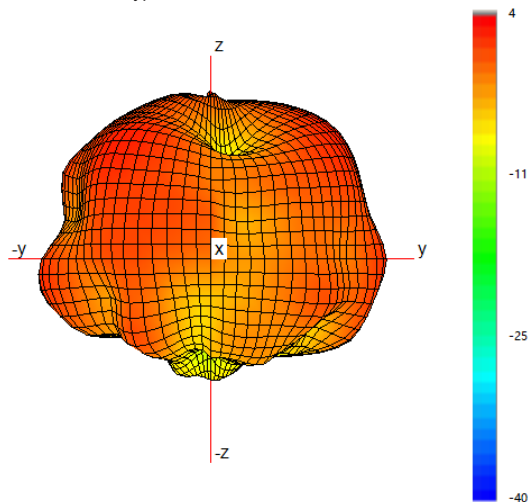
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

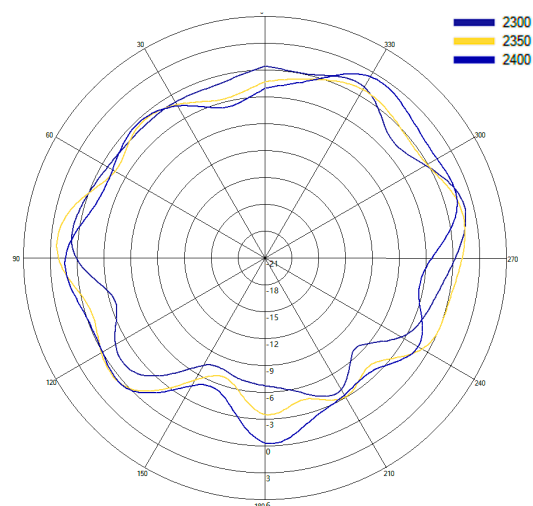
PANORAMA ANTENNAS

3D Patterns Cell B in Free Space

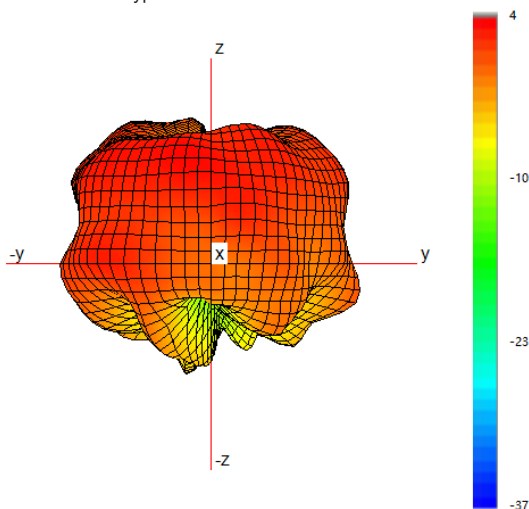
Typical 3D Pattern- Cell B - 2350 MHz



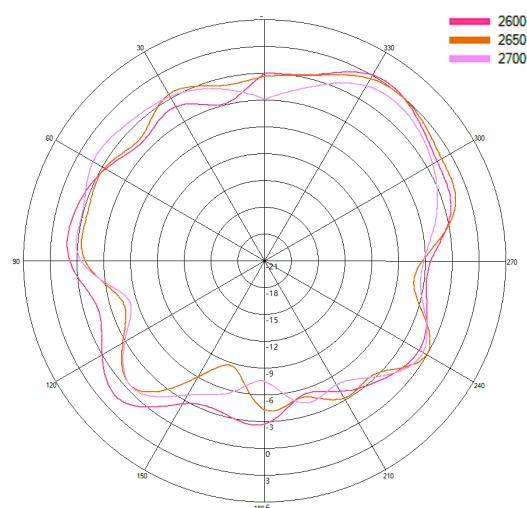
Typical H Plane- Cell B - Patterns- 2300-2400 MHz



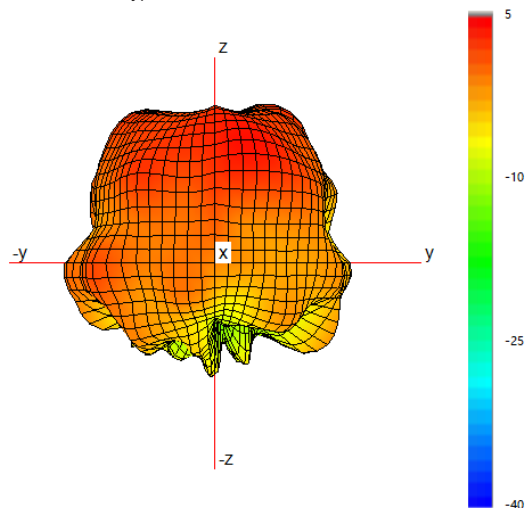
Typical 3D Pattern- Cell B - 2650 MHz



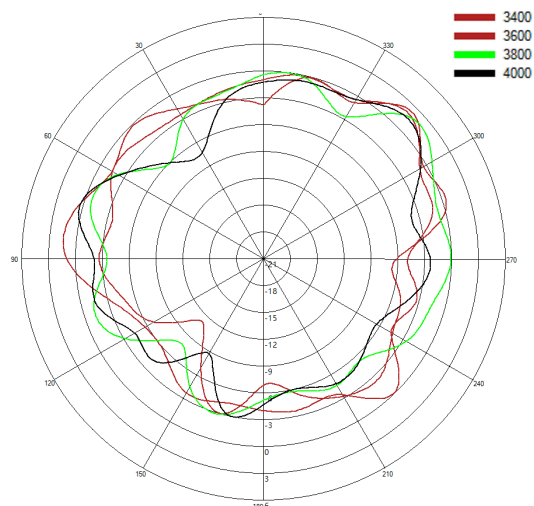
Typical H Plane- Cell B - Patterns- 2600-2700 MHz



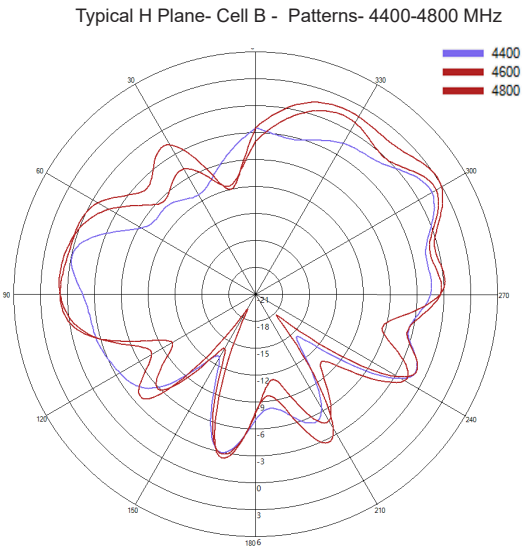
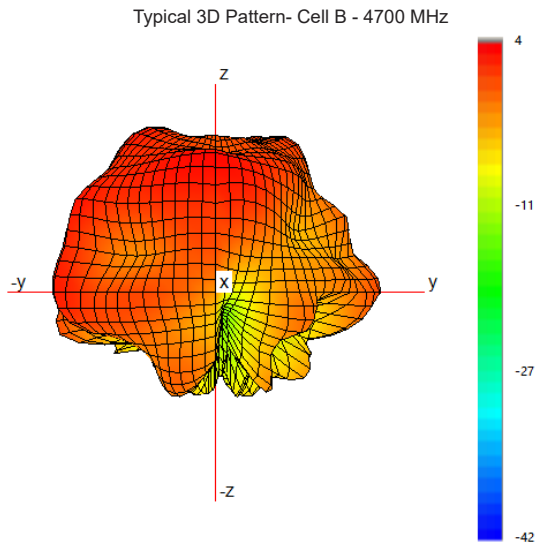
Typical 3D Pattern- Cell B - 3600 MHz



Typical H Plane- Cell B - Patterns- 3400-4000 MHz



3D Patterns Cell B
in Free Space



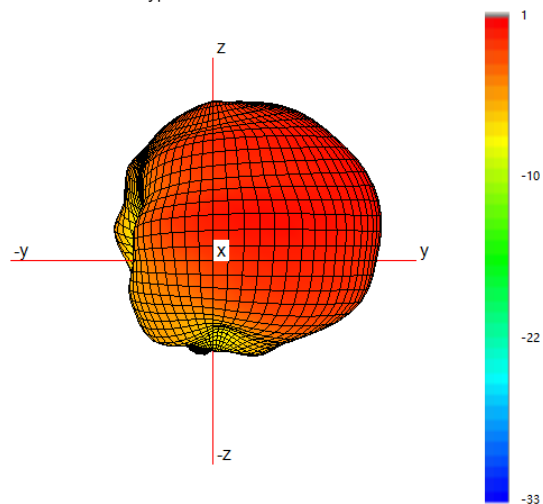
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

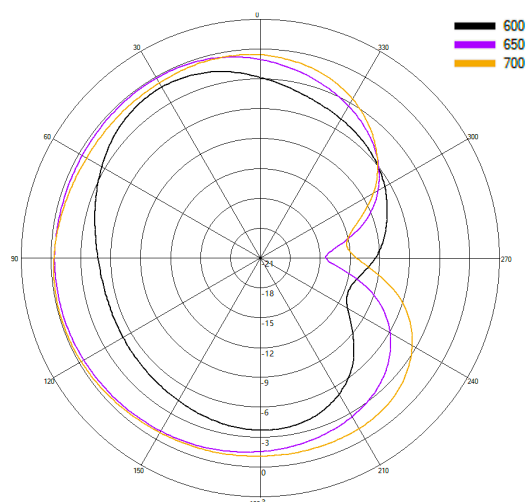
PANORAMA ANTENNAS

3D Patterns Cell C in Free Space

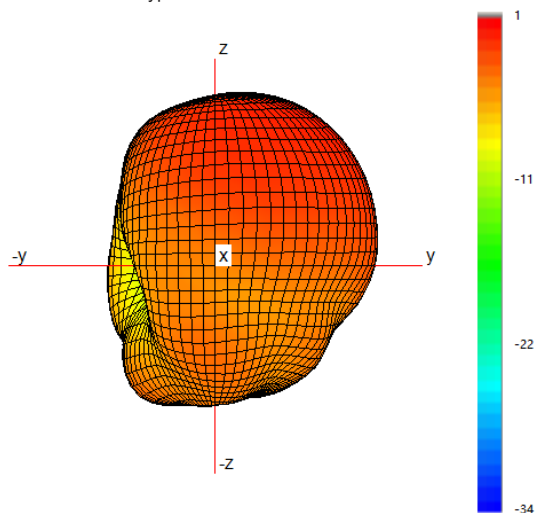
Typical 3D Pattern- Cell C - 650 MHz



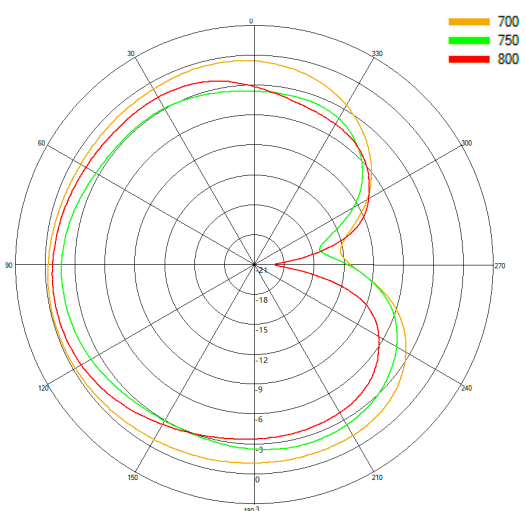
Typical H Plane- Cell C - Patterns- 600-700MHz



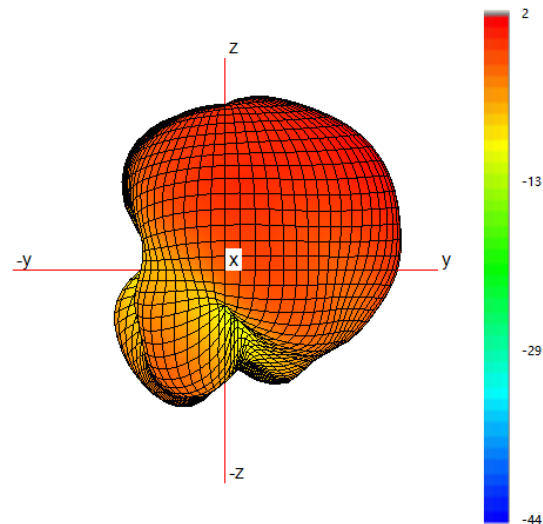
Typical 3D Pattern- Cell C - 750 MHz



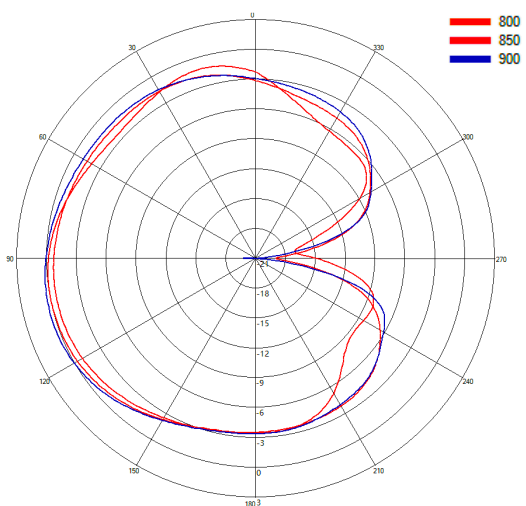
Typical H Plane- Cell C - Patterns- 700-800MHz



Typical 3D Pattern- Cell C - 850 MHz



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



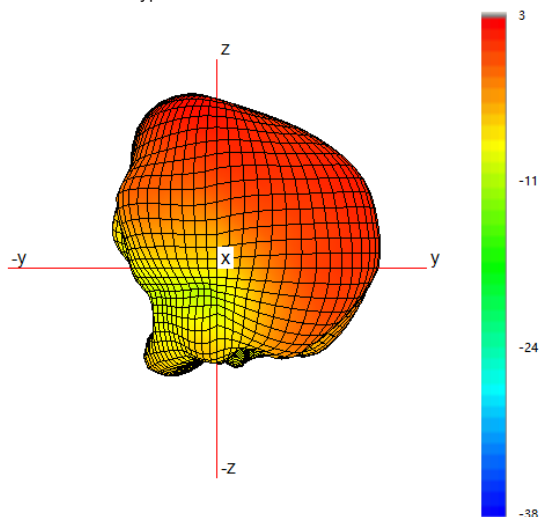
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

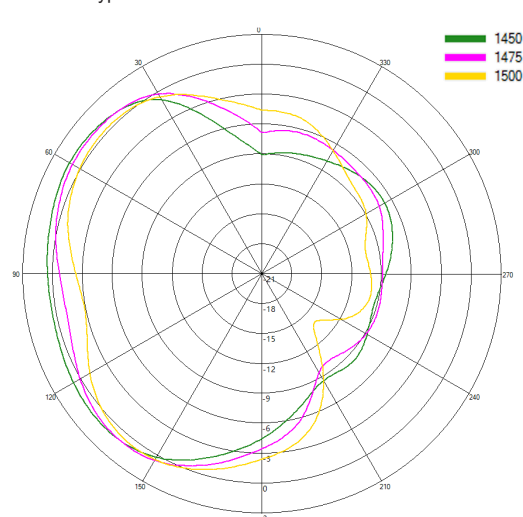
PANORAMA ANTENNAS

3D Patterns Cell C in
Free Space

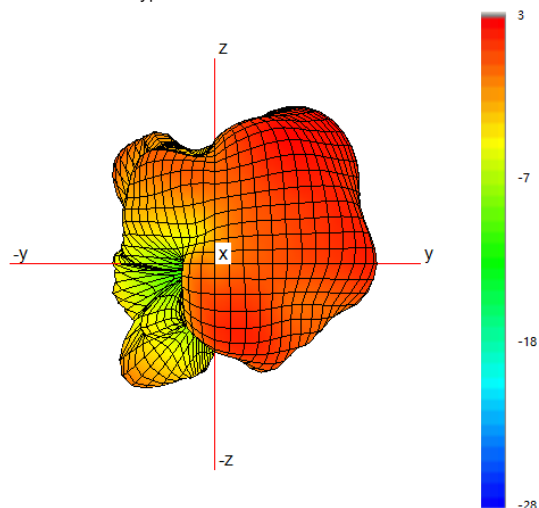
Typical 3D Pattern- Cell C - 1475 MHz



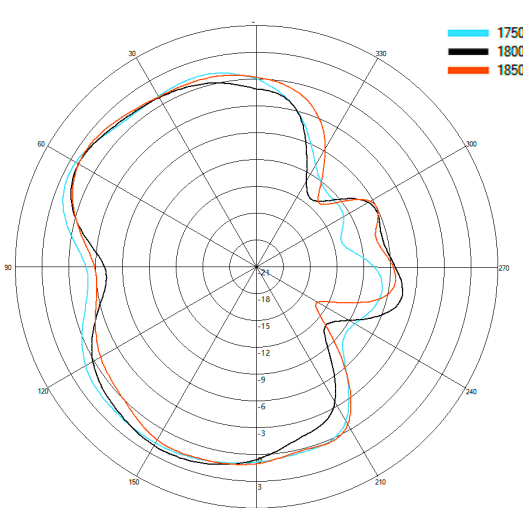
Typical H Plane- Cell C- Patterns- 1450-1500 MHz



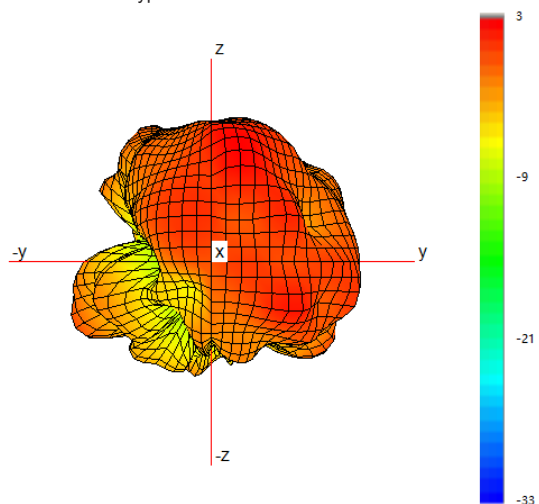
Typical 3D Pattern- Cell C - 1800 MHz



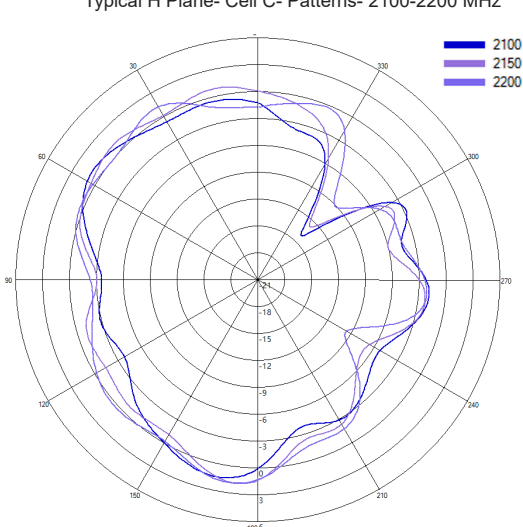
Typical H Plane- Cell C- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell C - 2150 MHz



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



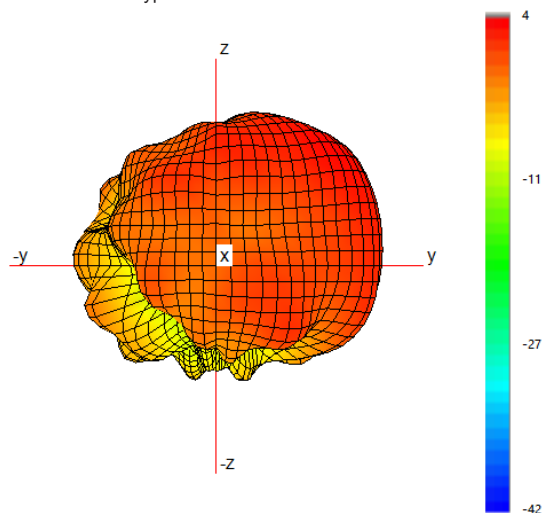
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

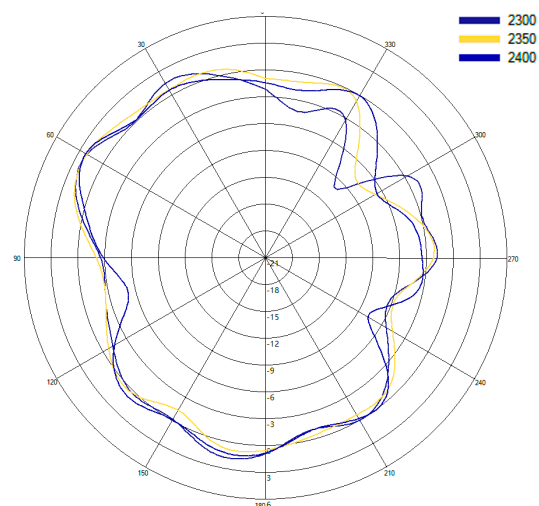
PANORAMA ANTENNAS

3D Patterns Cell C in Free Space

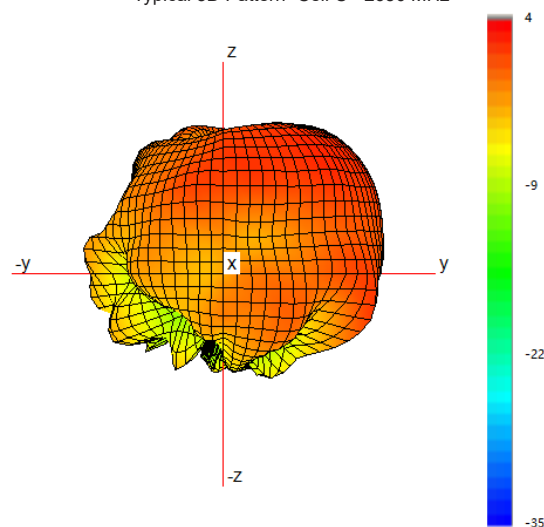
Typical 3D Pattern- Cell C - 2350 MHz



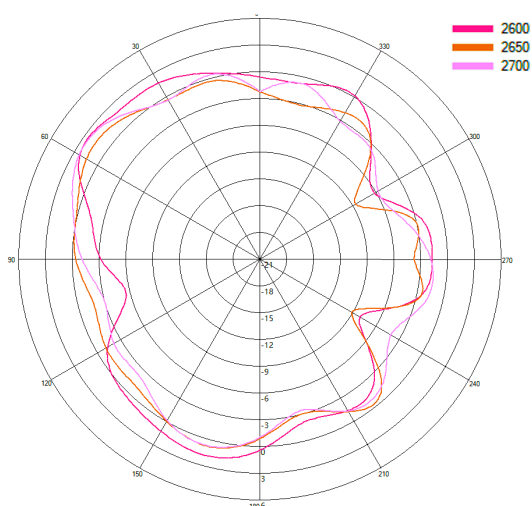
Typical H Plane- Cell C - Patterns- 2300-2400 MHz



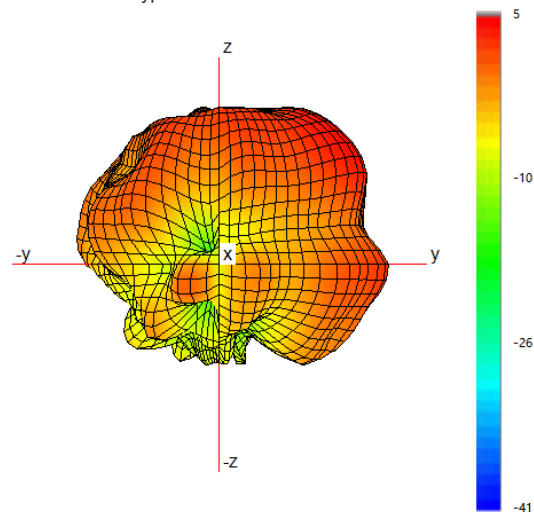
Typical 3D Pattern- Cell C - 2650 MHz



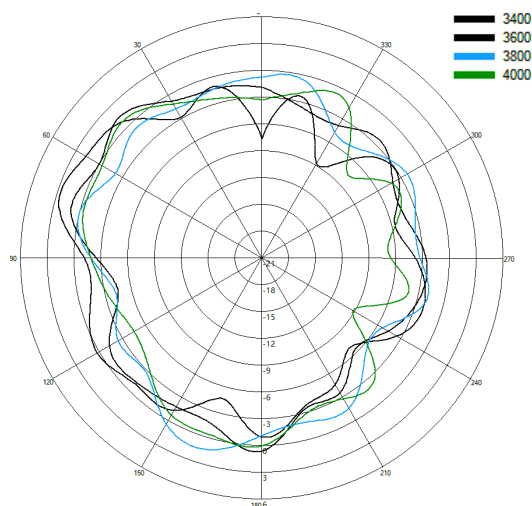
Typical H Plane- Cell C - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell C - 3600 MHz

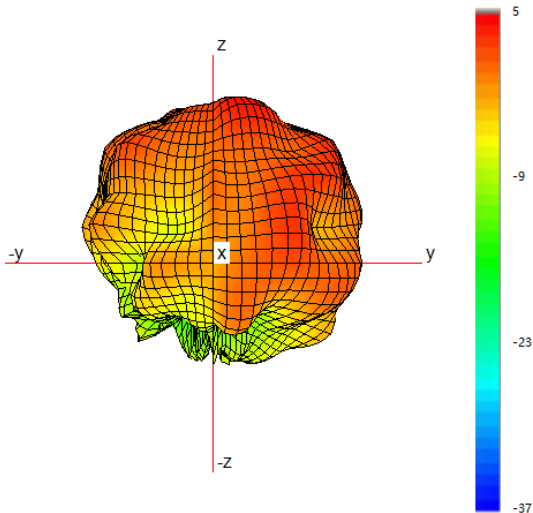


Typical H Plane- Cell C - Patterns- 3400-4000 MHz

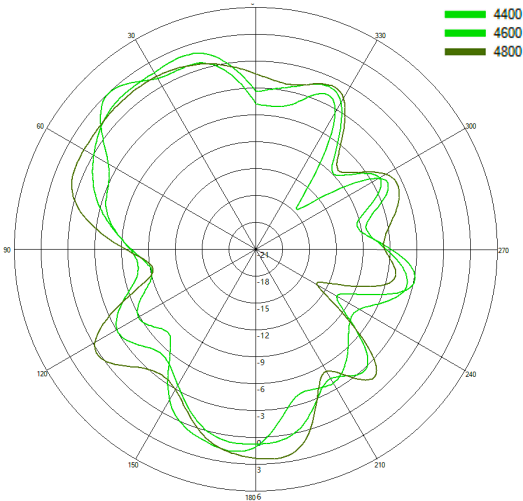


3D Patterns Cell C
in Free Space

Typical 3D Pattern- Cell C - 4700 MHz



Typical H Plane- Cell C - Patterns- 4400-4800 MHz



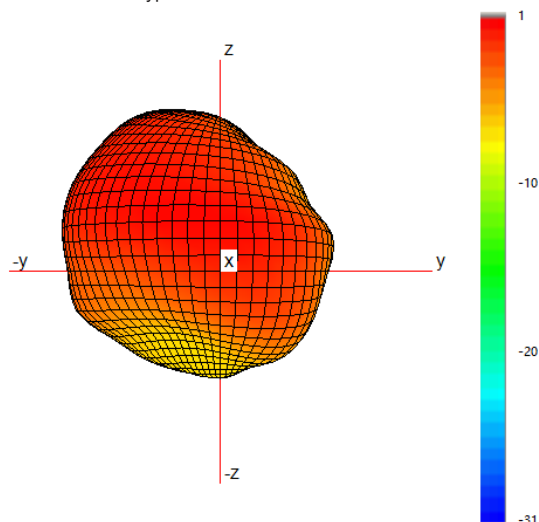
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

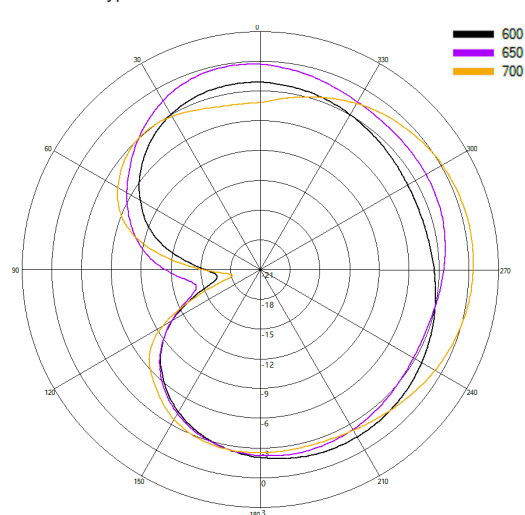
PANORAMA ANTENNAS

3D Patterns Cell D in Free Space

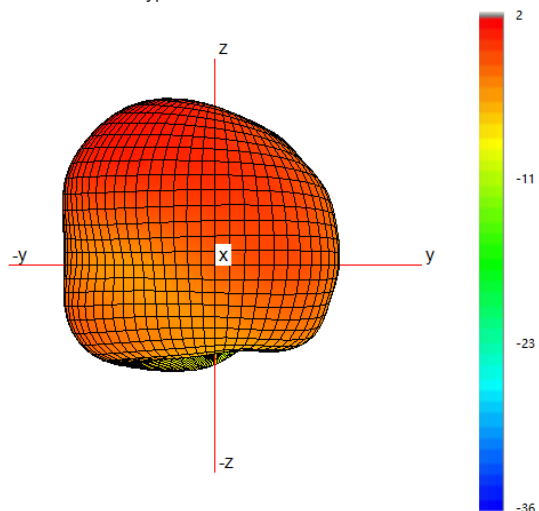
Typical 3D Pattern- Cell D - 650 MHz



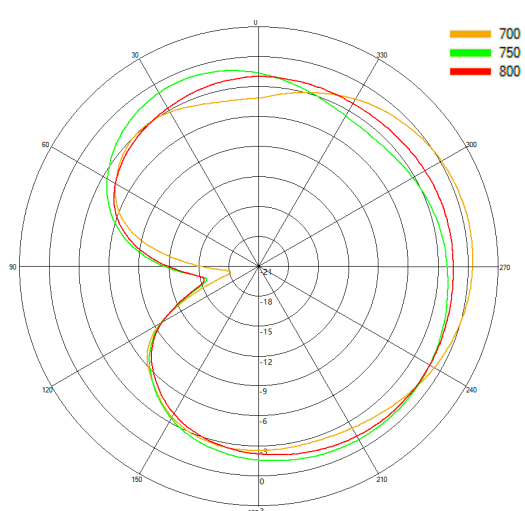
Typical H Plane- Cell D - Patterns- 600-700MHz



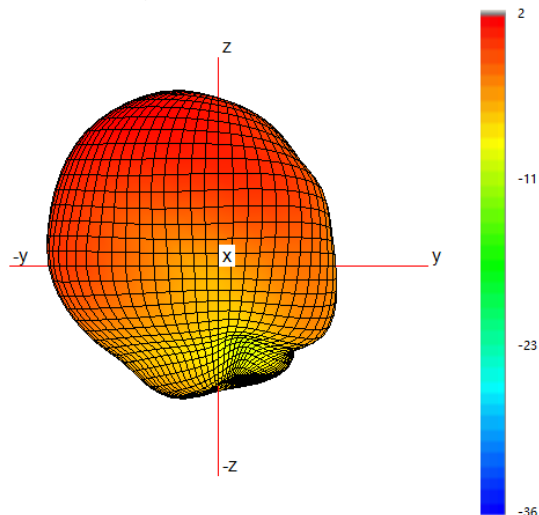
Typical 3D Pattern- Cell D - 750 MHz



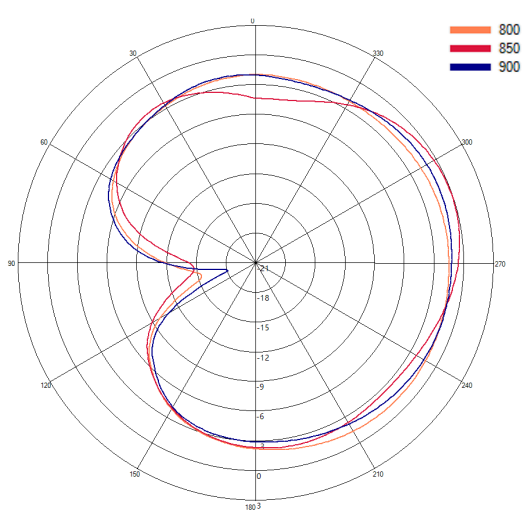
Typical H Plane- Cell D - Patterns- 700-800MHz



Typical 3D Pattern- Cell D - 850 MHz



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



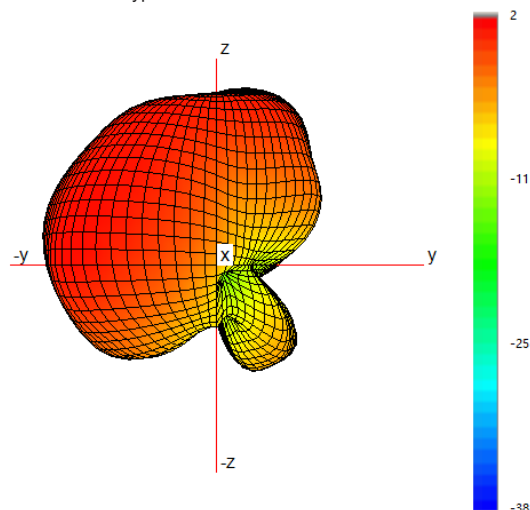
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

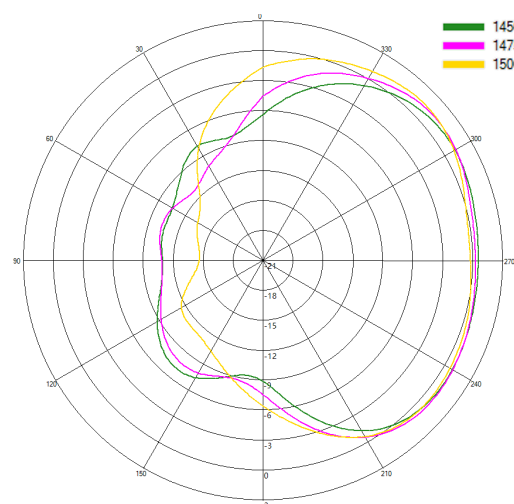
PANORAMA ANTENNAS

3D Patterns Cell D in
Free Space

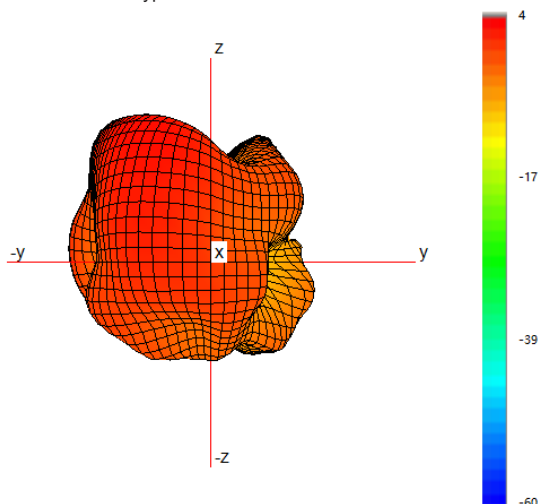
Typical 3D Pattern- Cell D - 1475 MHz



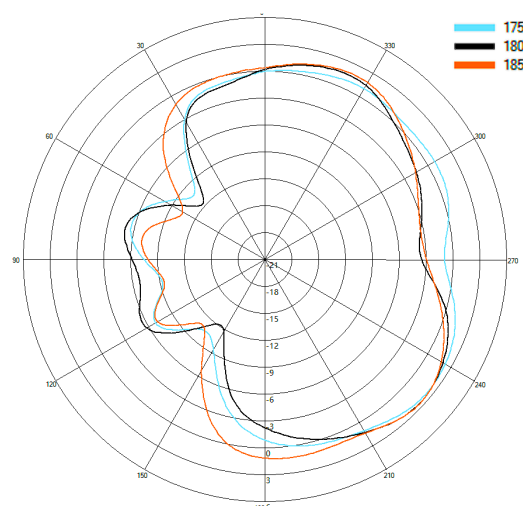
Typical H Plane- Cell D- Patterns- 1450-1500 MHz



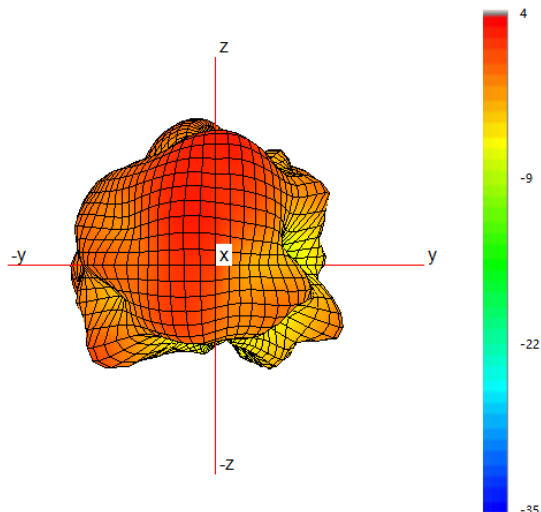
Typical 3D Pattern- Cell D - 1800 MHz



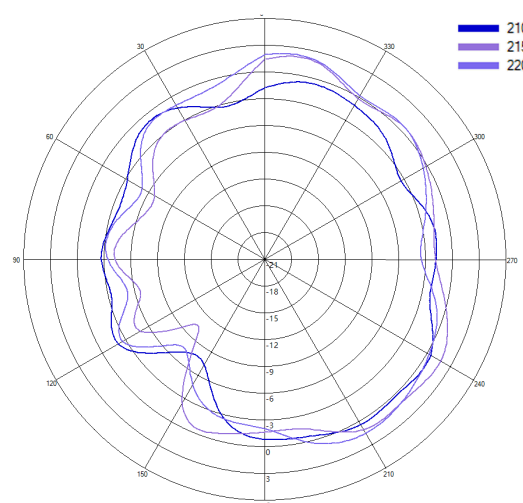
Typical H Plane- Cell D- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell D - 2150 MHz



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



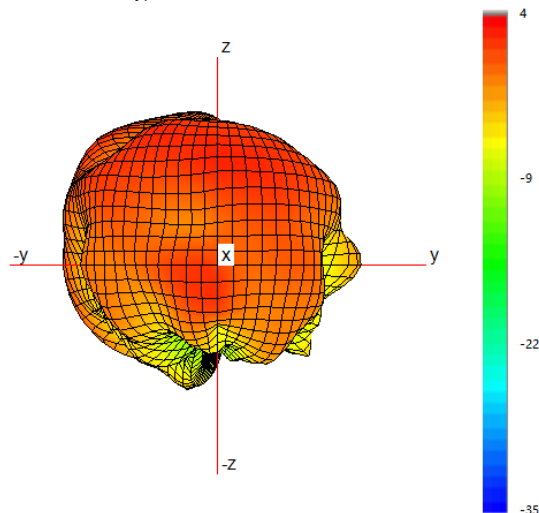
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

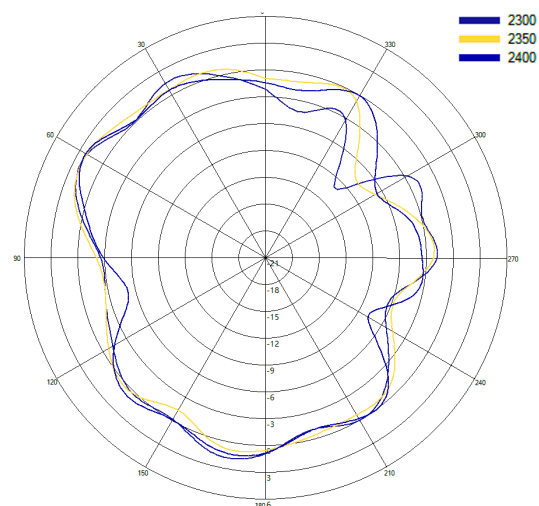
PANORAMA ANTENNAS

3D Patterns Cell D in Free Space

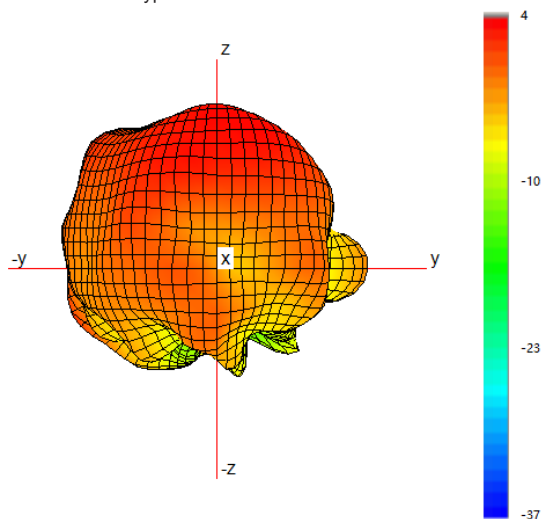
Typical 3D Pattern- Cell D - 2350 MHz



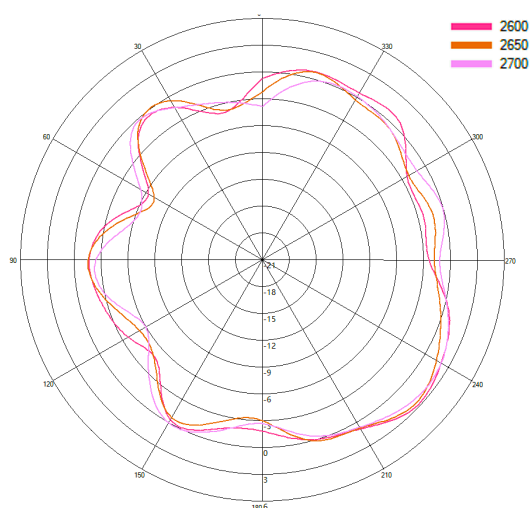
Typical H Plane- Cell D - Patterns- 2300-2400 MHz



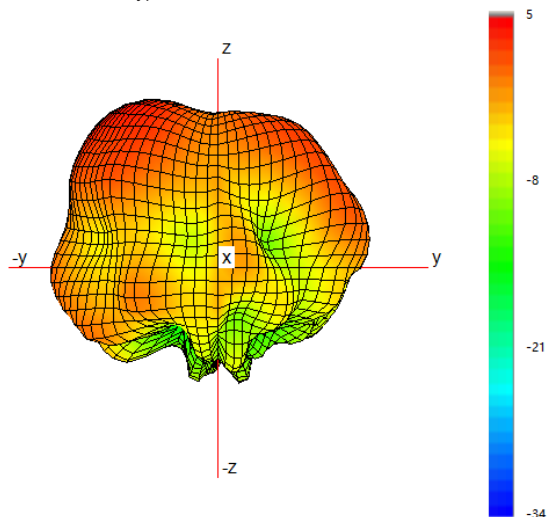
Typical 3D Pattern- Cell D - 2650 MHz



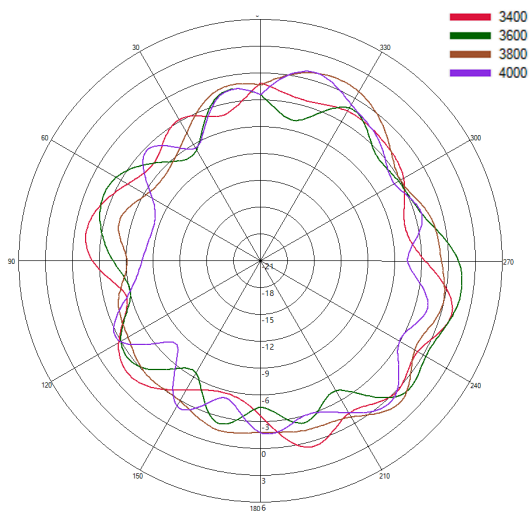
Typical H Plane- Cell D - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell D - 3600 MHz



Typical H Plane- Cell D - Patterns- 3400-4000 MHz

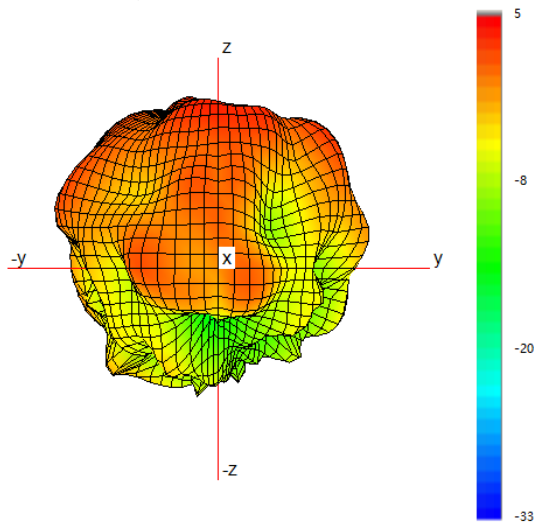


MiMo 4G/5G Dome Combination Antenna Range

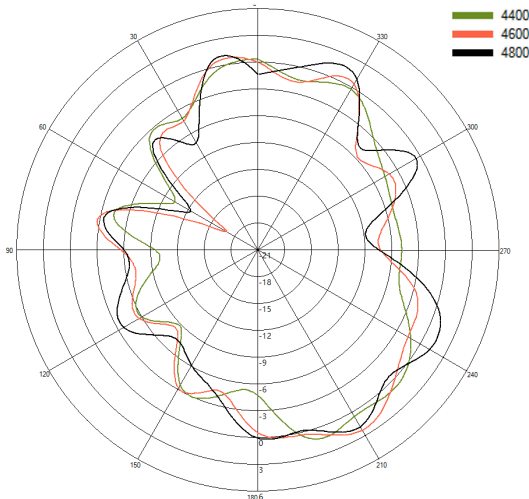
L[X]M[X]M4[X]-6-60-[X]14-72

3D Patterns Cell D
in Free Space

Typical 3D Pattern- Cell D - 4700 MHz



Typical H Plane- Cell D - Patterns- 4400-4800 MHz



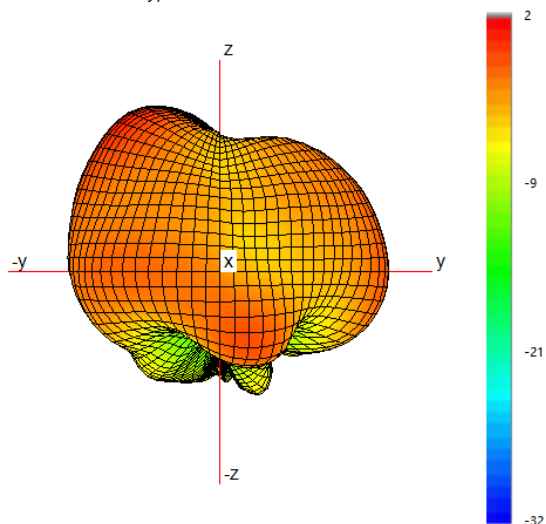
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

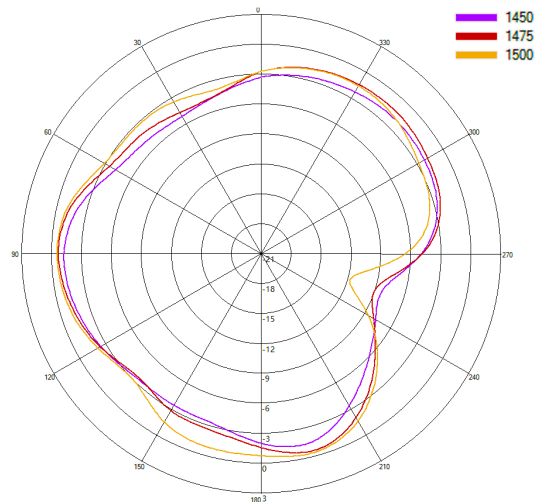
PANORAMA ANTENNAS

3D Patterns Cell 1 in
Free Space

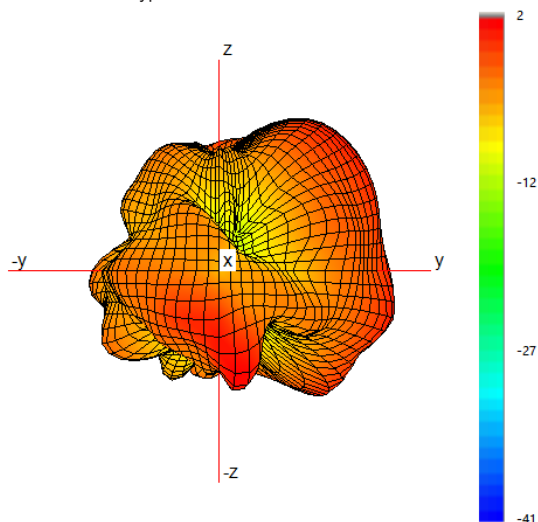
Typical 3D Pattern- Cell 1 - 1475 MHz



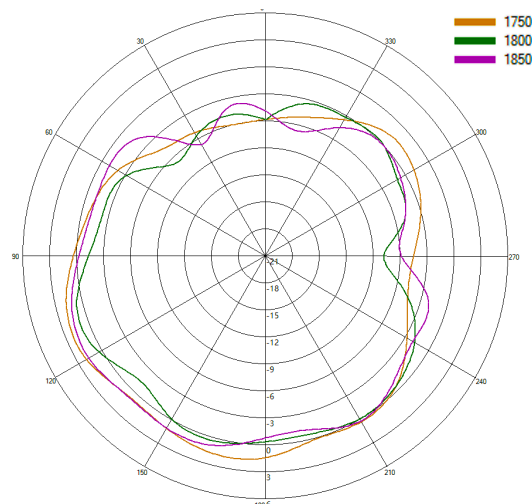
Typical H Plane- Cell 1- Patterns- 1450-1500 MHz



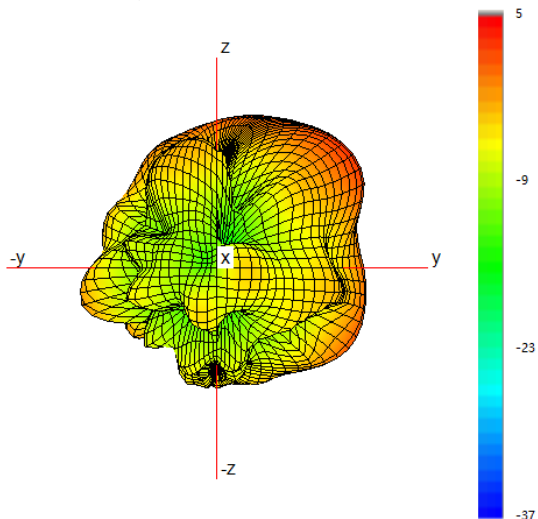
Typical 3D Pattern- Cell 1 - 1800 MHz



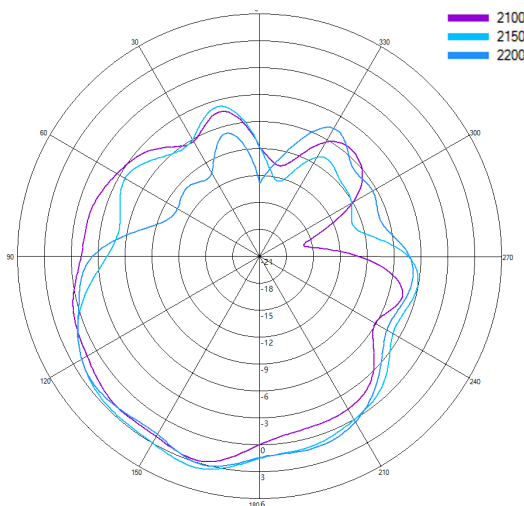
Typical H Plane- Cell 1- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell 1 - 2150 MHz



Typical H Plane- Cell 1- Patterns- 2100-2200 MHz



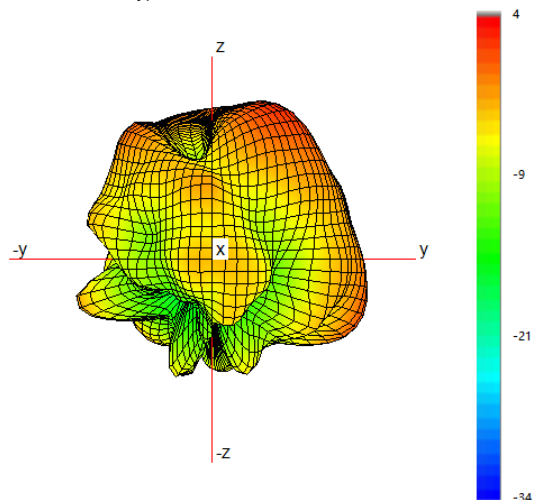
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

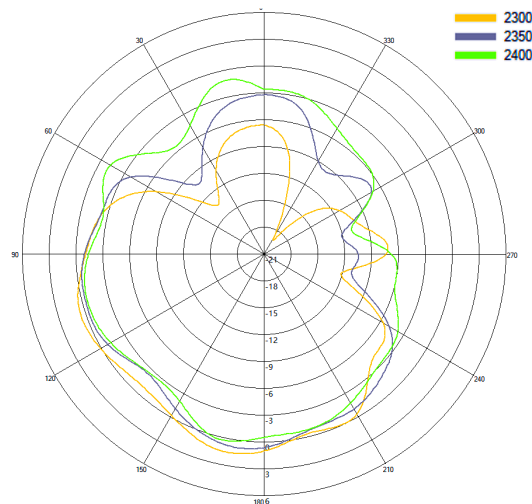
PANORAMA ANTENNAS

3D Patterns Cell 1 in
Free Space

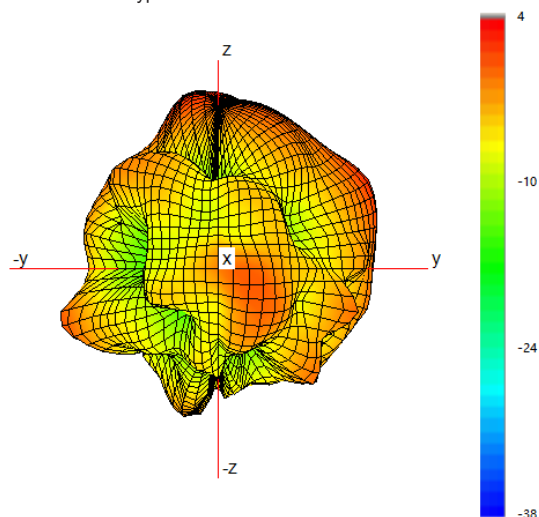
Typical 3D Pattern- Cell 1 - 2350 MHz



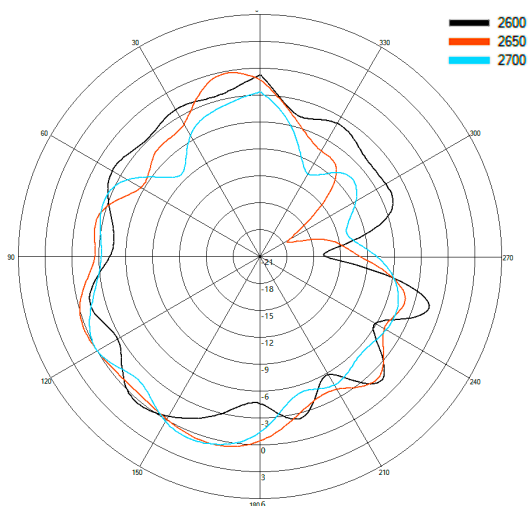
Typical H Plane- Cell 1 - Patterns- 2300-2400 MHz



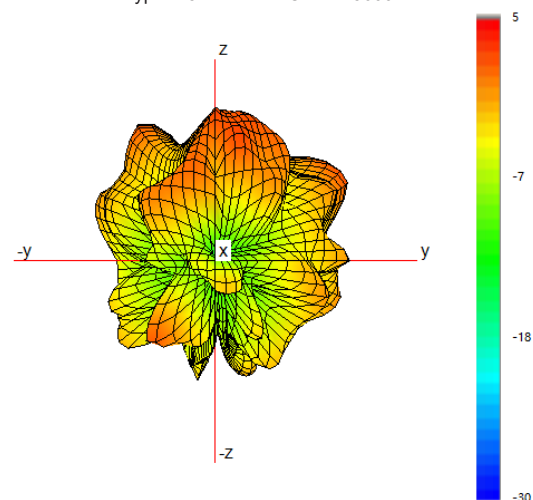
Typical 3D Pattern- Cell 1 - 2650 MHz



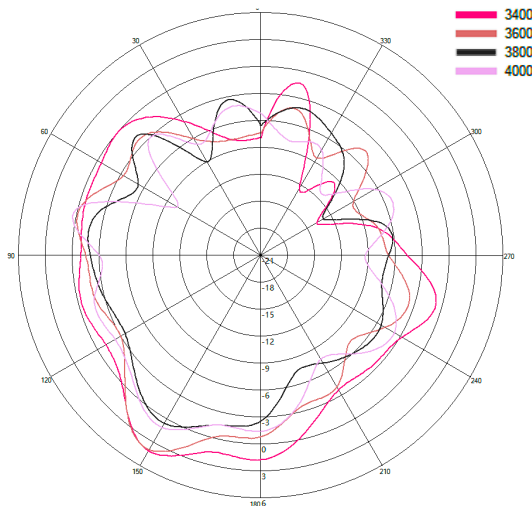
Typical H Plane- Cell 1 - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell 1 - 3600 MHz



Typical H Plane- Cell 1 - Patterns- 3400-4000 MHz



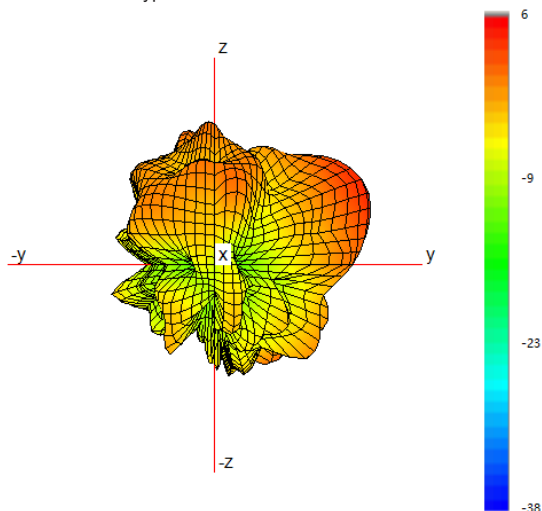
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

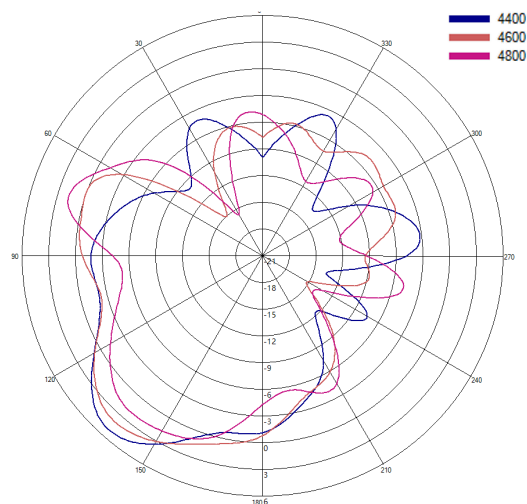
PANORAMA ANTENNAS

3D Patterns Cell 1 in Free Space

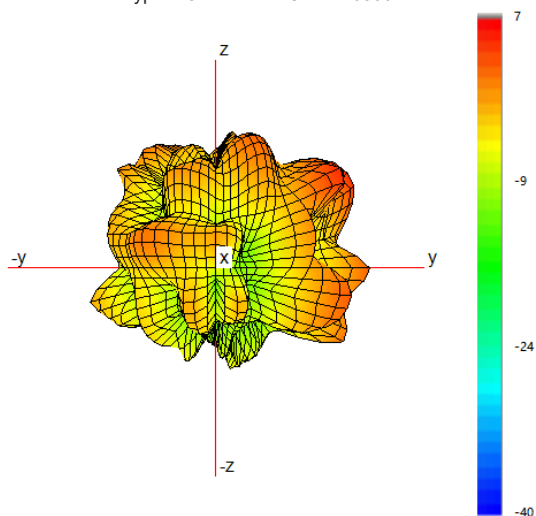
Typical 3D Pattern- Cell 1 - 4700 MHz



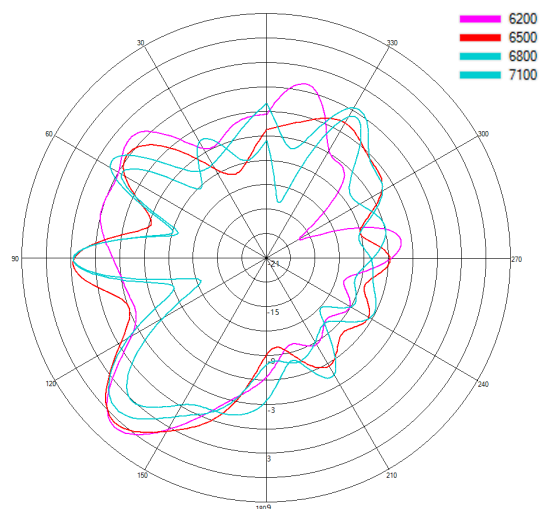
Typical H Plane- Cell 1 - Patterns- 4400-4800 MHz



Typical 3D Pattern- Cell 1 - 6500 MHz



Typical H Plane- Cell 1 - Patterns- 6200-7100 MHz



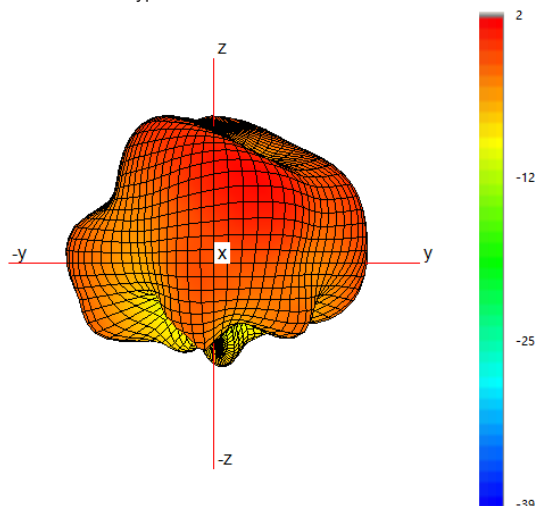
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

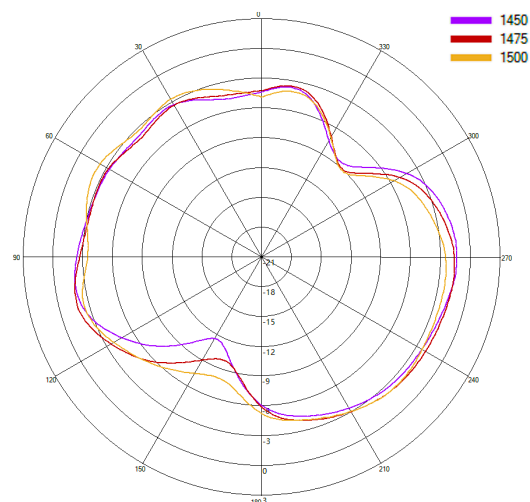
PANORAMA ANTENNAS

3D Patterns Cell 2
in Free Space

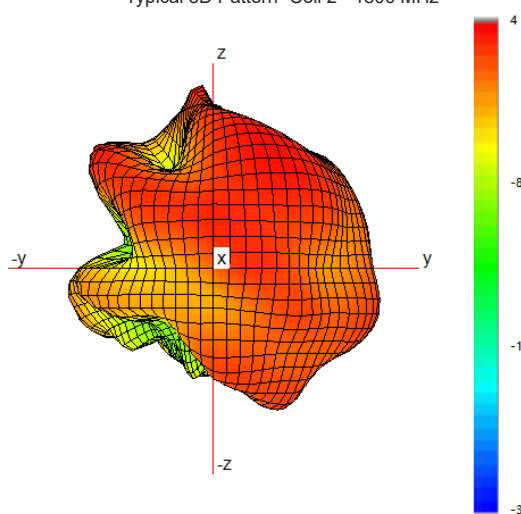
Typical 3D Pattern- Cell 2 - 1475 MHz



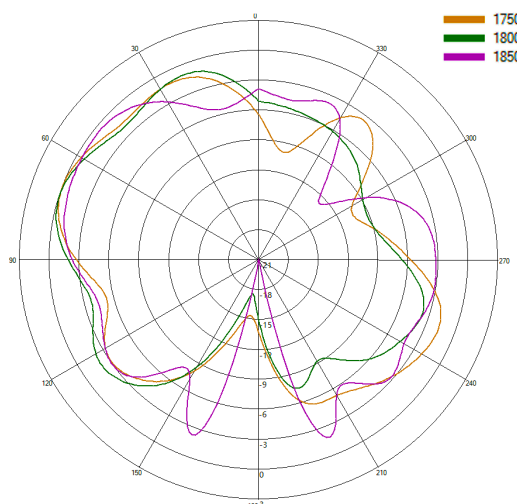
Typical H Plane- Cell 2- Patterns- 1450-1500 MHz



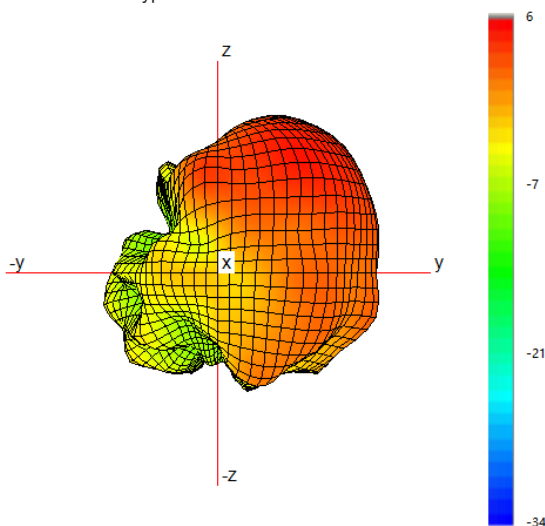
Typical 3D Pattern- Cell 2 - 1800 MHz



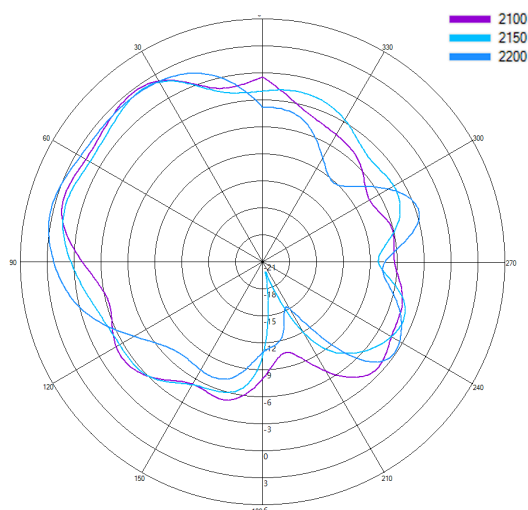
Typical H Plane- Cell 2- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell 2 - 2150 MHz



Typical H Plane- Cell 2- Patterns- 2100-2200 MHz



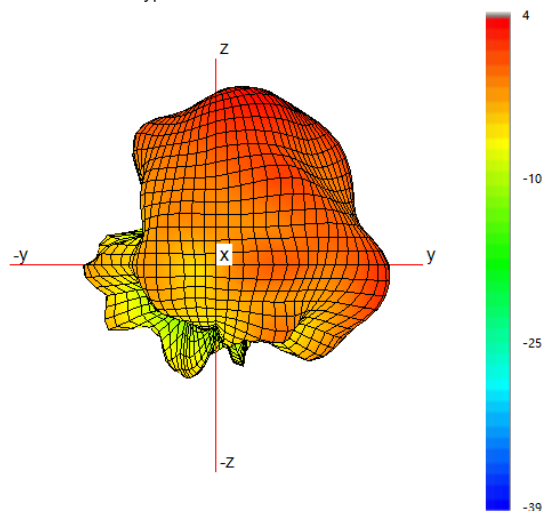
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

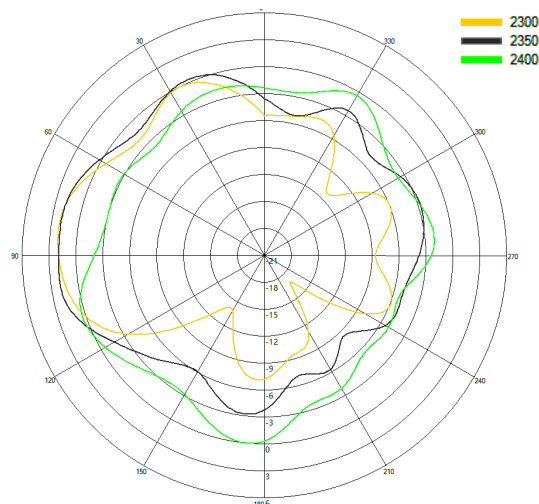
PANORAMA ANTENNAS

3D Patterns Cell 2 in Free Space

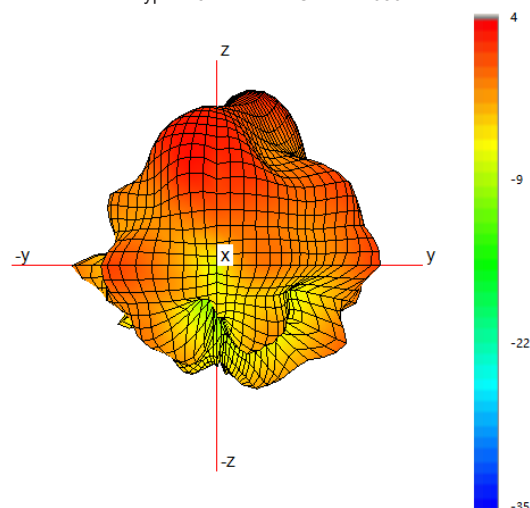
Typical 3D Pattern- Cell 2 - 2350 MHz



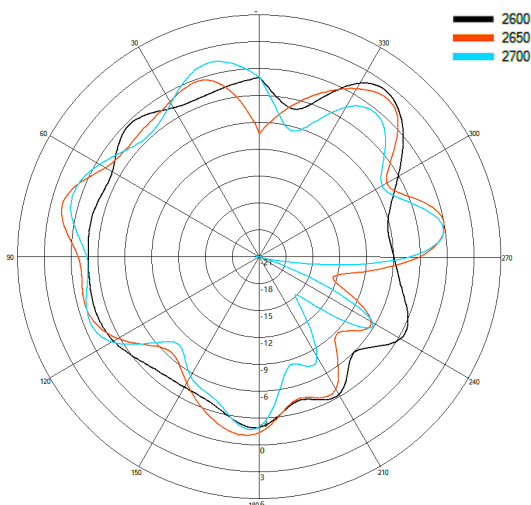
Typical H Plane- Cell 2 - Patterns- 2300-2400 MHz



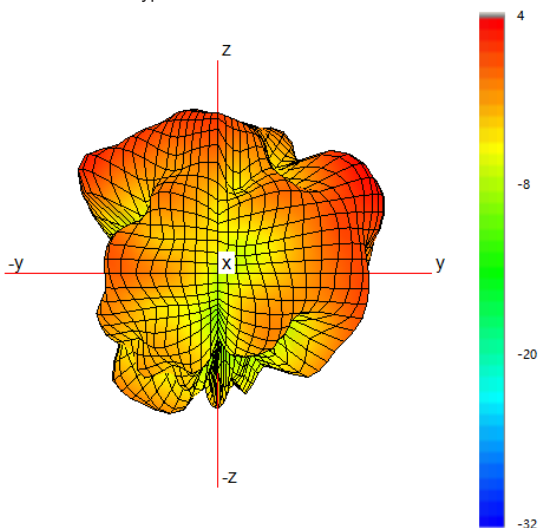
Typical 3D Pattern- Cell 2 - 2650 MHz



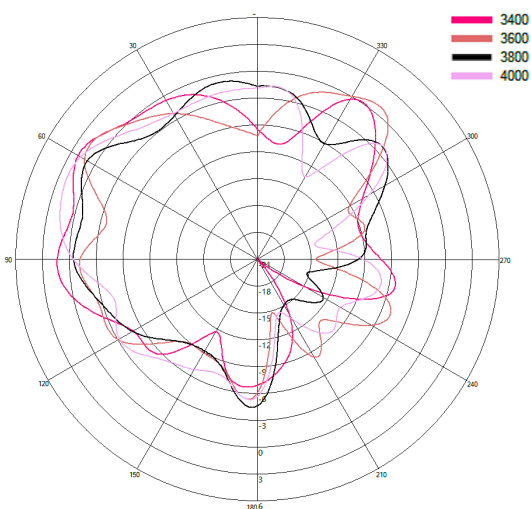
Typical H Plane- Cell 2 - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell 2 - 3600 MHz



Typical H Plane- Cell 2 - Patterns- 3400-4000 MHz



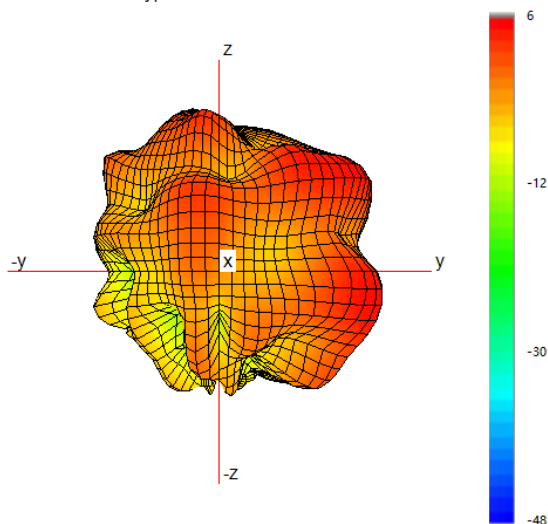
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

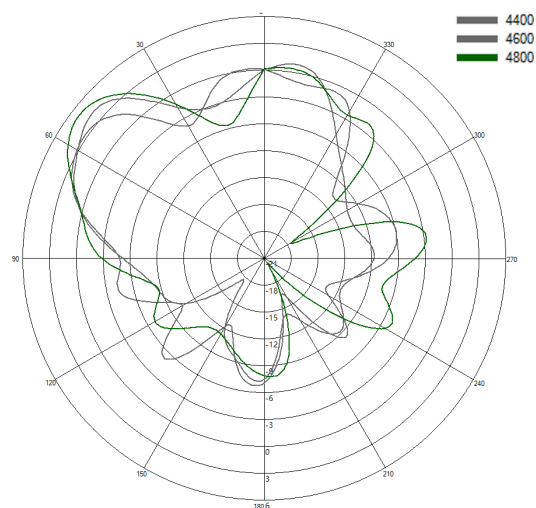
PANORAMA ANTENNAS

3D Patterns Cell 2
in Free Space

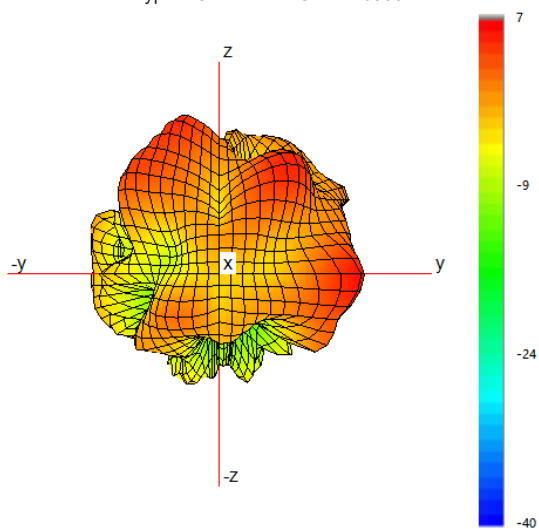
Typical 3D Pattern- Cell 2 - 4700 MHz



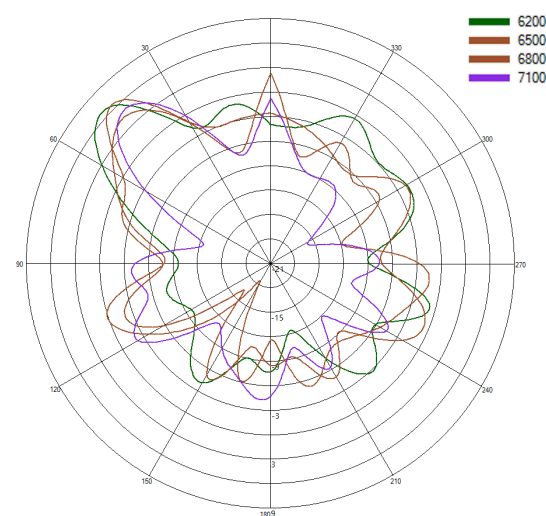
Typical H Plane- Cell 2 - Patterns- 4400-4800 MHz



Typical 3D Pattern- Cell 2 - 6500 MHz



Typical H Plane- Cell 2 - Patterns- 6200-7100 MHz



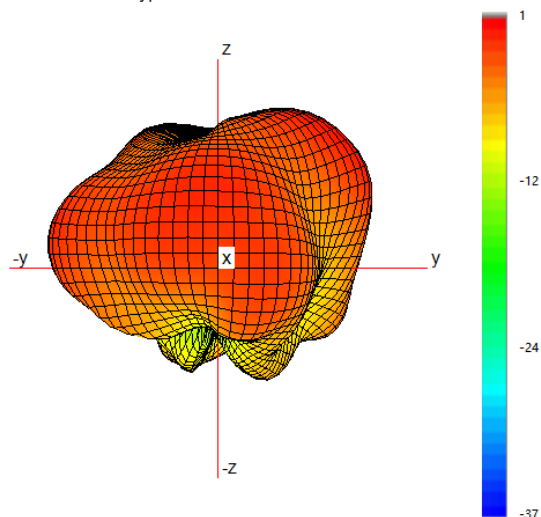
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

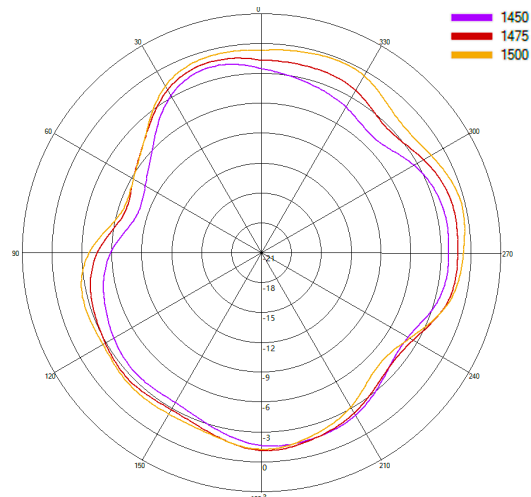
PANORAMA ANTENNAS

3D Patterns Cell 3 in
Free Space

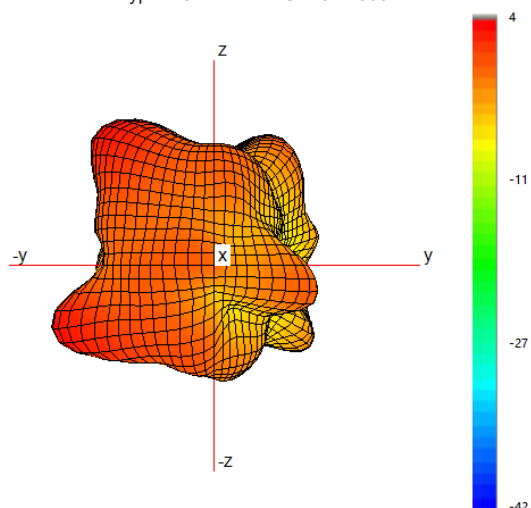
Typical 3D Pattern- Cell 3 - 1475 MHz



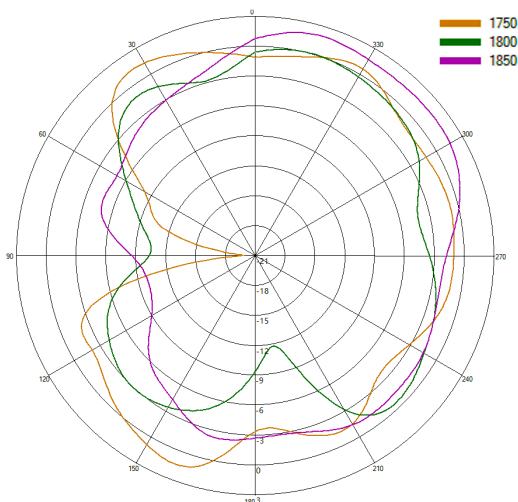
Typical H Plane- Cell 3- Patterns- 1450-1500 MHz



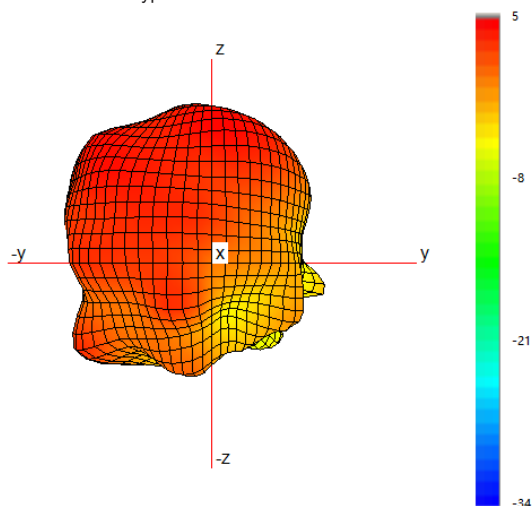
Typical 3D Pattern- Cell 3 - 1800 MHz



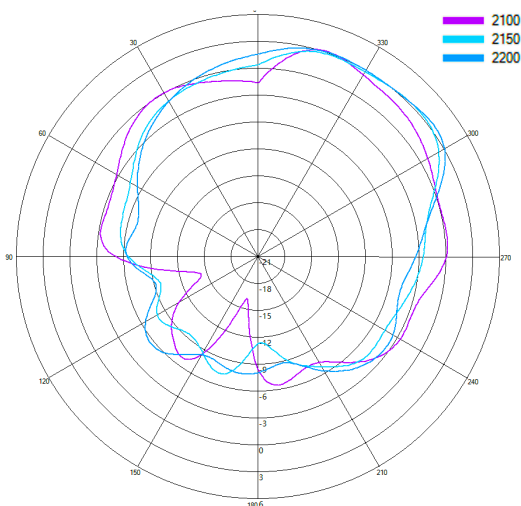
Typical H Plane- Cell 3- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell 3 - 2150 MHz



Typical H Plane- Cell 3- Patterns- 2100-2200 MHz



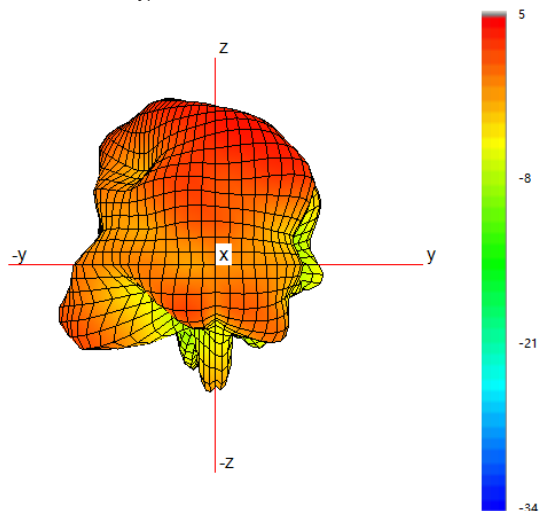
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

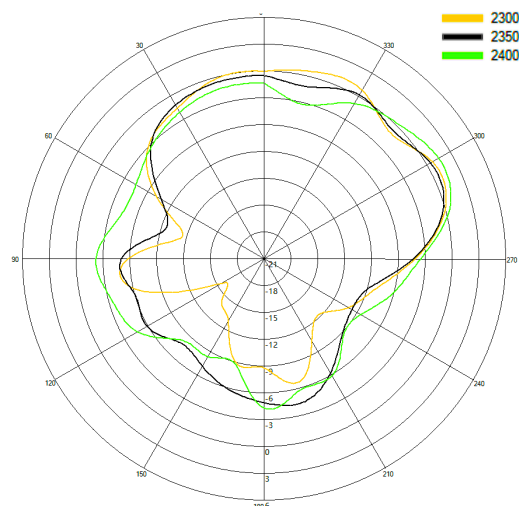
PANORAMA ANTENNAS

3D Patterns Cell 3 in
Free Space

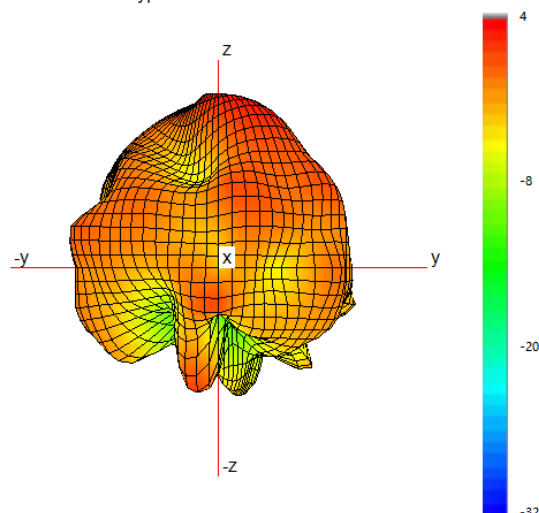
Typical 3D Pattern- Cell 3 - 2350 MHz



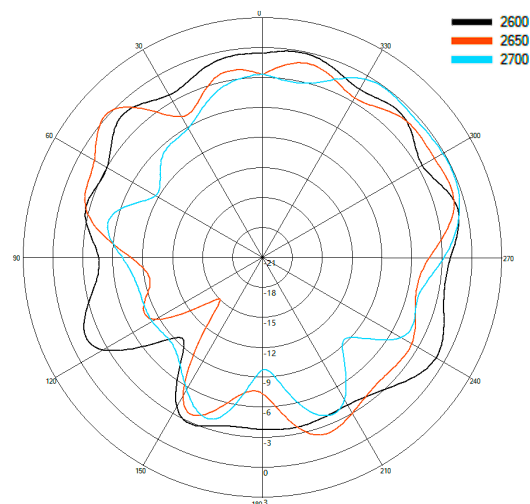
Typical H Plane- Cell 3 - Patterns- 2300-2400 MHz



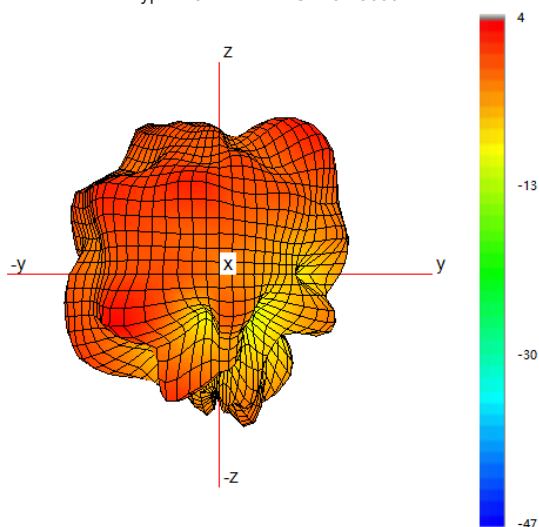
Typical 3D Pattern- Cell 3 - 2650 MHz



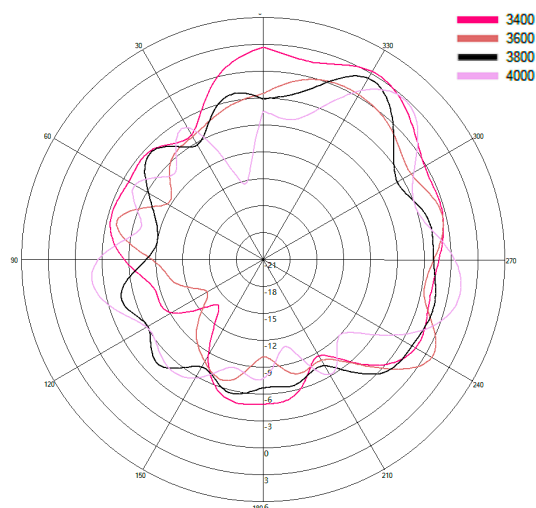
Typical H Plane- Cell 3 - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell 3 - 3600 MHz



Typical H Plane- Cell 3 - Patterns- 3400-4000 MHz



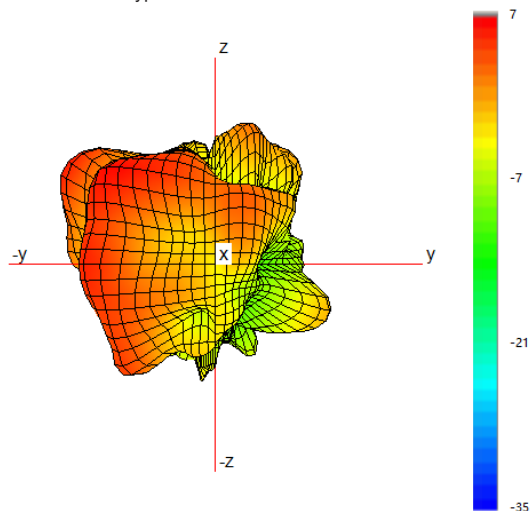
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

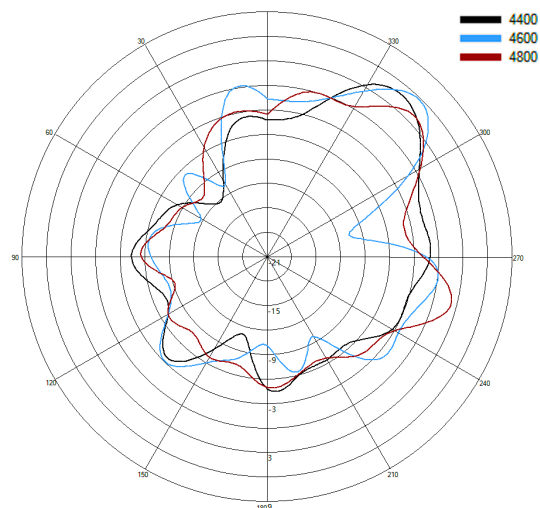
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3D Patterns Cell 3 in Free Space

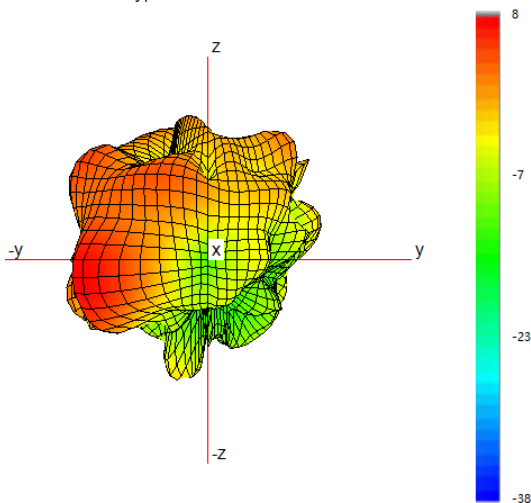
Typical 3D Pattern- Cell 3 - 4700 MHz



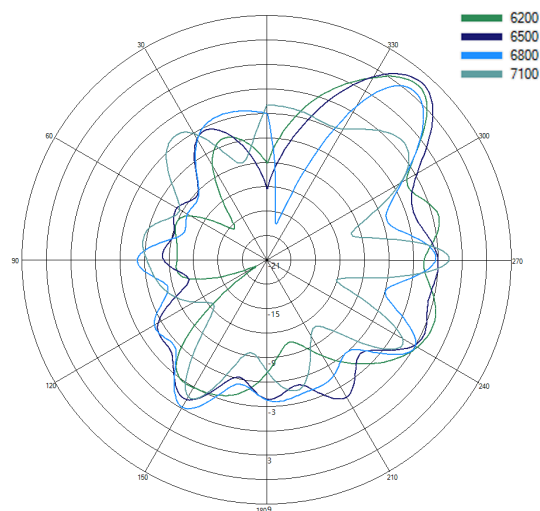
Typical H Plane- Cell 3 - Patterns- 4400-4800 MHz



Typical 3D Pattern- Cell 3 - 6500 MHz



Typical H Plane- Cell 3 - Patterns- 6200-7100 MHz



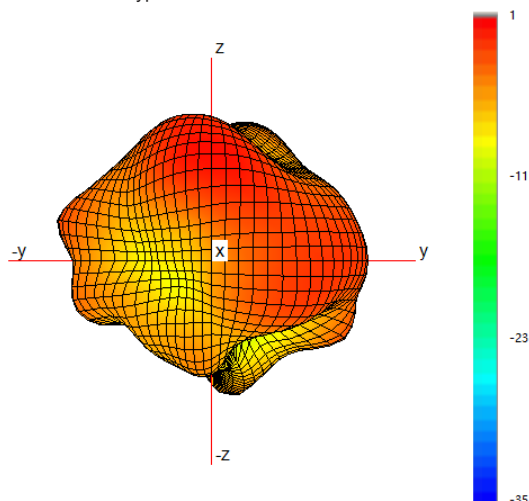
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

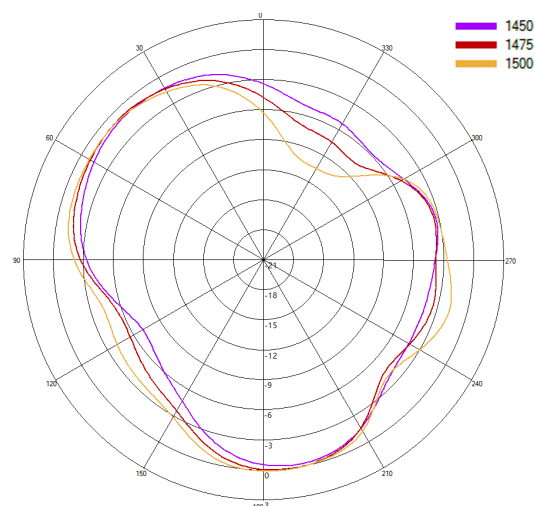
PANORAMA ANTENNAS

3D Patterns Cell 4
in Free Space

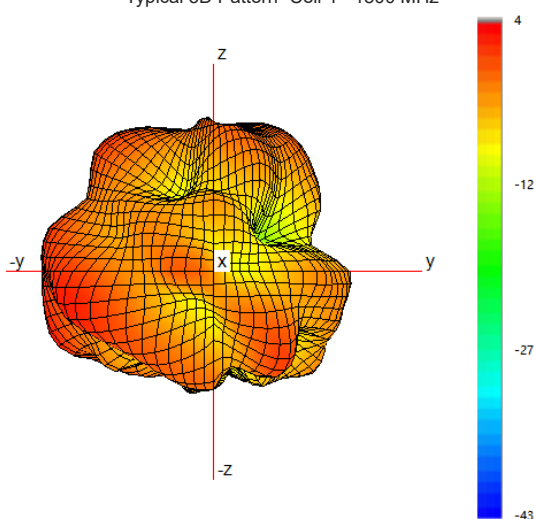
Typical 3D Pattern- Cell 4 - 1475 MHz



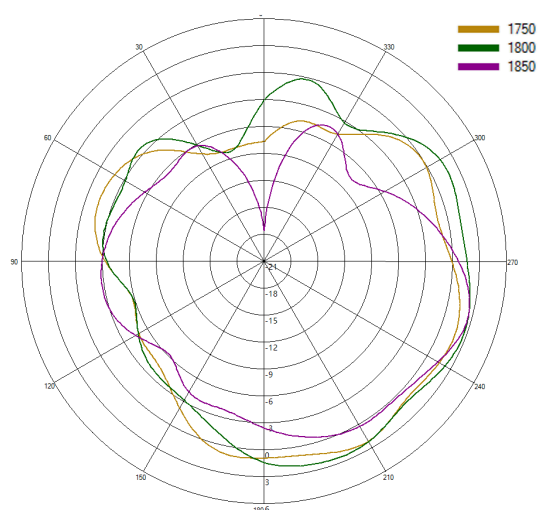
Typical H Plane- Cell 4- Patterns- 1450-1500 MHz



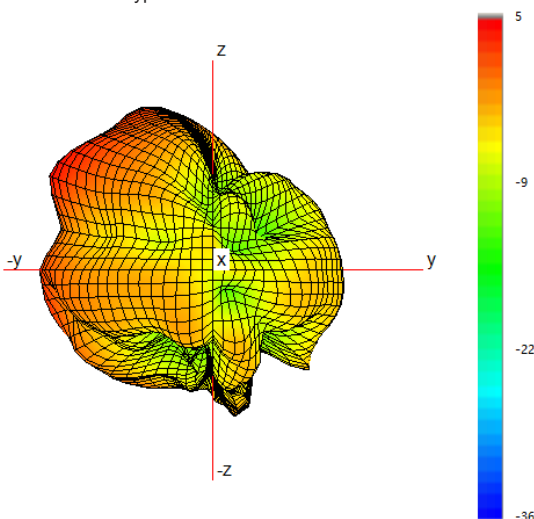
Typical 3D Pattern- Cell 4 - 1800 MHz



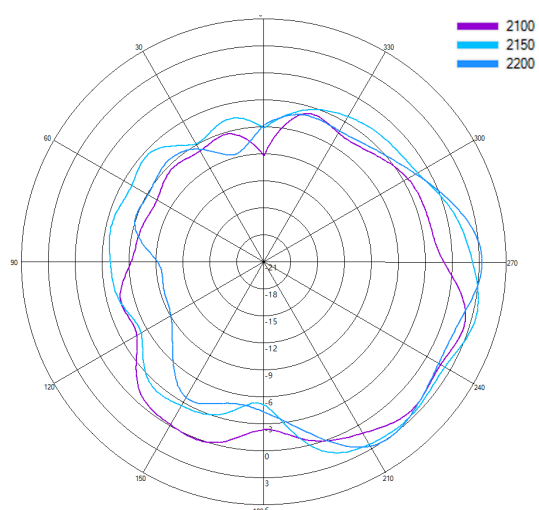
Typical H Plane- Cell 4- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell 4 - 2150 MHz



Typical H Plane- Cell 4- Patterns- 2100-2200 MHz



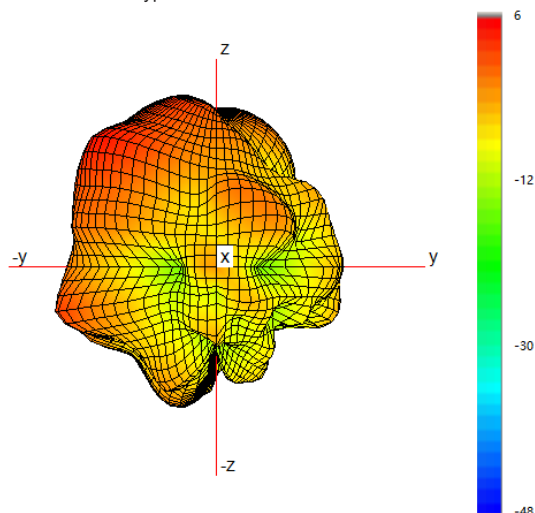
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

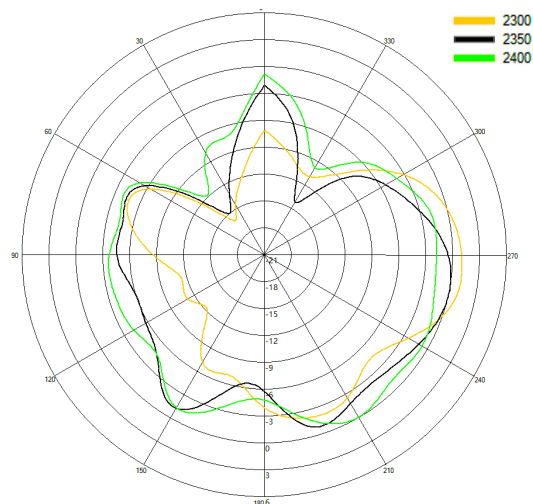
PANORAMA ANTENNAS

3D Patterns Cell 4 in Free Space

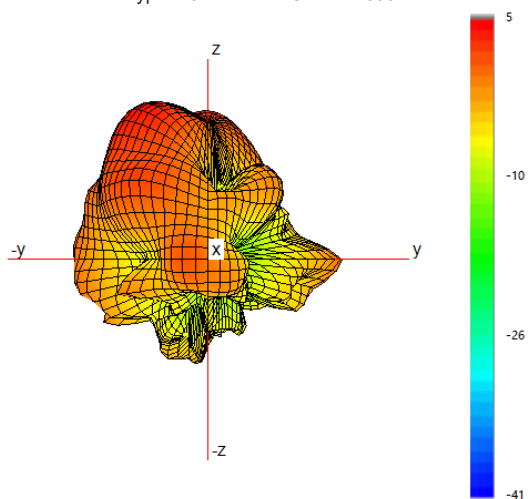
Typical 3D Pattern- Cell 4 - 2350 MHz



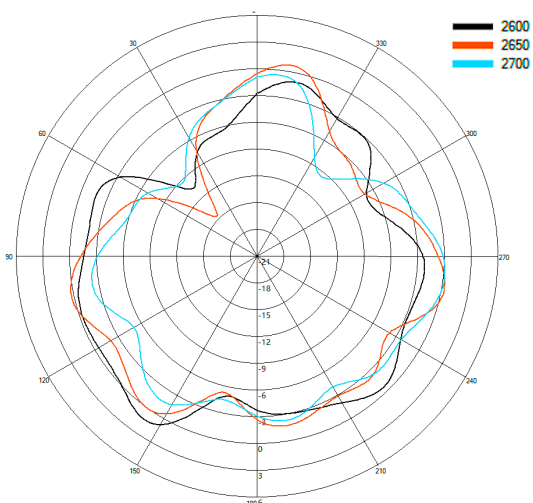
Typical H Plane- Cell 4 - Patterns- 2300-2400 MHz



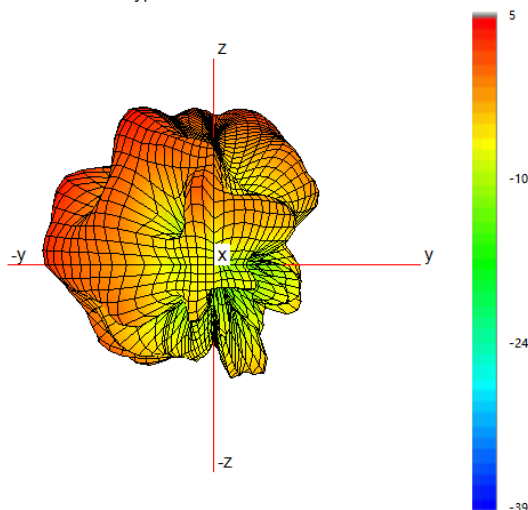
Typical 3D Pattern- Cell 4 - 2650 MHz



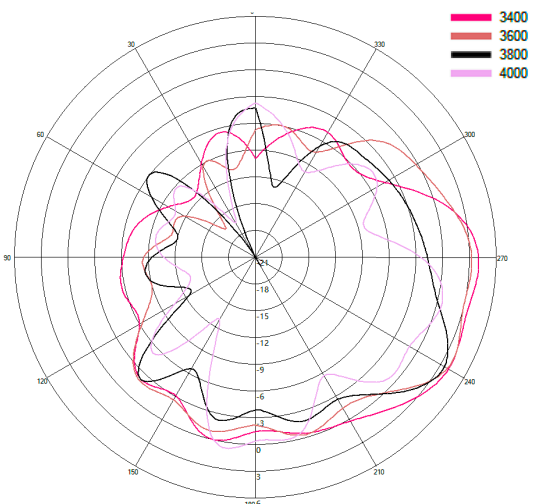
Typical H Plane- Cell 4 - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell 4 - 3600 MHz



Typical H Plane- Cell 4 - Patterns- 3400-4000 MHz



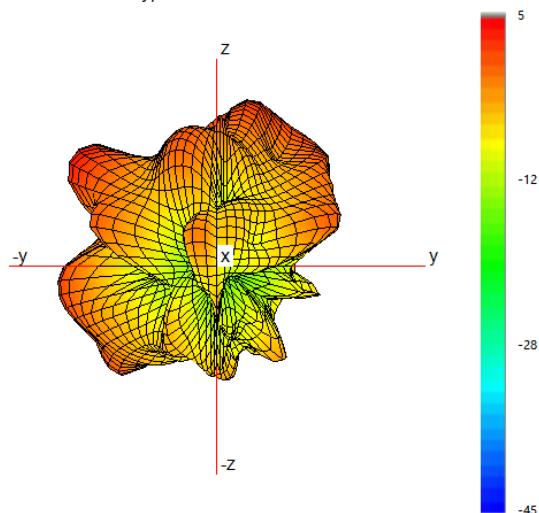
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

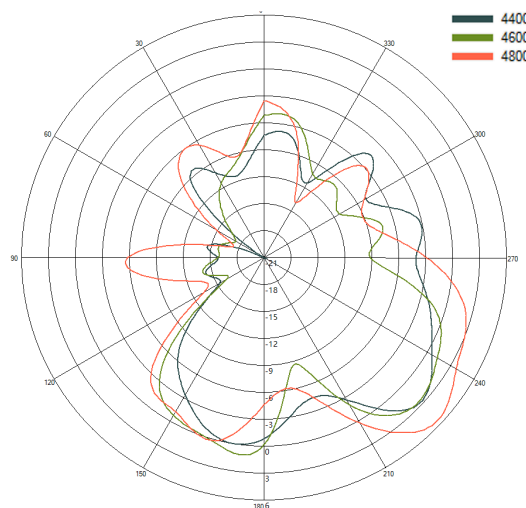
PANORAMA ANTENNAS

3D Patterns Cell 4
in Free Space

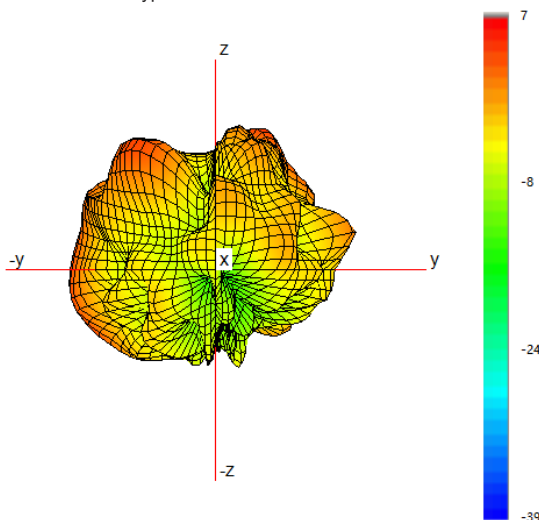
Typical 3D Pattern- Cell 4 - 4700 MHz



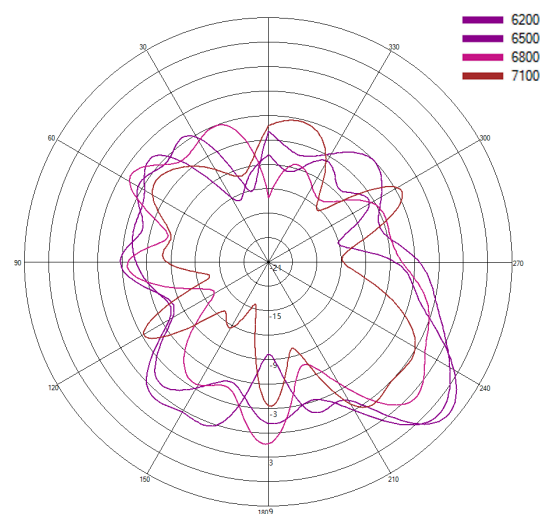
Typical H Plane- Cell 4 - Patterns- 4400-4800 MHz



Typical 3D Pattern- Cell 4 - 6500 MHz



Typical H Plane- Cell 4 - Patterns- 6200-7100 MHz



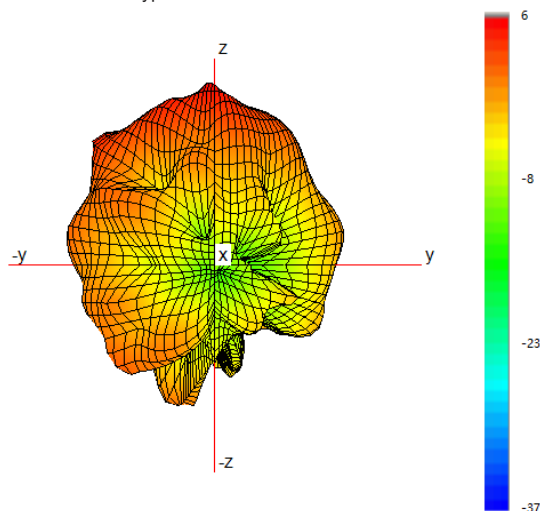
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

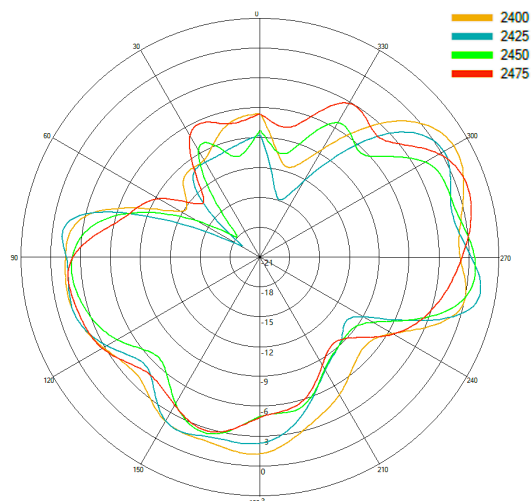
PANORAMA ANTENNAS

3D Patterns WiFi 1 in Free Space

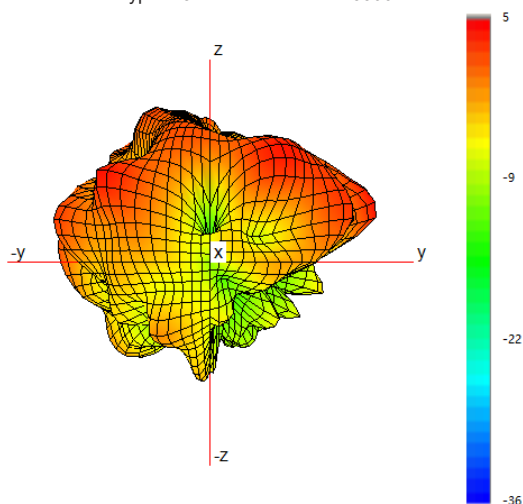
Typical 3D Pattern- WiFi 1 - 2450 MHz



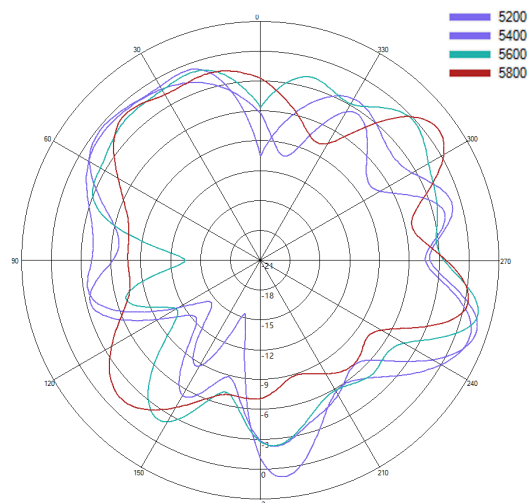
Typical H Plane- WiFi 1 - Patterns- 2400-2475 MHz



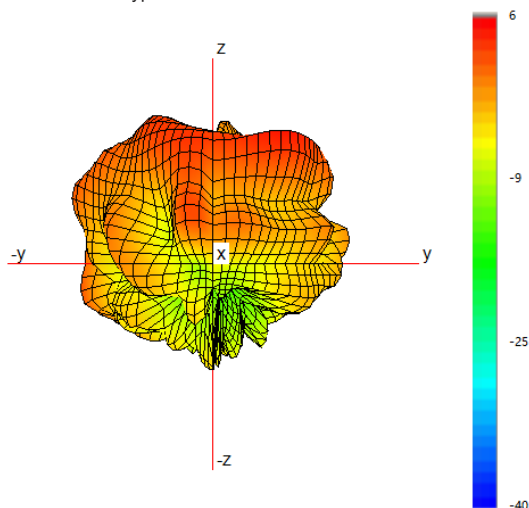
Typical 3D Pattern- WiFi 1 - 5500 MHz



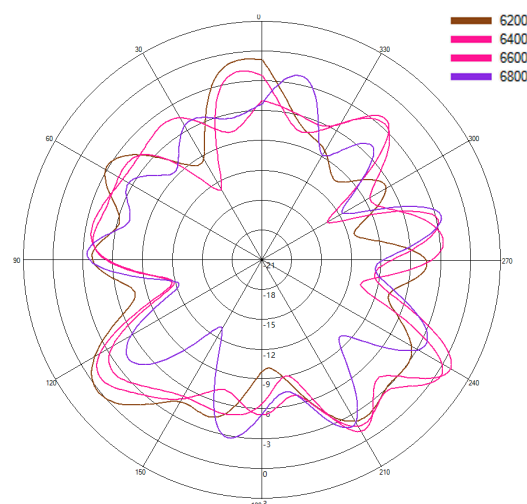
Typical H Plane- WiFi 1 - Patterns- 5200-5800 MHz



Typical 3D Pattern- WiFi 1 - 6500 MHz



Typical H Plane- WiFi 1 - Patterns- 6200-6800 MHz



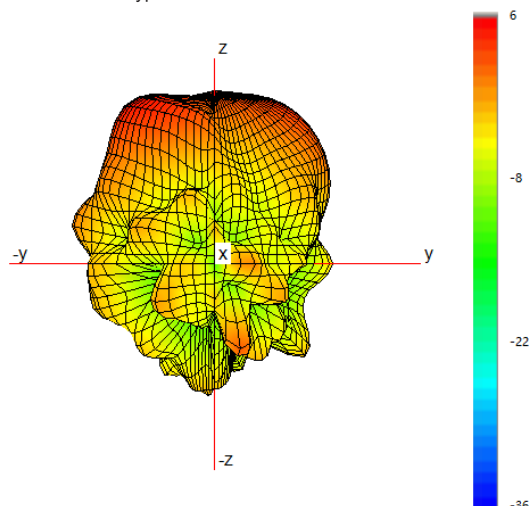
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

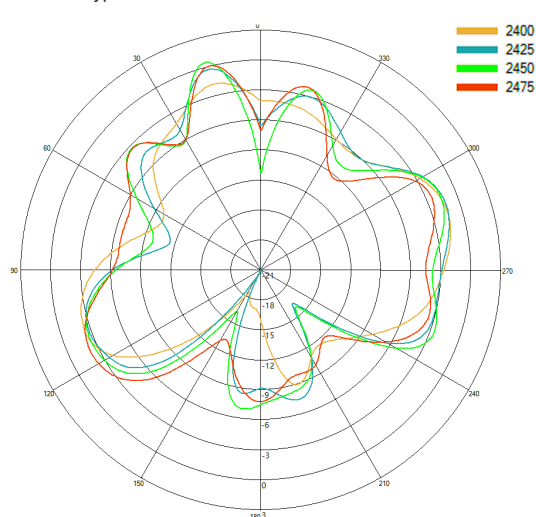
PANORAMA ANTENNAS

3D Patterns WiFi 2
in Free Space

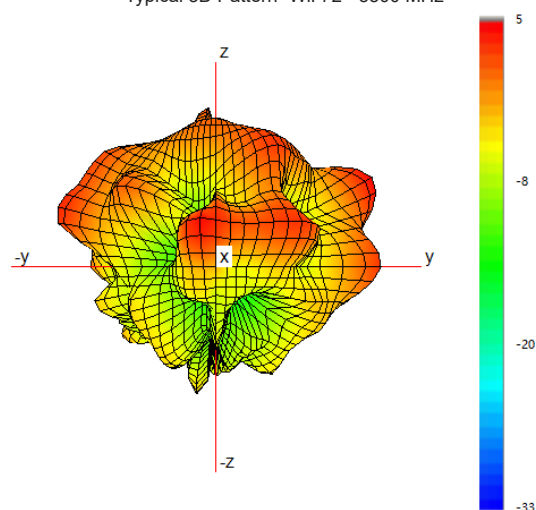
Typical 3D Pattern- WiFi 2 - 2450 MHz



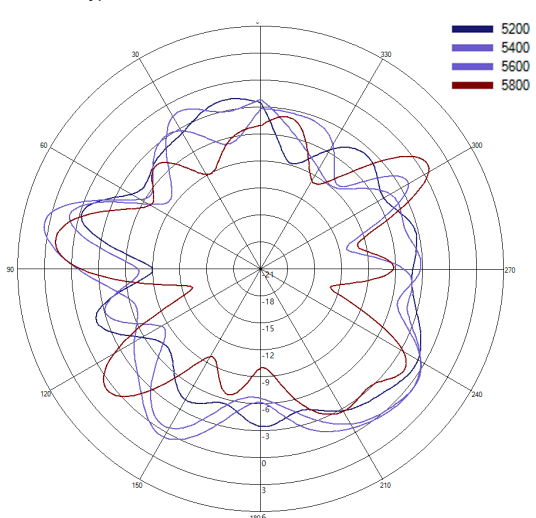
Typical H Plane- WiFi 2 - Patterns- 2400-2475 MHz



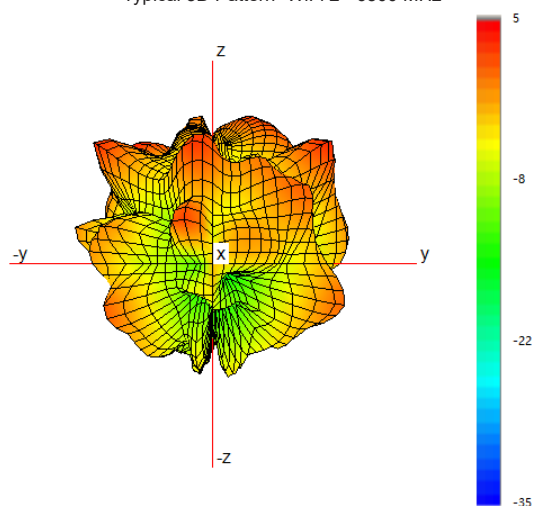
Typical 3D Pattern- WiFi 2 - 5500 MHz



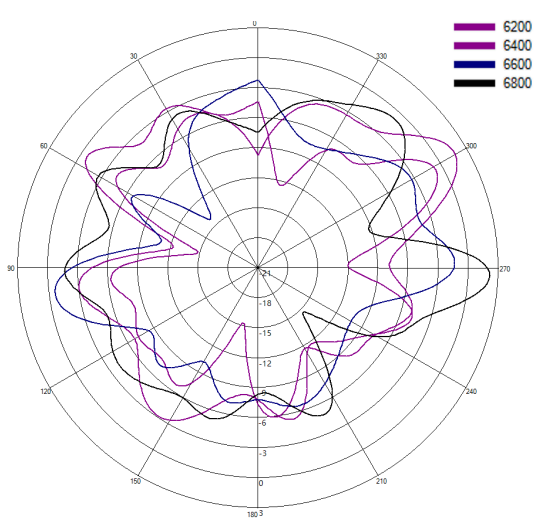
Typical H Plane- WiFi 2 - Patterns- 5200-5800 MHz



Typical 3D Pattern- WiFi 2 - 6500 MHz



Typical H Plane- WiFi 2 - Patterns- 6200-6800 MHz

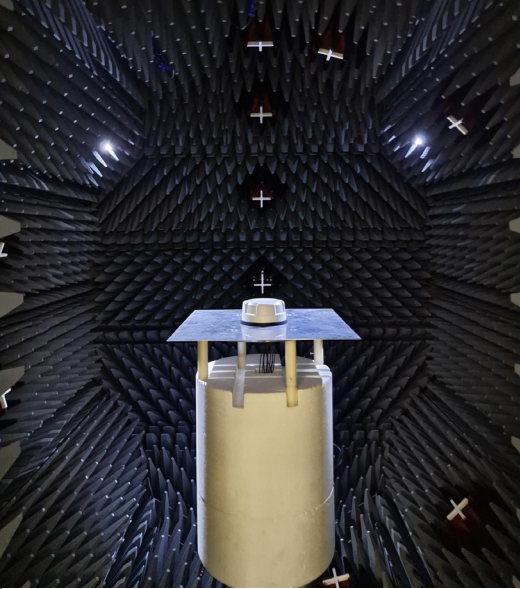


MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

PANORAMA ANTENNAS

Electrical Data on Ground
Plane - Cell A-B-C-D

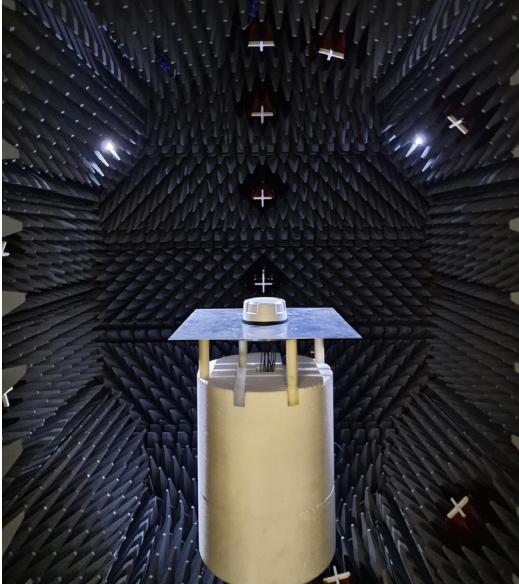
Measurement Conditions	4G/5G Full Band Antennas				
Measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable	Frequency Range (MHz)	LTE Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
	617-698	71,105	Cell A	4.1	47
			Cell B	3.3	48
			Cell C	3.2	47
			Cell D	3.4	47
	699-798	12,13, 14 17,28	Cell A	4.2	51
			Cell B	3.9	49
			Cell C	4.2	47
			Cell D	3.9	49
	807- 862	5,19,20,26,27	Cell A	5.1	53
			Cell B	4.2	52
			Cell C	4.3	51
			Cell D	4.1	51
	880-960	8	Cell A	5.1	54
			Cell B	4.3	55
			Cell C	4.1	53
			Cell D	4.6	55
	1427-1518	11, 21, 74,75,76	Cell A	5.5	50
			Cell B	5.8	49
			Cell C	5.7	55
			Cell D	6.0	51
	1710-1920	2,3,4,9,25,35, 39,66	Cell A	6.5	75
			Cell B	6.8	74
			Cell C	6.6	74
			Cell D	6.6	73
	1920-2170	1,23	Cell A	5.7	68
			Cell B	5.8	68
			Cell C	6.6	67
			Cell D	6.1	69
	2300-2400	30,40	Cell A	5.6	62
			Cell B	5.7	65
			Cell C	6.1	68
			Cell D	5.7	65
	2496-2690	7,38,41	Cell A	6.6	68
			Cell B	6.1	66
			Cell C	6.7	70
			Cell D	6.1	66
	3300-4200	22,42,43,48,77, 78,79	Cell A	6.2	59
			Cell B	6.3	57
			Cell C	6.1	61
			Cell D	5.7	60
	4400-5000	79	Cell A	5.9	58
			Cell B	6.7	55
			Cell C	6.4	61
			Cell D	7.2	61

MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

PANORAMA ANTENNAS

Electrical Data on Ground
Plane - Cell 1-2-3-4

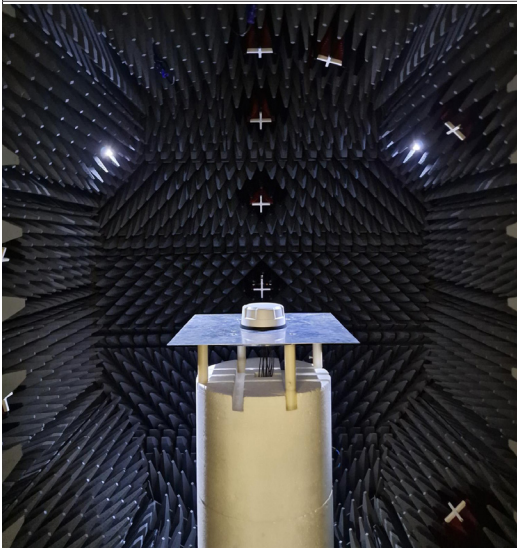
Measurement Conditions	4G/5G Mid/High Band Antennas				
Measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable	Frequency Range (MHz)	LTE Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
	1427-1518	11, 21, 74,75,76	Cell 1	3.0	33
			Cell 2	3.0	35
			Cell 3	3.8	32
			Cell 4	2.9	29
	1710-1920	2,3,4,9,25,35,39,66	Cell 1	6.9	55
			Cell 2	6.8	60
			Cell 3	6.6	56
			Cell 4	6.2	53
	1920-2170	1,23	Cell 1	8.2	64
			Cell 2	8.2	64
			Cell 3	8.1	63
			Cell 4	8.2	61
	2300-2400	30,40	Cell 1	5.3	48
			Cell 2	5.5	47
			Cell 3	5.6	55
			Cell 4	5.9	50
	2496-2690	7,38,41	Cell 1	6.6	53
			Cell 2	6.3	56
			Cell 3	7.8	57
			Cell 4	6.9	56
	3300-4200	22,42,43,48,77,78,79	Cell 1	7.6	57
			Cell 2	7.5	54
			Cell 3	8.7	59
			Cell 4	7.8	50
	4400-5000	79	Cell 1	8.5	57
			Cell 2	9.2	56
			Cell 3	10.2	61
			Cell 4	10.0	54
	5925-7125	96, 102,104	Cell 1	6.9	54
			Cell 2	7.1	49
			Cell 3	7.5	57
			Cell 4	8.2	49

MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

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Electrical Data on Ground
Plane - WiFi 1 - WiFi 2

Measurement Conditions	WiFi Antennas 1-2				
Measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable	Frequency Range (MHz)	WiFi Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
	2396-2485	2.4GHz	WiFi 1	4.5	44
			WiFi 2	5.6	57
	5150-5250	UNII-1	WiFi 1	4.2	45
			WiFi 2	4.7	48
	5250-5350	UNII-2A	WiFi 1	5.4	48
			WiFi 2	4.6	50
	5350-5470	UNII-2B	WiFi 1	5.3	51
			WiFi 2	4.4	51
	5470-5725	UNII-2C	WiFi 1	5.4	55
			WiFi 2	5.3	55
	5725-5850	UNII-3	WiFi 1	5.5	57
			WiFi 2	6.4	54
	5850-5925	UNII-4	WiFi 1	4.6	54
			WiFi 2	6.4	51
	5925-6425	UNII-5	WiFi 1	6.4	53
			WiFi 2	7.1	47
	6425-6525	UNII-6	WiFi 1	4.9	46
			WiFi 2	4.8	43
	6525-6875	UNII-7	WiFi 1	5.8	40
			WiFi 2	4.5	46
	6875-7125	UNII-8	WiFi 1	4.5	33
			WiFi 2	4.0	43

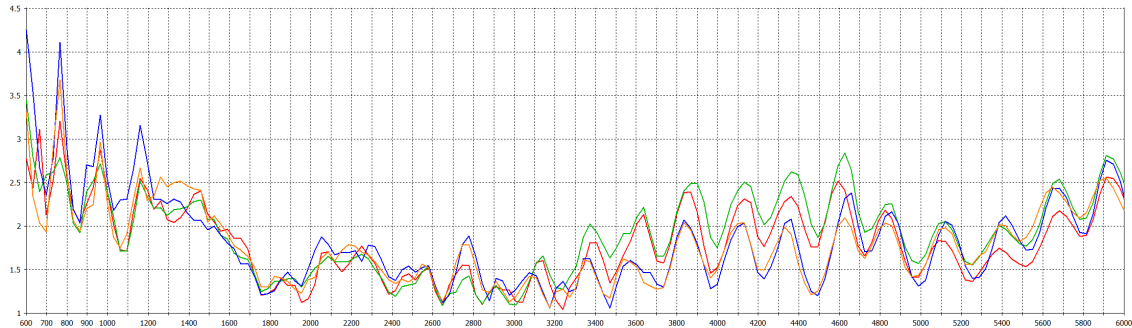
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

PANORAMA ANTENNAS

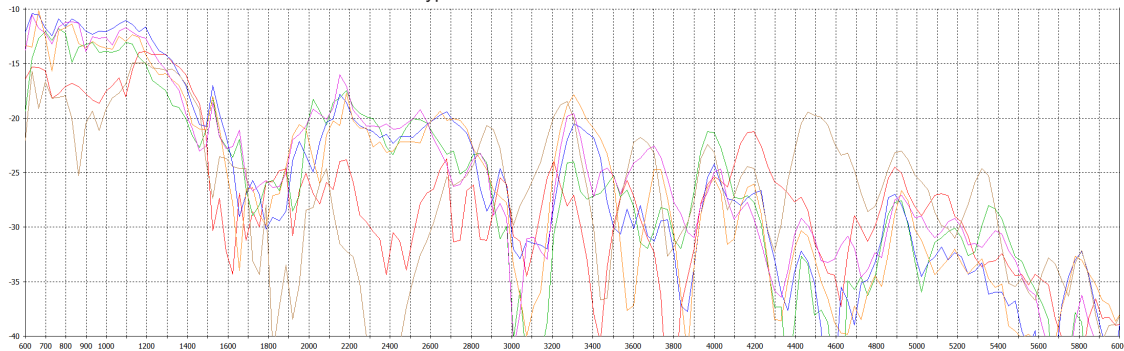
Electrical Data on Ground
Plane - Cell A-B-C-D

Typical VSWR- 4G/5G Full Band Elements*



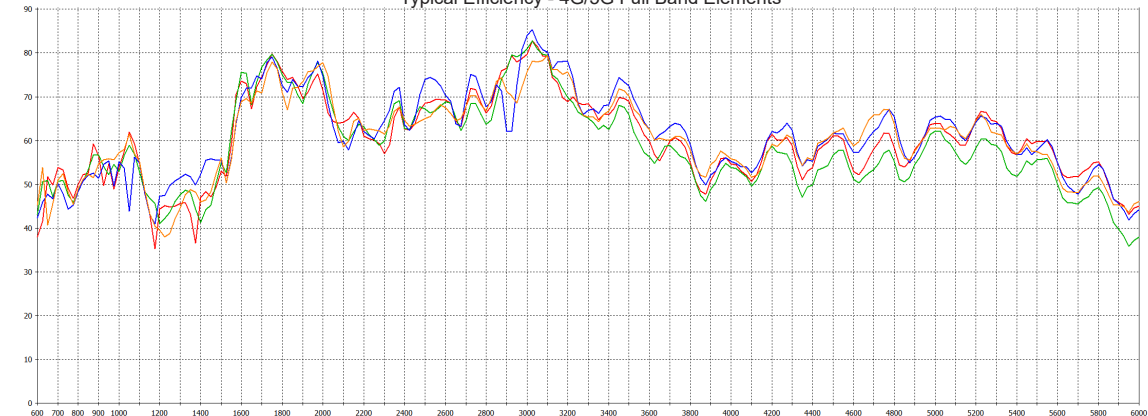
* VSWR measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable

Typical Isolation- 4G/5G Full Band Elements*



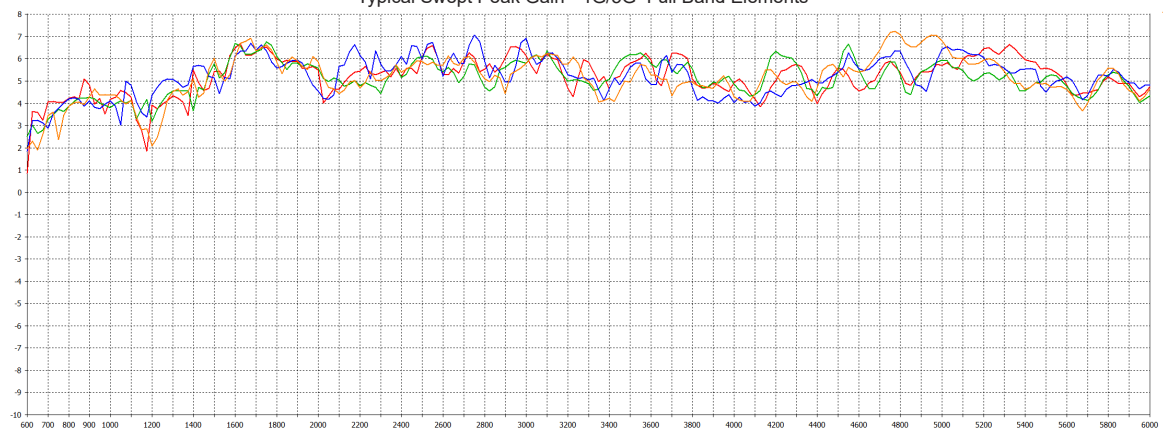
* Isolation measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable

Typical Efficiency - 4G/5G Full Band Elements*



* Efficiency measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable

Typical Swept Peak Gain - 4G/5G Full Band Elements*



*Swept peak gain measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable

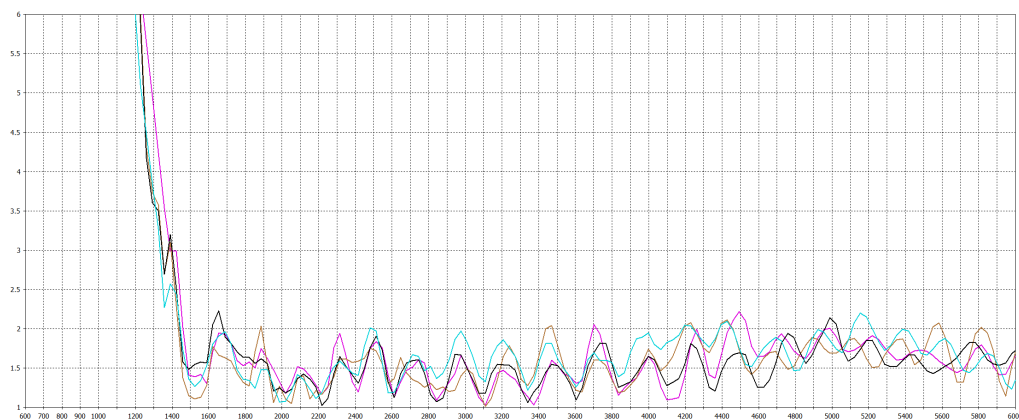
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

PANORAMA ANTENNAS

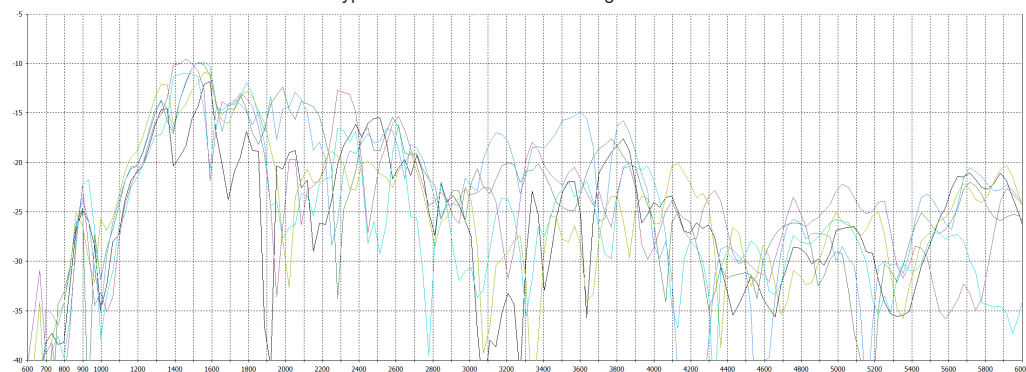
Electrical Data on Ground
Plane - Cell 1-2-3-4

Typical VSWR- 4G/5G Mid / High Band Elements*



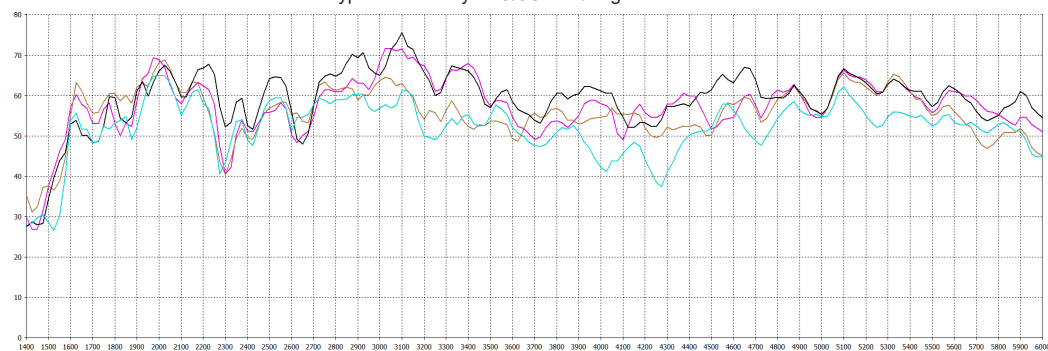
* VSWR measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable

Typical Isolation - 4G/5G Mid / High Band Elements*



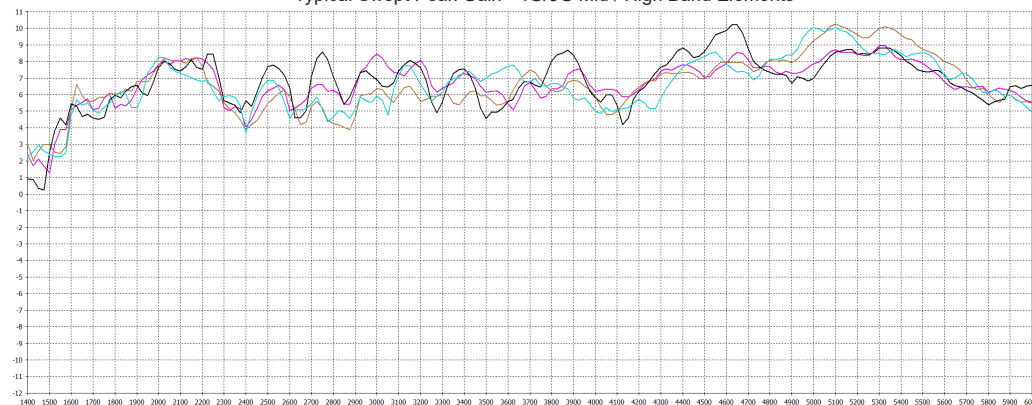
* Isolation measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable

Typical Efficiency - 4G/5G Mid / High Band Elements*



* Efficiency measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable

Typical Swept Peak Gain - 4G/5G Mid / High Band Elements*



* Swept peak gain measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable

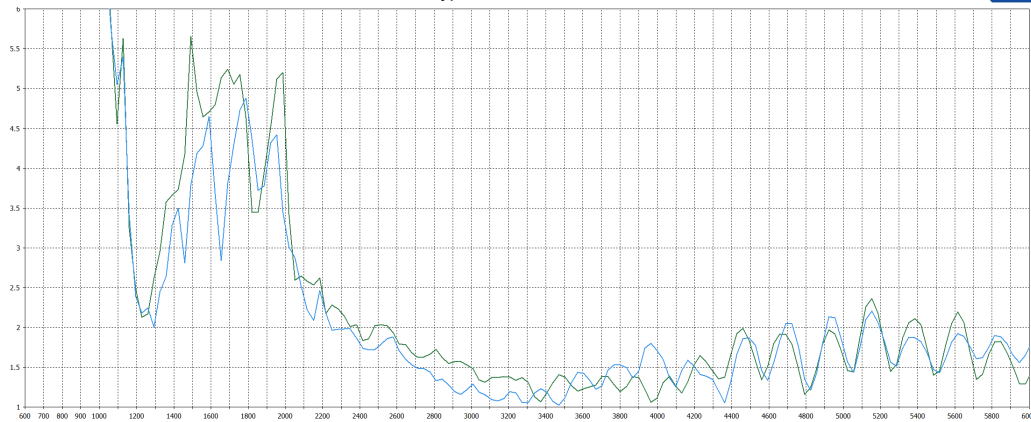
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

PANORAMA ANTENNAS

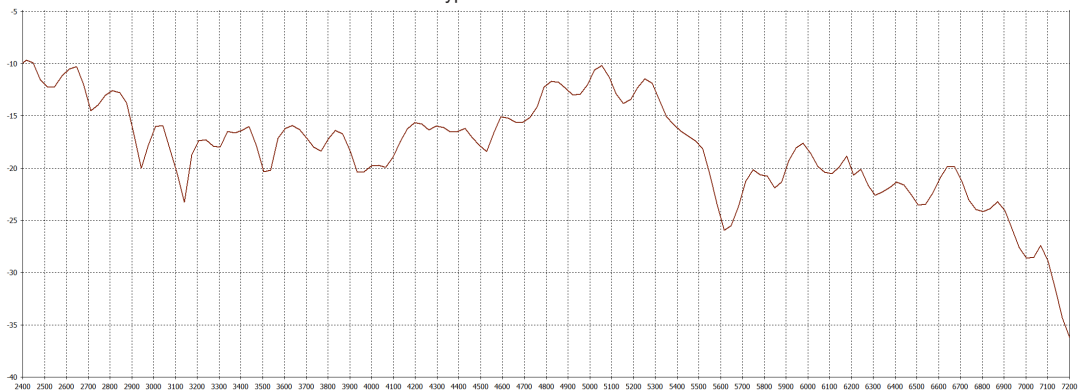
Electrical Data on Ground
Plane. - WiFi 1- WiFi 2

Typical VSWR- WiFi Elements*



* VSWR measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable

Typical Isolation - WiFi Elements*



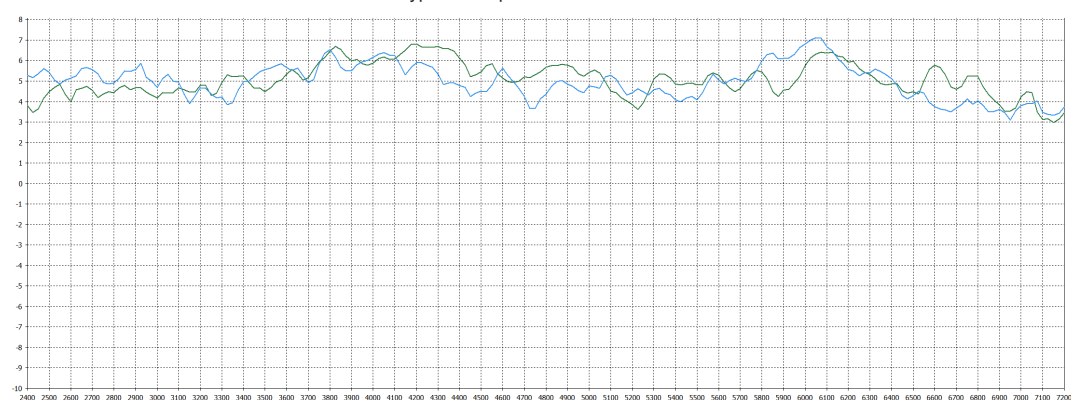
* Isolation measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable

Typical Efficiency - WiFi Elements*



* Efficiency measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable

Typical Swept Peak Gain - WiFi Elements*



* Swept peak gain measured on 600x600(2'x2') ground plane with 0.3m (1') of FR RG174 Cable

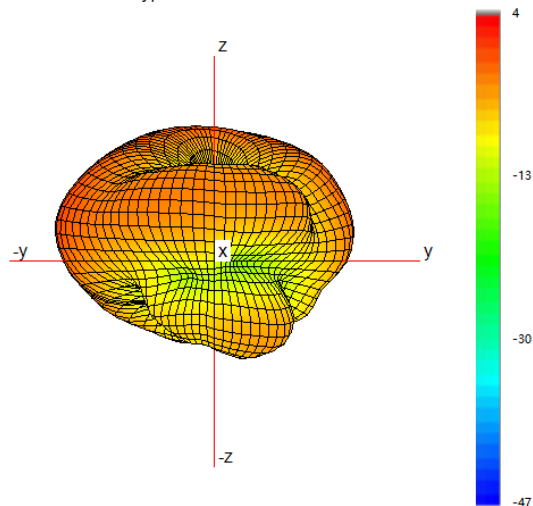
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

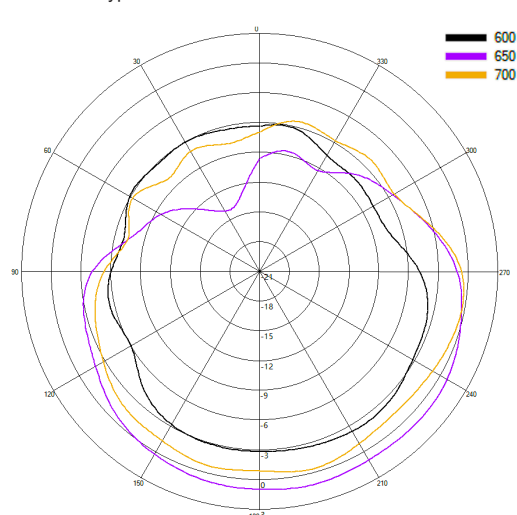
PANORAMA ANTENNAS

3D Patterns Cell A on Ground Plane

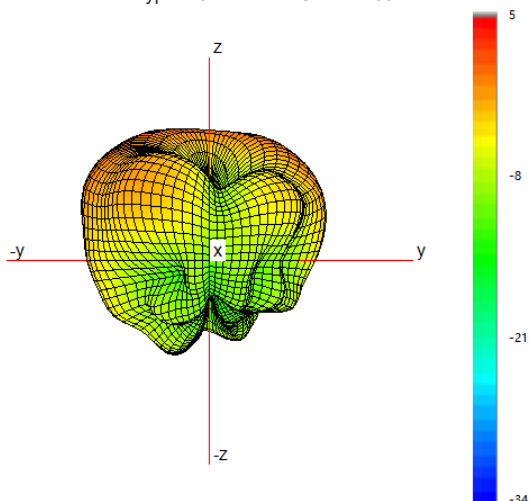
Typical 3D Pattern- Cell A - 650 MHz



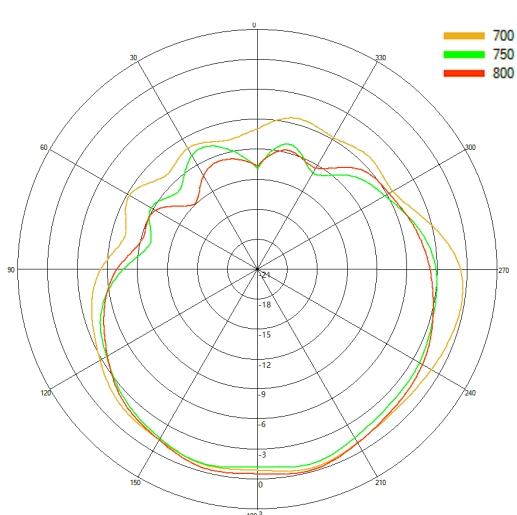
Typical H Plane- Cell A - Patterns- 600-700MHz



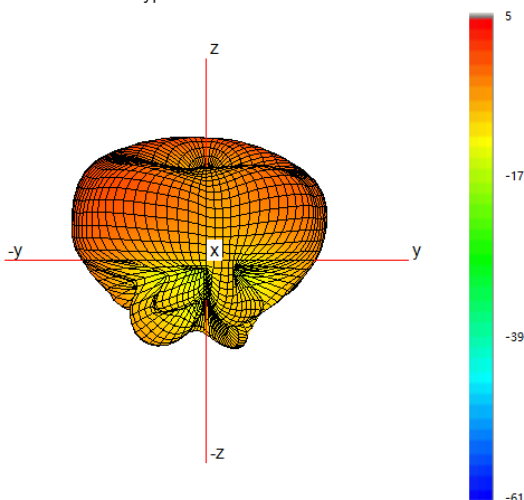
Typical 3D Pattern- Cell A - 750 MHz



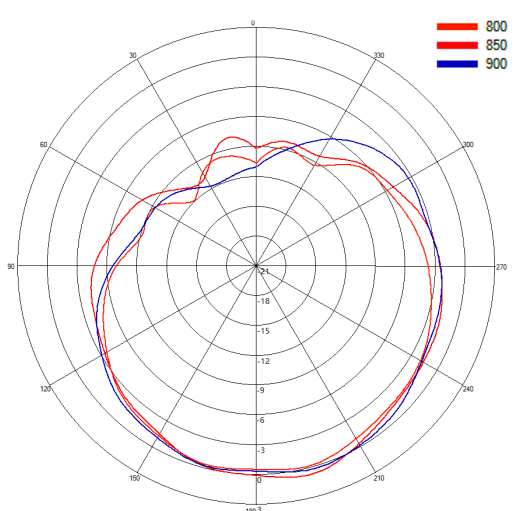
Typical H Plane- Cell A - Patterns- 700-800MHz



Typical 3D Pattern- Cell A - 850 MHz



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



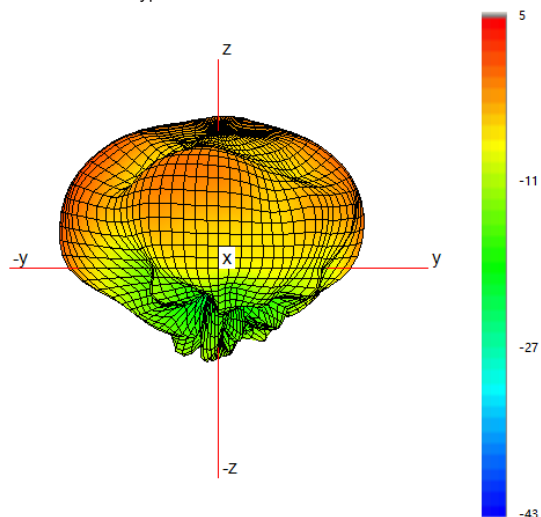
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

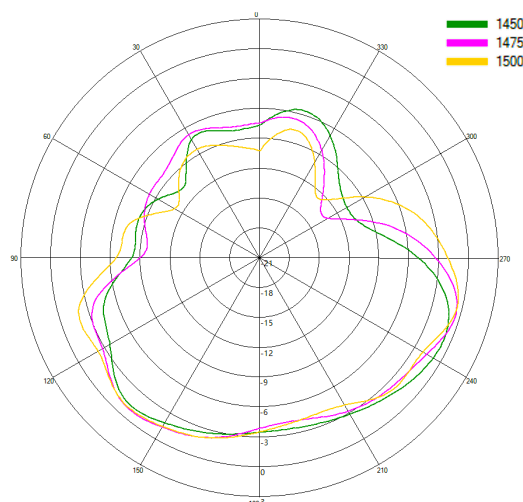
PANORAMA ANTENNAS

3D Patterns Cell A on
Ground Plane

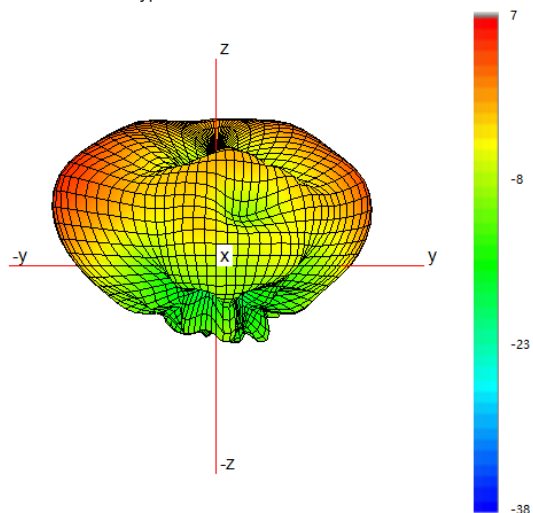
Typical 3D Pattern- Cell A - 1475 MHz



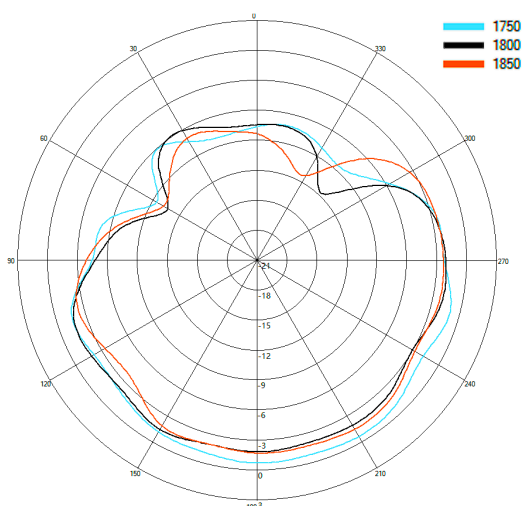
Typical H Plane- Cell A- Patterns- 1450-1500 MHz



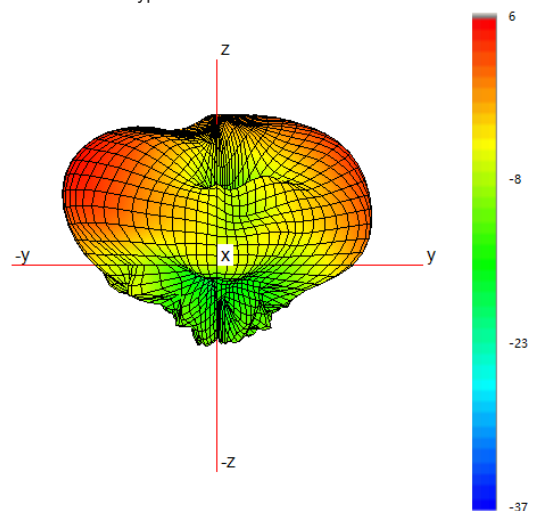
Typical 3D Pattern- Cell A - 1800 MHz



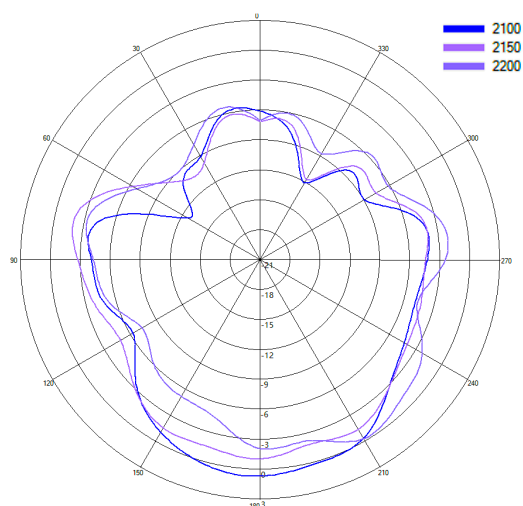
Typical H Plane- Cell A- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell A - 2150 MHz



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



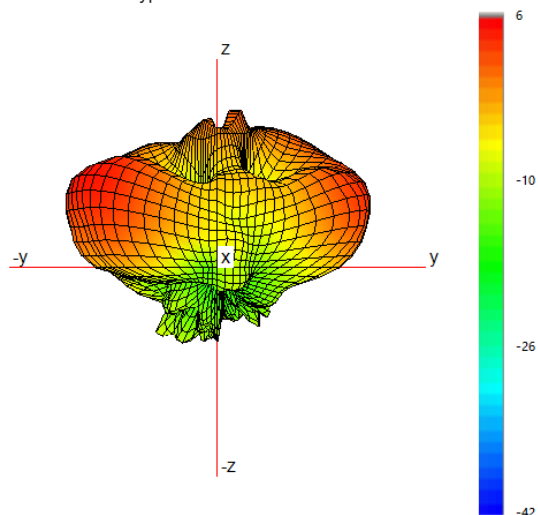
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

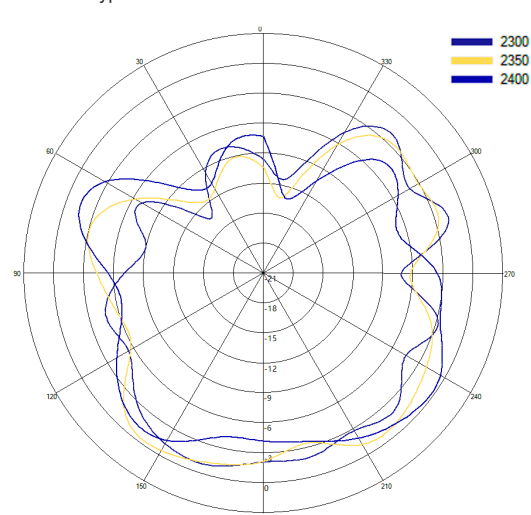
PANORAMA ANTENNAS

3D Patterns Cell A on Ground Plane

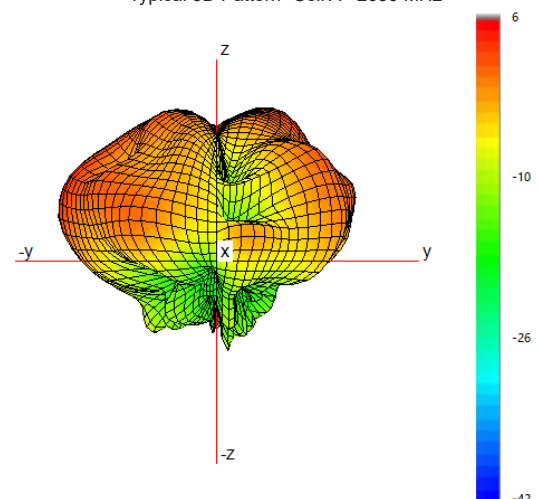
Typical 3D Pattern- Cell A - 2350 MHz



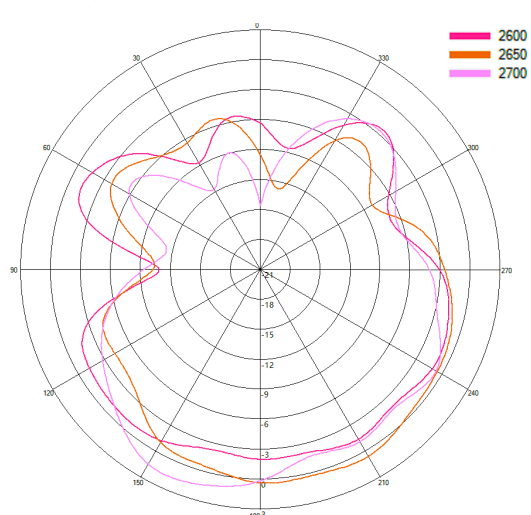
Typical H Plane- Cell A - Patterns- 2300-2400 MHz



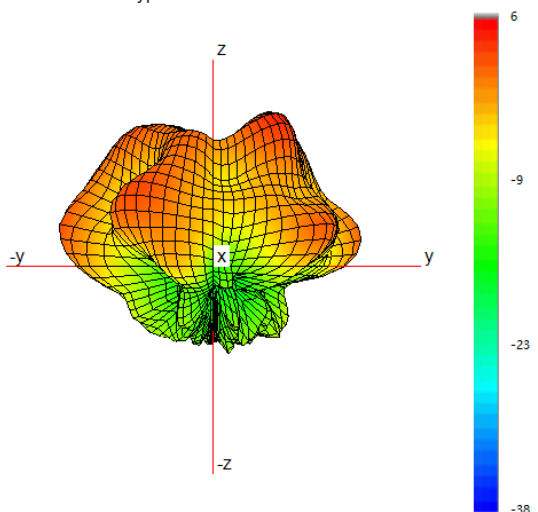
Typical 3D Pattern- Cell A - 2650 MHz



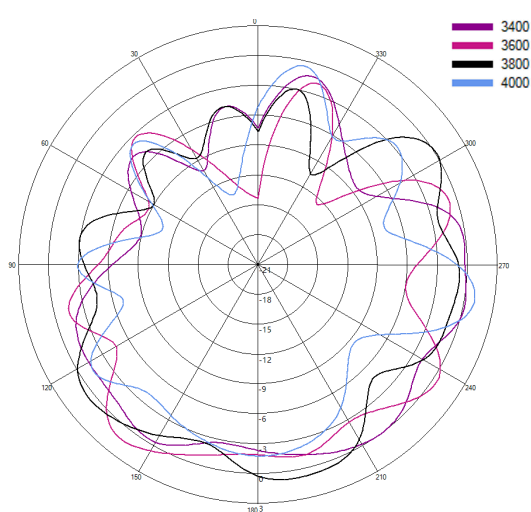
Typical H Plane- Cell A - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell A - 3600 MHz



Typical H Plane- Cell A - Patterns- 3400-4000 MHz

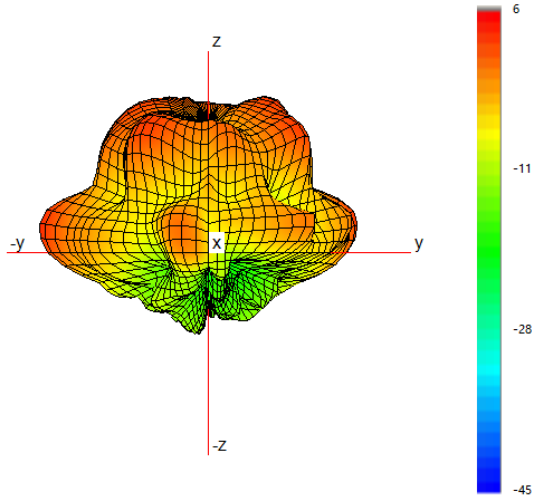


MiMo 4G/5G Dome Combination Antenna Range

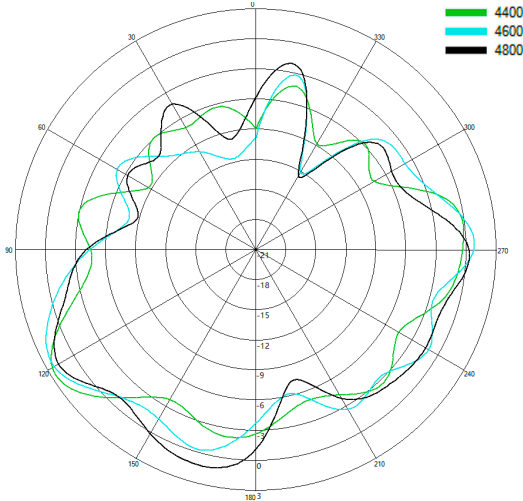
L[X]M[X]M4[X]-6-60-[X]14-72

3D Patterns Cell A
on Ground Plane

Typical 3D Pattern- Cell A - 4700 MHz



Typical H Plane- Cell A - Patterns- 4400-4800 MHz



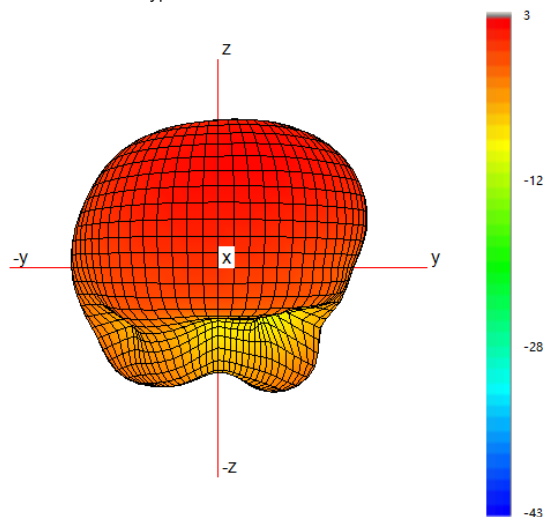
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

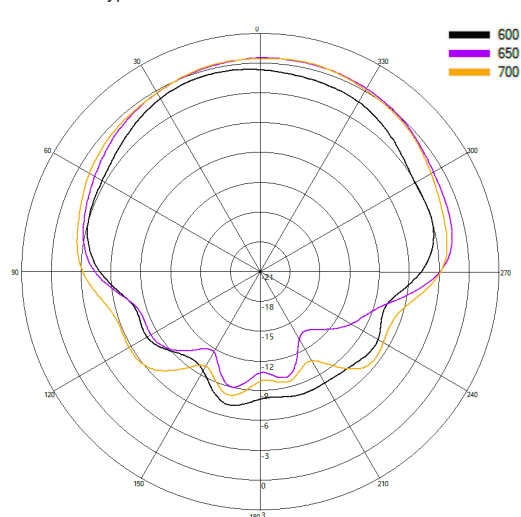
PANORAMA ANTENNAS

3D Patterns Cell B on Ground Plane

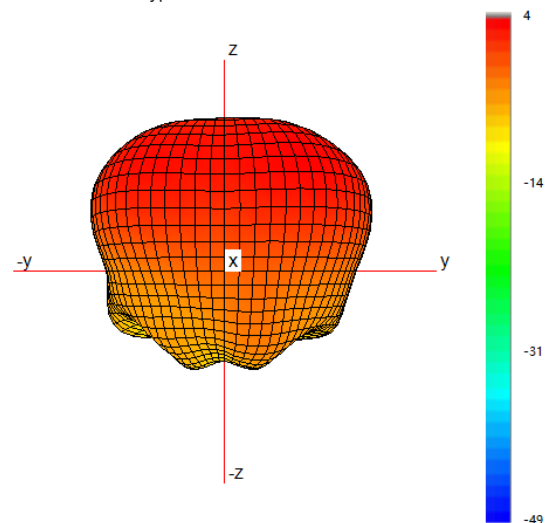
Typical 3D Pattern- Cell B - 650 MHz



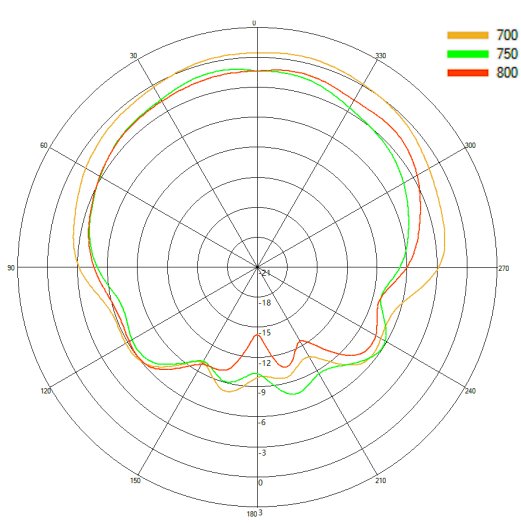
Typical H Plane- Cell B - Patterns- 600-700MHz



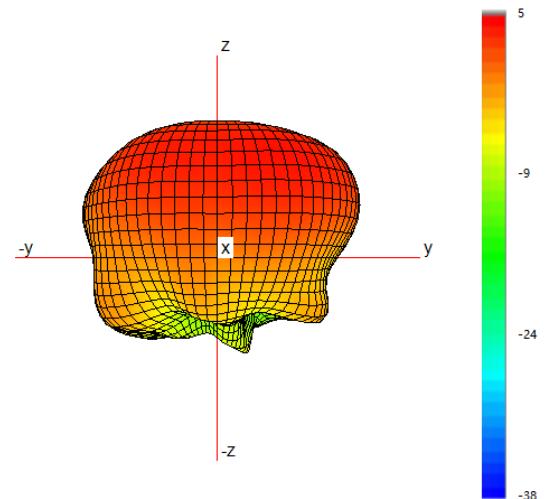
Typical 3D Pattern- Cell B - 750 MHz



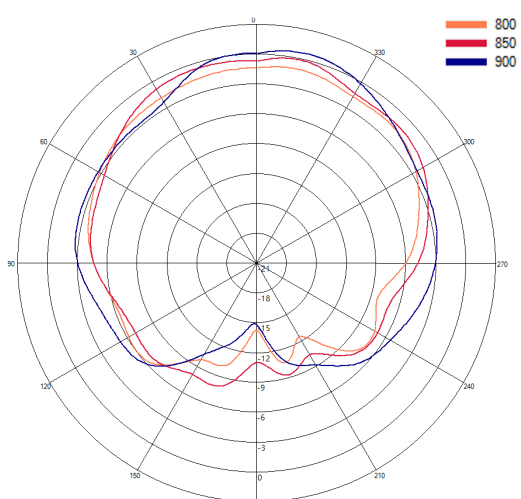
Typical H Plane- Cell B - Patterns- 700-800MHz



Typical 3D Pattern- Cell B - 850 MHz



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



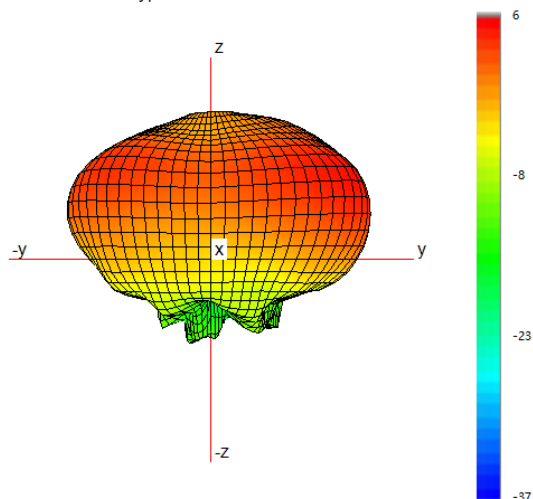
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

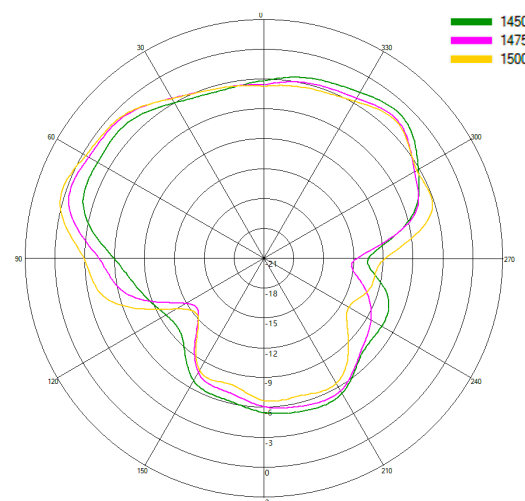
PANORAMA ANTENNAS

3D Patterns Cell B
on Ground Plane

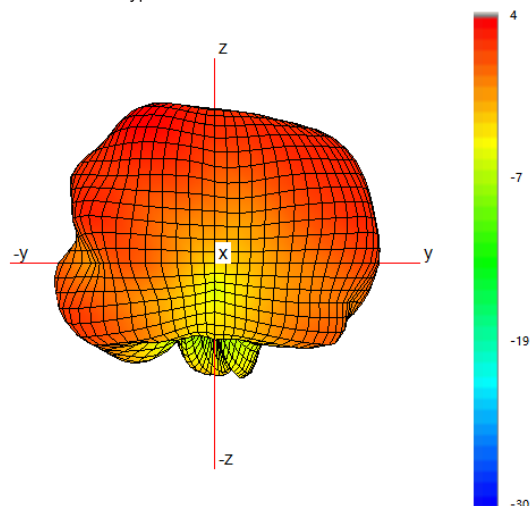
Typical 3D Pattern- Cell B - 1475 MHz



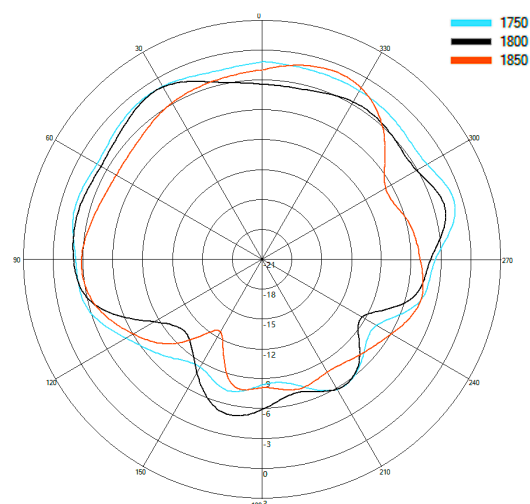
Typical H Plane- Cell B- Patterns- 1450-1500 MHz



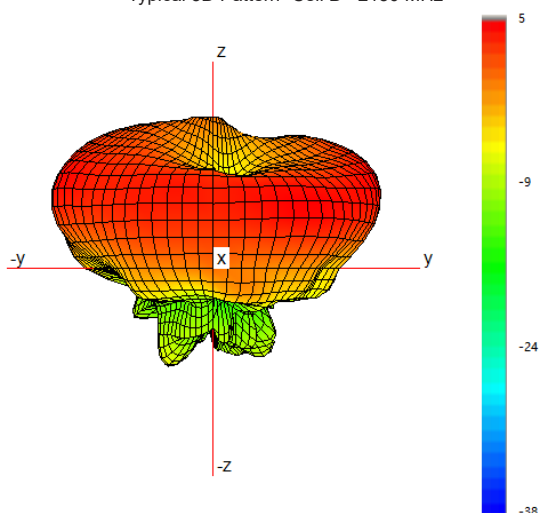
Typical 3D Pattern- Cell B - 1800 MHz



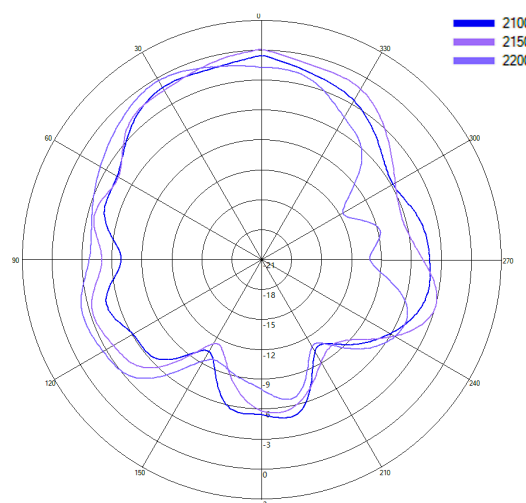
Typical H Plane- Cell B- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell B - 2150 MHz



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



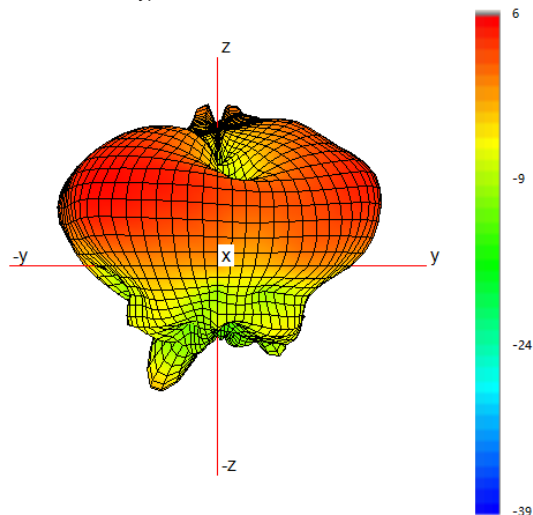
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

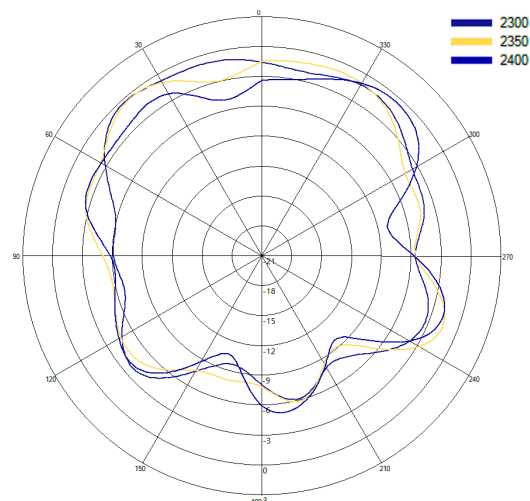
PANORAMA ANTENNAS

3D Patterns Cell B on Ground Plane

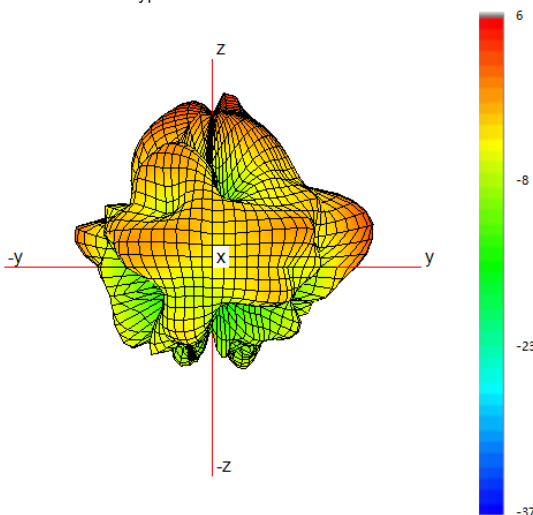
Typical 3D Pattern- Cell B - 2350 MHz



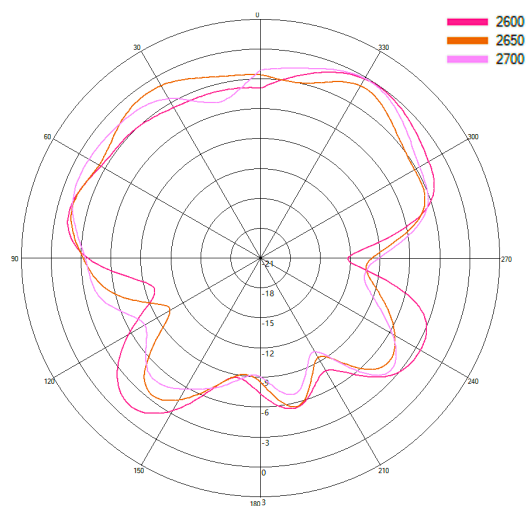
Typical H Plane- Cell B - Patterns- 2300-2400 MHz



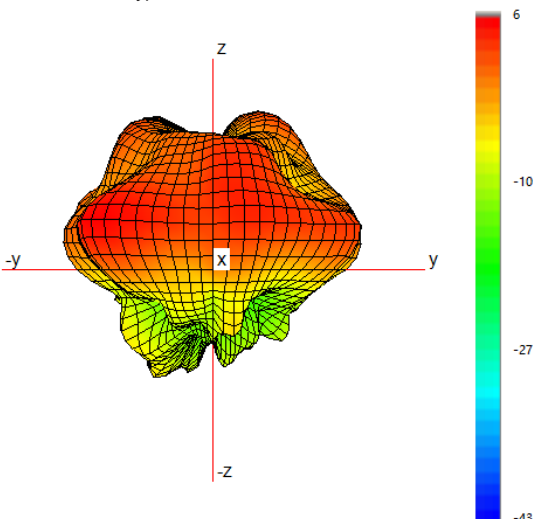
Typical 3D Pattern- Cell B - 2650 MHz



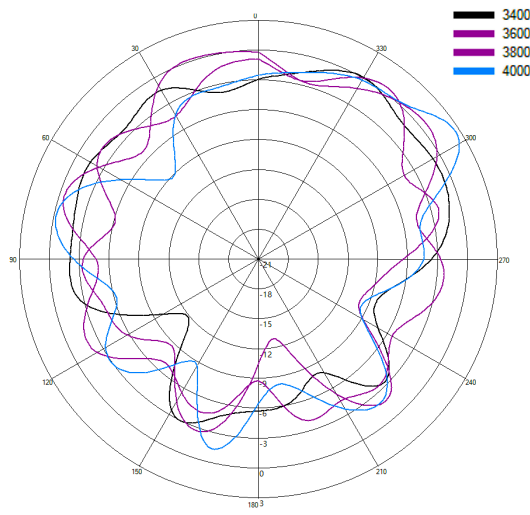
Typical H Plane- Cell B - Patterns- 2600-2700 MHz



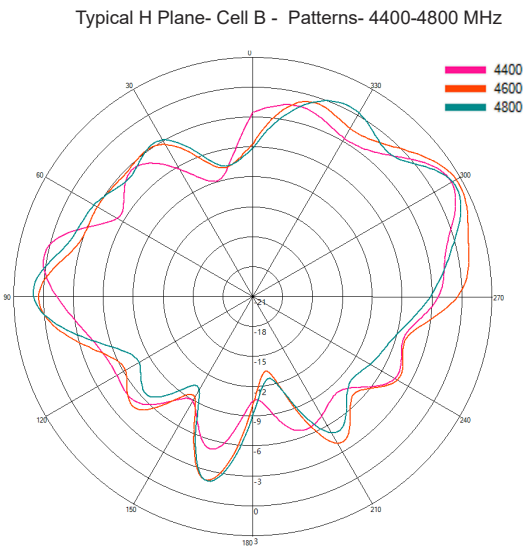
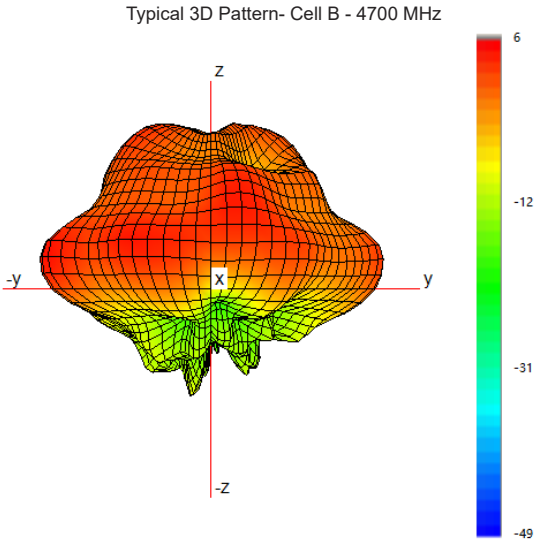
Typical 3D Pattern- Cell B - 3600 MHz



Typical H Plane- Cell B - Patterns- 3400-4000 MHz



3D Patterns Cell B
on Ground Plane



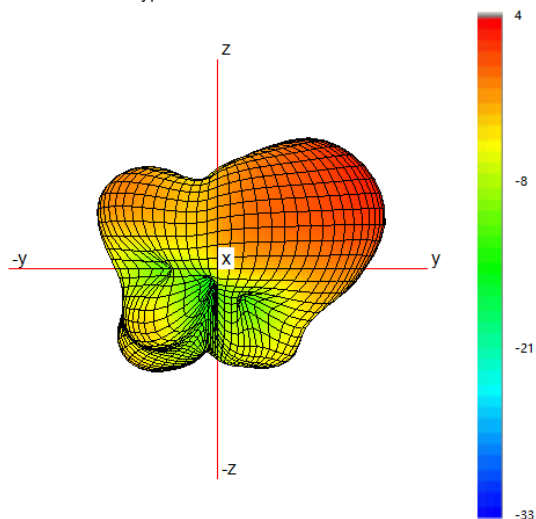
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

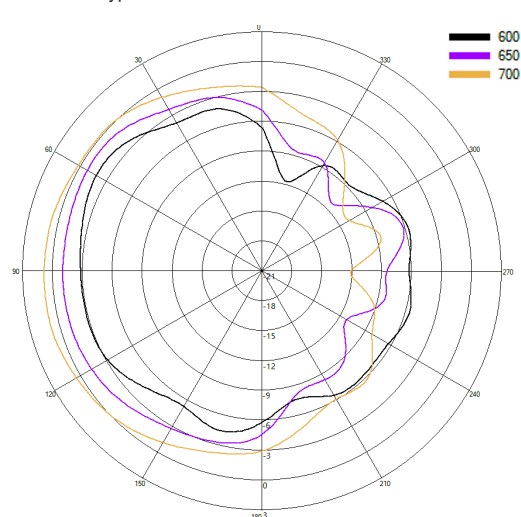
PANORAMA ANTENNAS

3D Patterns Cell C on Ground Plane

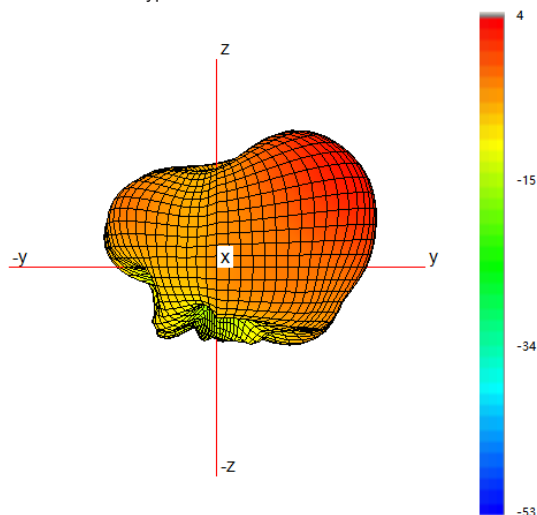
Typical 3D Pattern- Cell C - 650 MHz



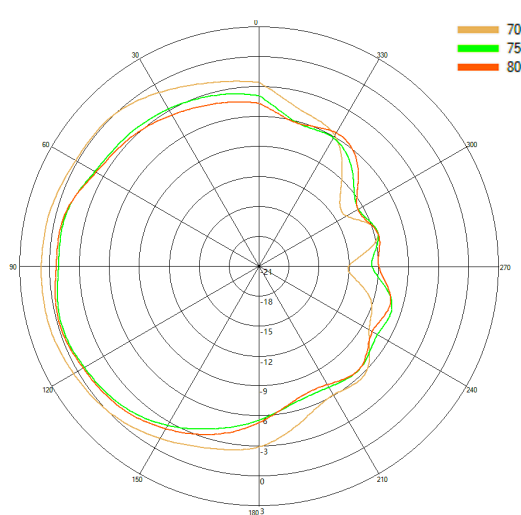
Typical H Plane- Cell C - Patterns- 600-700MHz



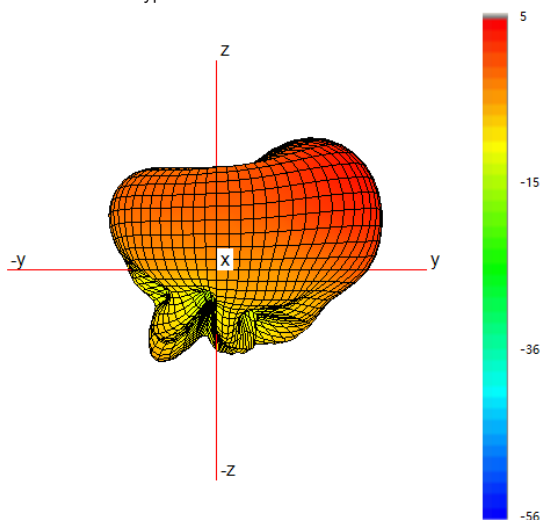
Typical 3D Pattern- Cell C - 750 MHz



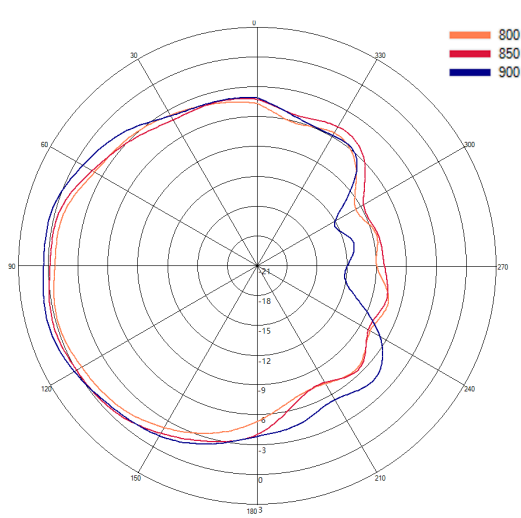
Typical H Plane- Cell C - Patterns- 700-800MHz



Typical 3D Pattern- Cell C - 850 MHz



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



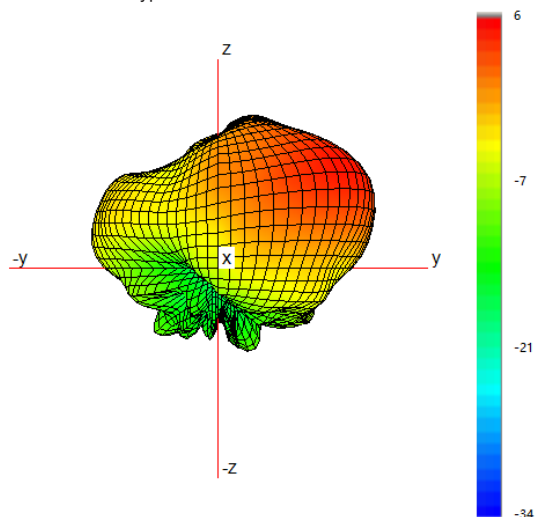
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

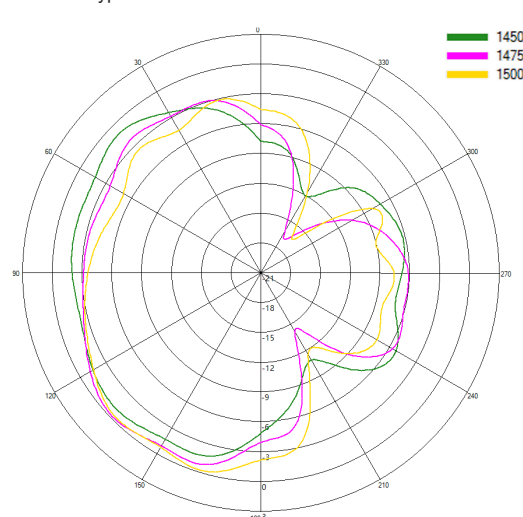
PANORAMA ANTENNAS

3D Patterns Cell C
on Ground Plane

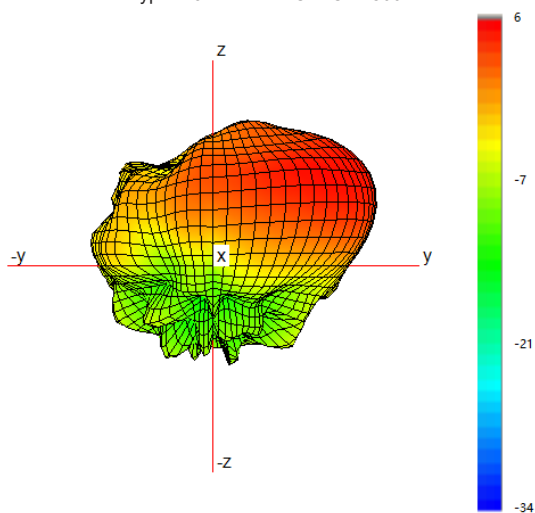
Typical 3D Pattern- Cell C - 1475 MHz



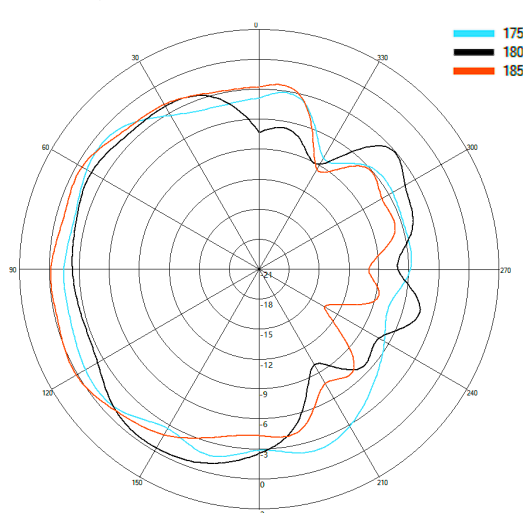
Typical H Plane- Cell C- Patterns- 1450-1500 MHz



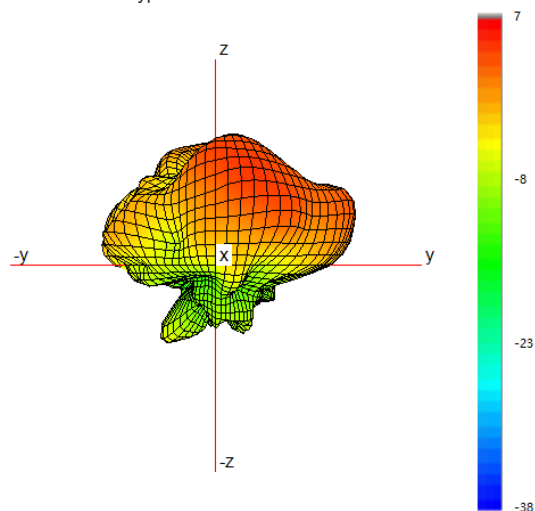
Typical 3D Pattern- Cell C - 1800 MHz



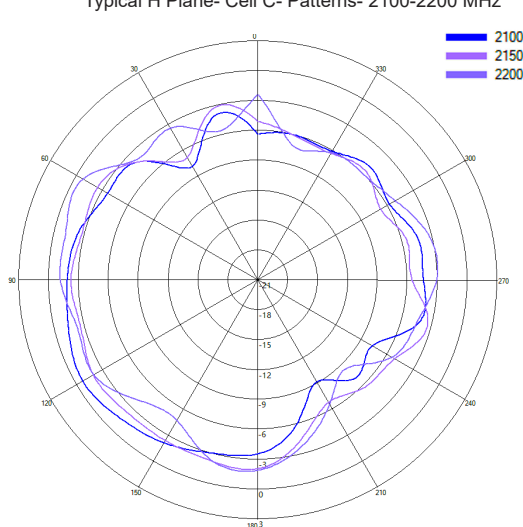
Typical H Plane- Cell C- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell C - 2150 MHz



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



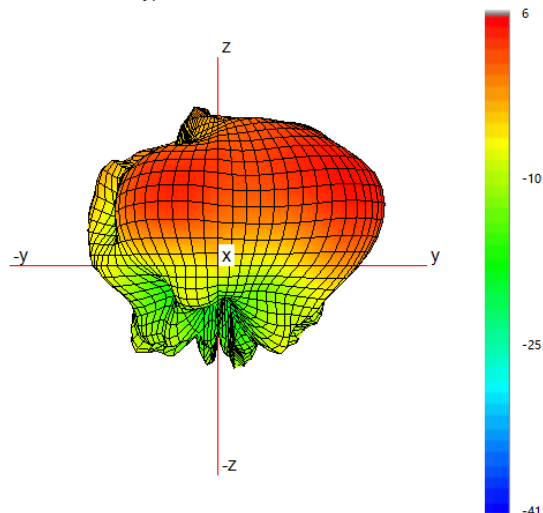
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

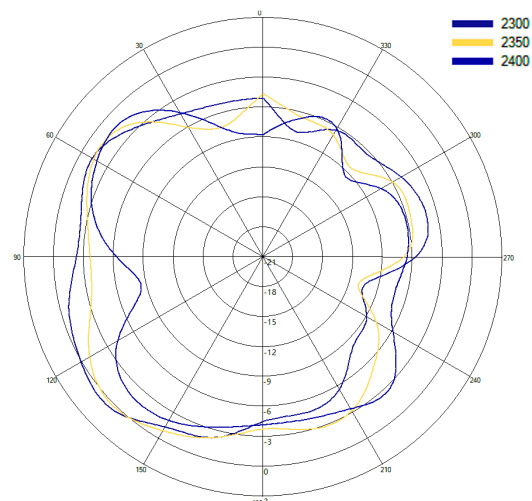
PANORAMA ANTENNAS

3D Patterns Cell C on Ground Plane

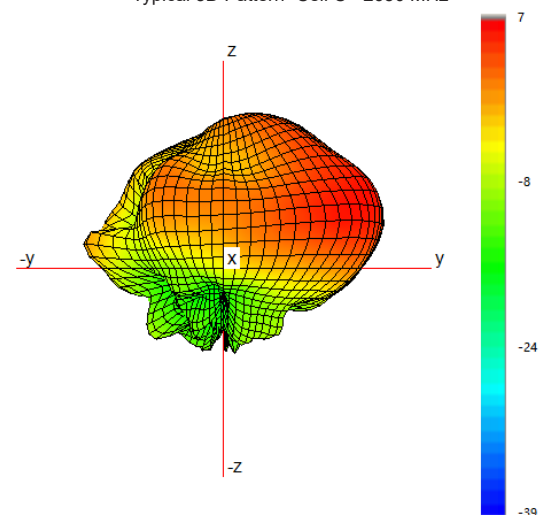
Typical 3D Pattern- Cell C - 2350 MHz



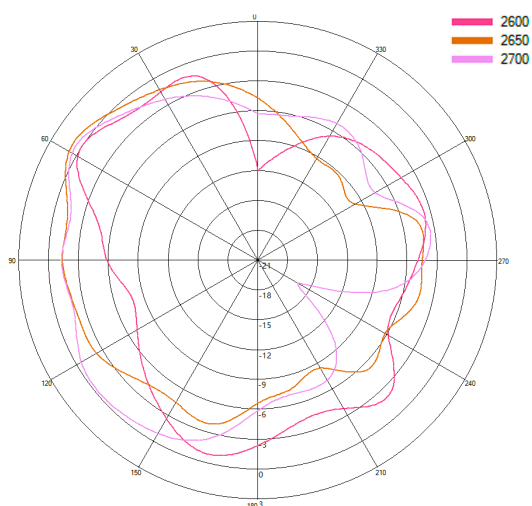
Typical H Plane- Cell C - Patterns- 2300-2400 MHz



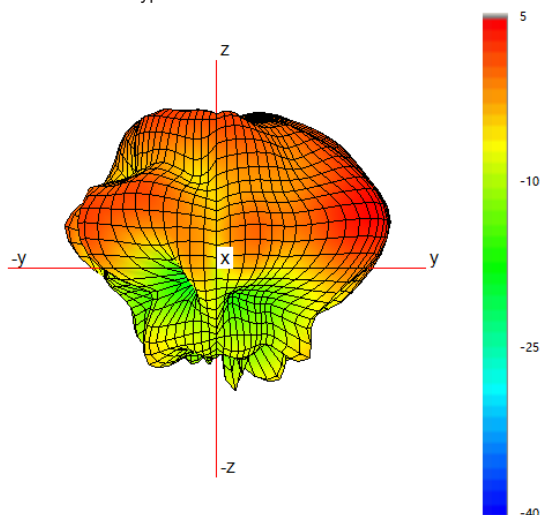
Typical 3D Pattern- Cell C - 2650 MHz



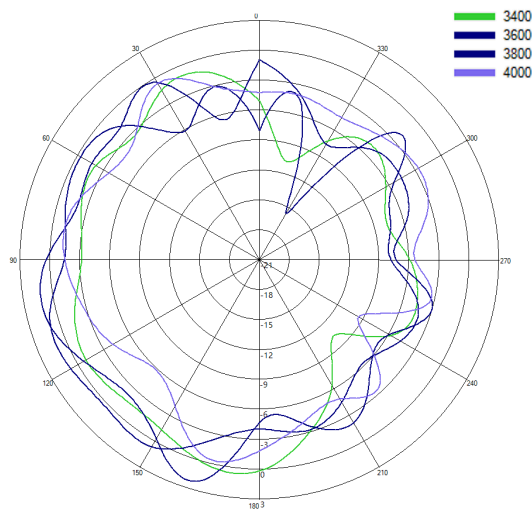
Typical H Plane- Cell C - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell C - 3600 MHz

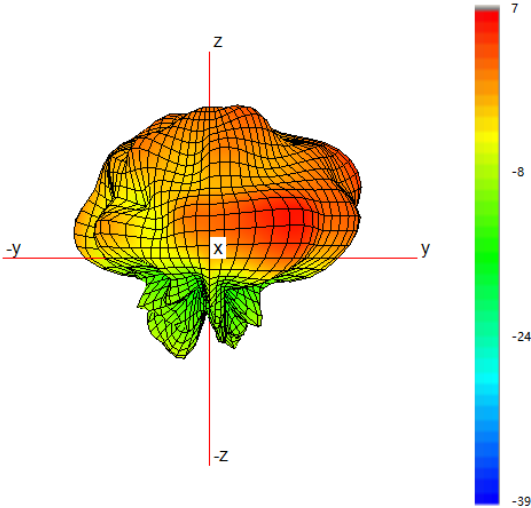


Typical H Plane- Cell C - Patterns- 3400-4000 MHz

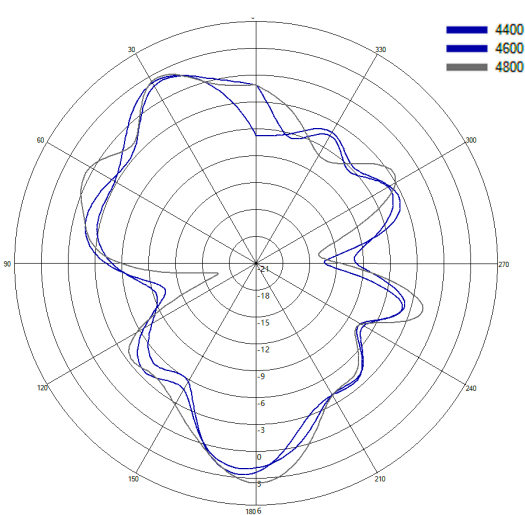


3D Patterns Cell C
on Ground Plane

Typical 3D Pattern- Cell C - 4700 MHz



Typical H Plane- Cell C - Patterns- 4400-4800 MHz



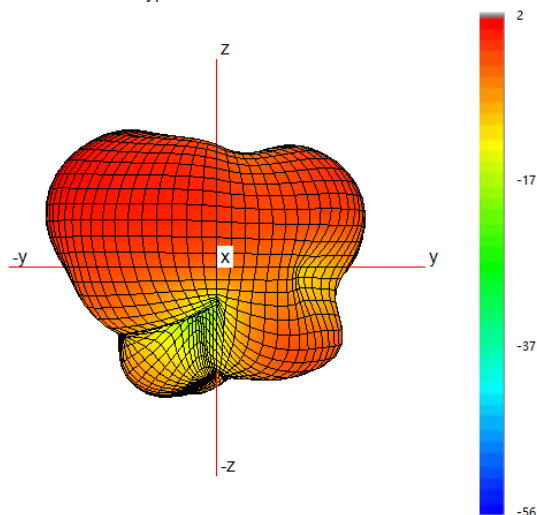
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

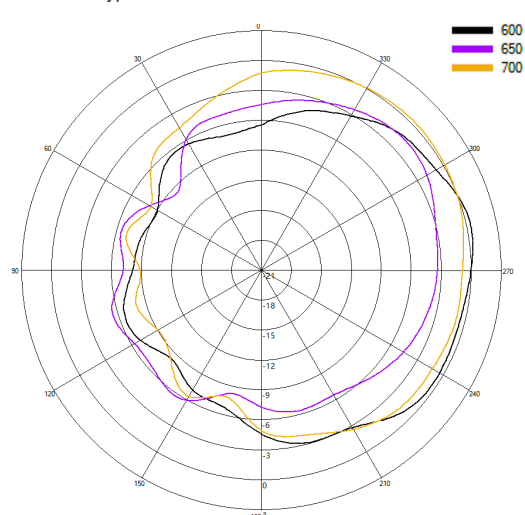
PANORAMA ANTENNAS

3D Patterns Cell D on Ground Plane

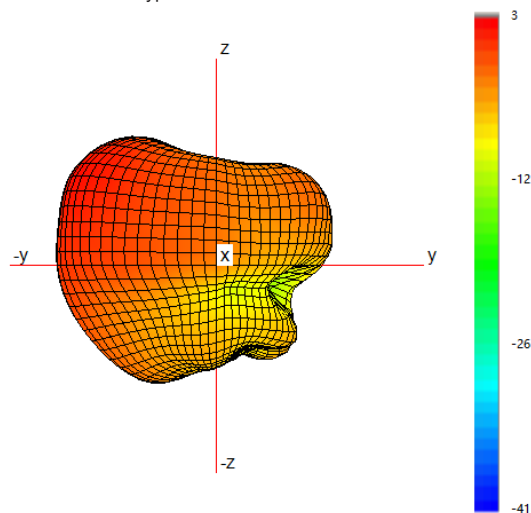
Typical 3D Pattern- Cell D - 650 MHz



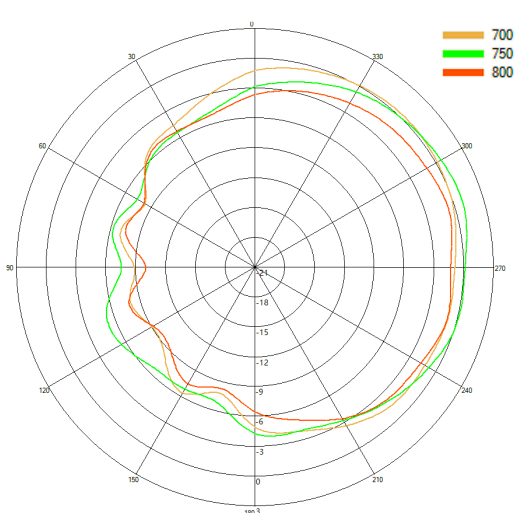
Typical H Plane- Cell D - Patterns- 600-700MHz



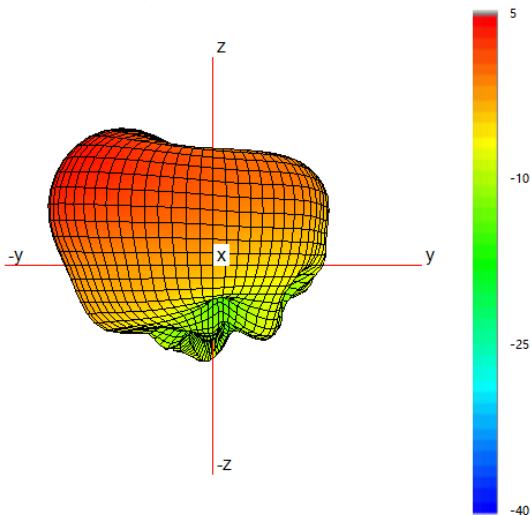
Typical 3D Pattern- Cell D - 750 MHz



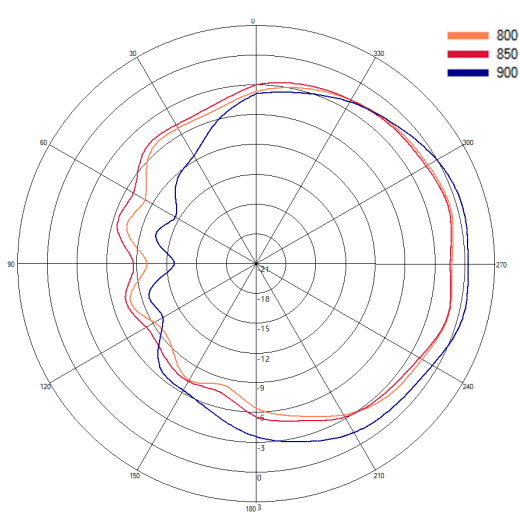
Typical H Plane- Cell D - Patterns- 700-800MHz



Typical 3D Pattern- Cell D - 850 MHz



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



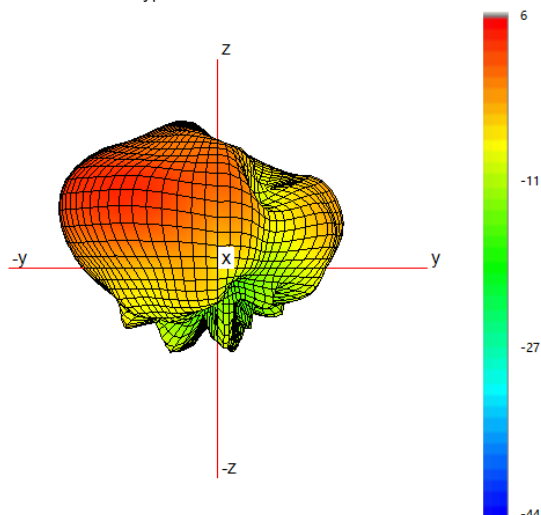
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

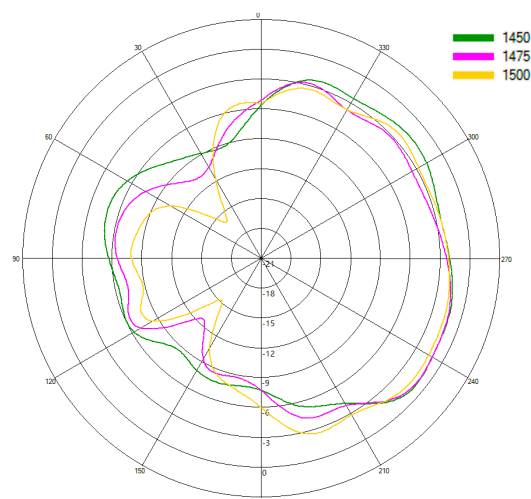
PANORAMA ANTENNAS

3D Patterns Cell D
on Ground Plane

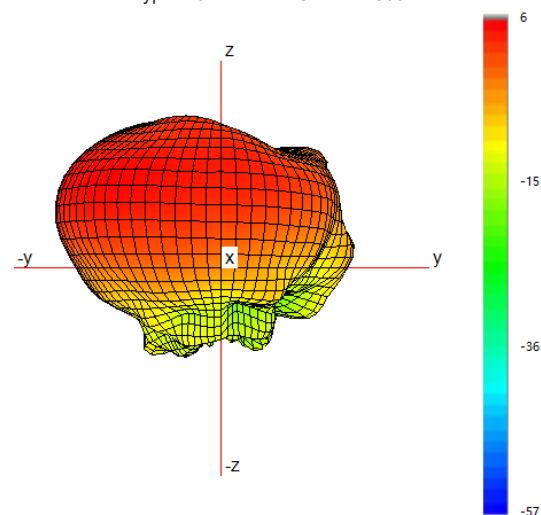
Typical 3D Pattern- Cell D - 1475 MHz



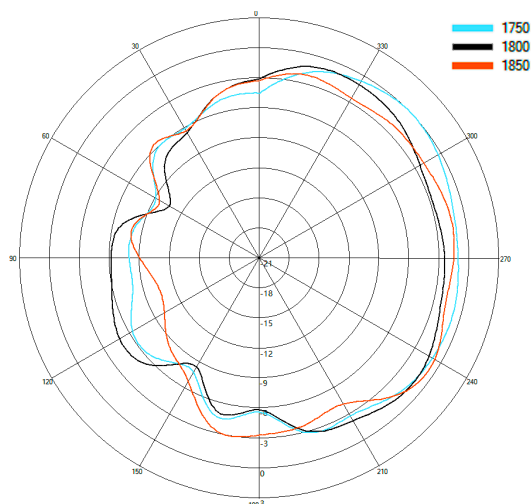
Typical H Plane- Cell D- Patterns- 1450-1500 MHz



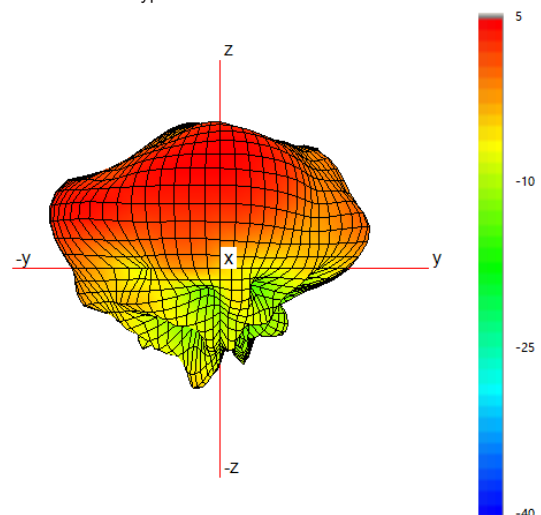
Typical 3D Pattern- Cell D - 1800 MHz



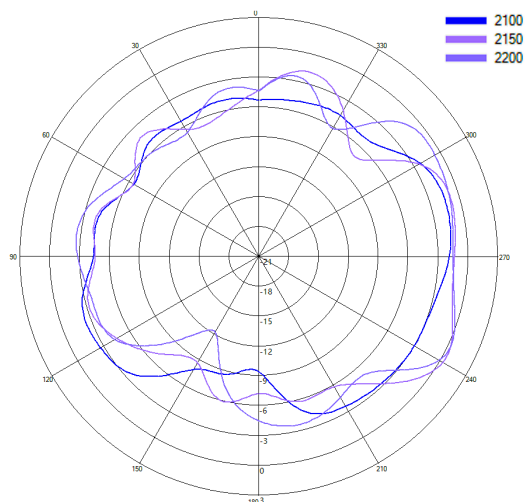
Typical H Plane- Cell D- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell D - 2150 MHz



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



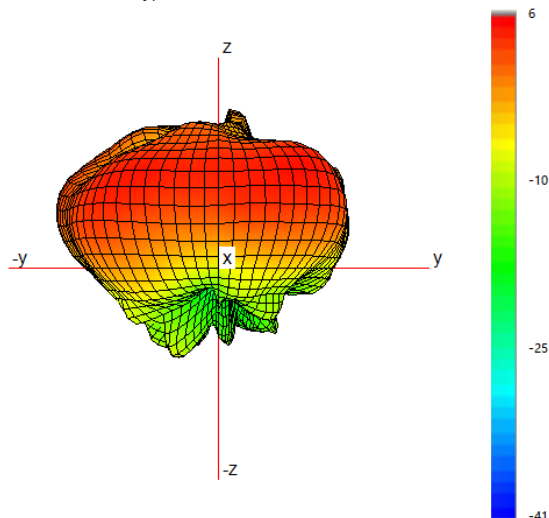
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

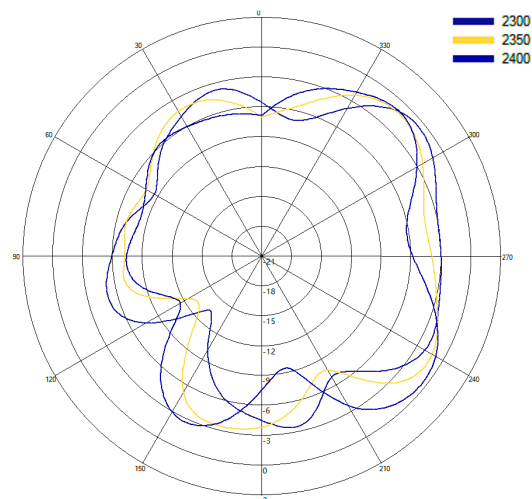
PANORAMA ANTENNAS

3D Patterns Cell D on Ground Plane

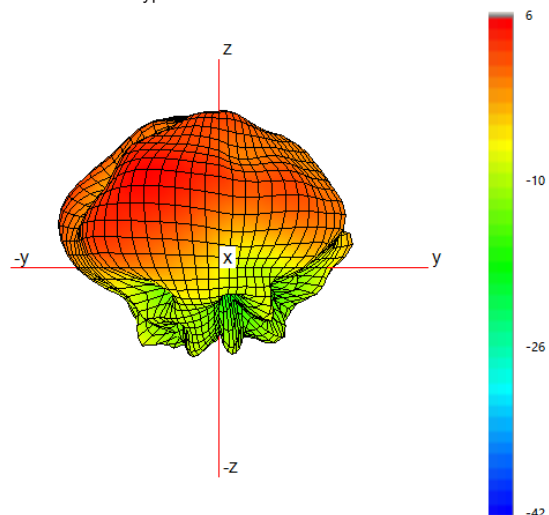
Typical 3D Pattern- Cell D - 2350 MHz



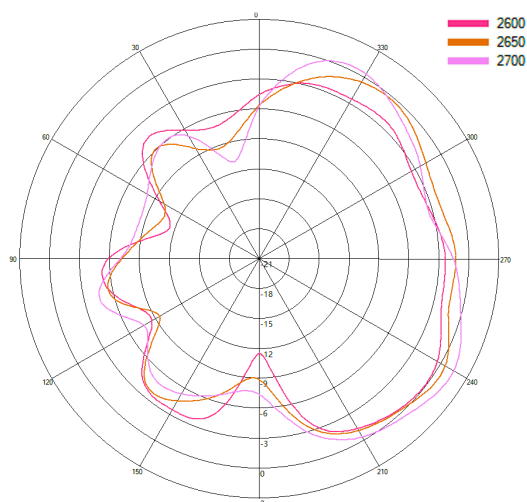
Typical H Plane- Cell D - Patterns- 2300-2400 MHz



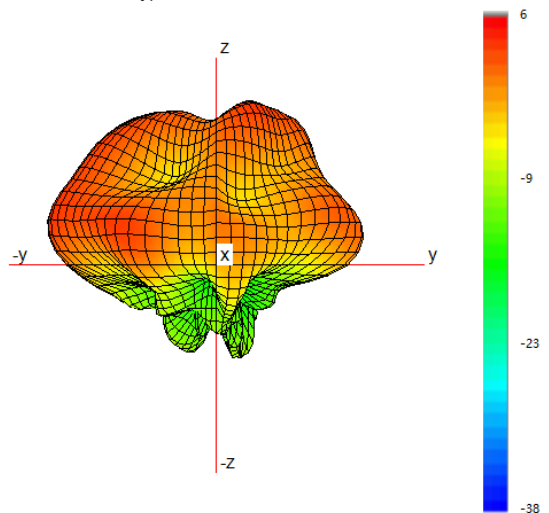
Typical 3D Pattern- Cell D - 2650 MHz



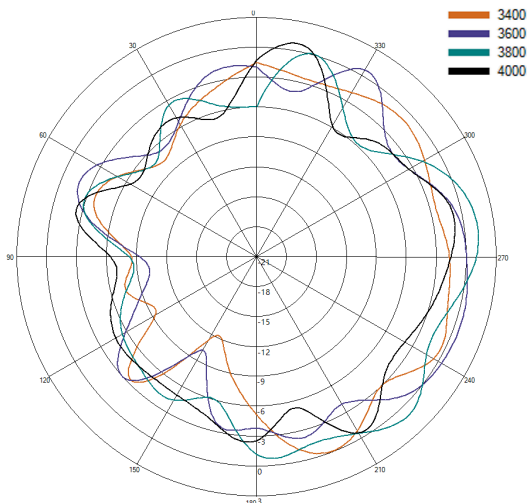
Typical H Plane- Cell D - Patterns- 2600-2700 MHz



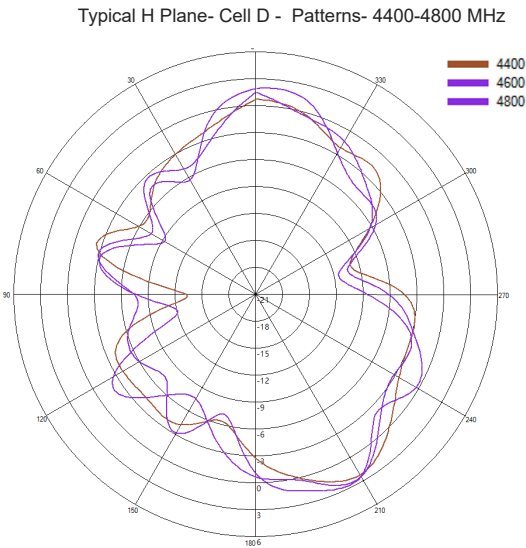
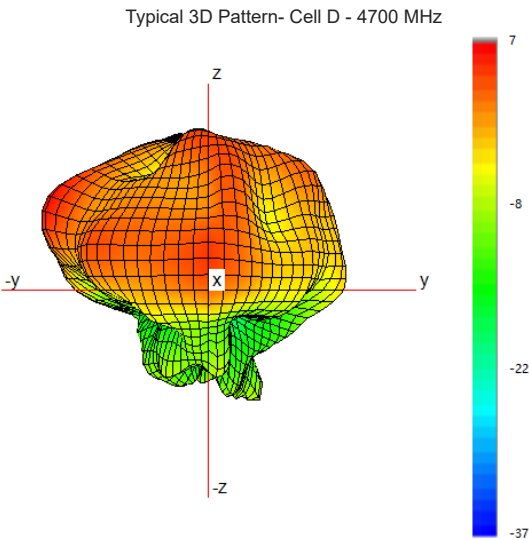
Typical 3D Pattern- Cell D - 3600 MHz



Typical H Plane- Cell D - Patterns- 3400-4000 MHz



3D Patterns Cell D
on Ground Plane



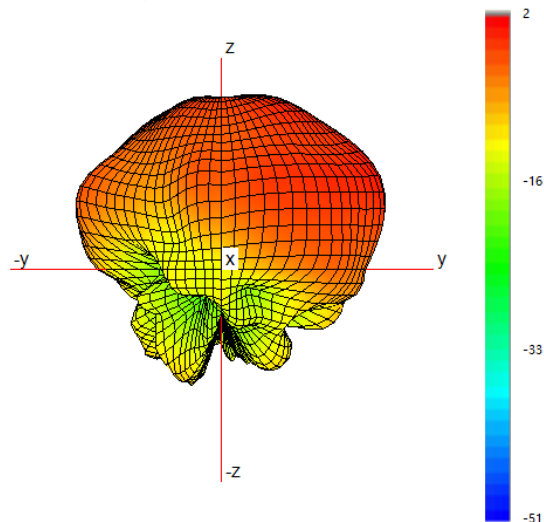
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

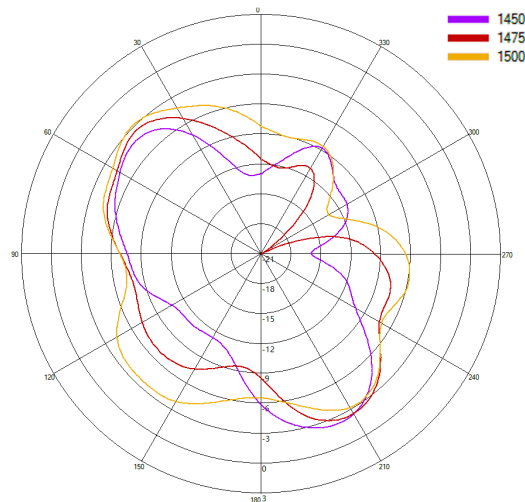
PANORAMA ANTENNAS

3D Patterns Cell 1 on Ground Plane

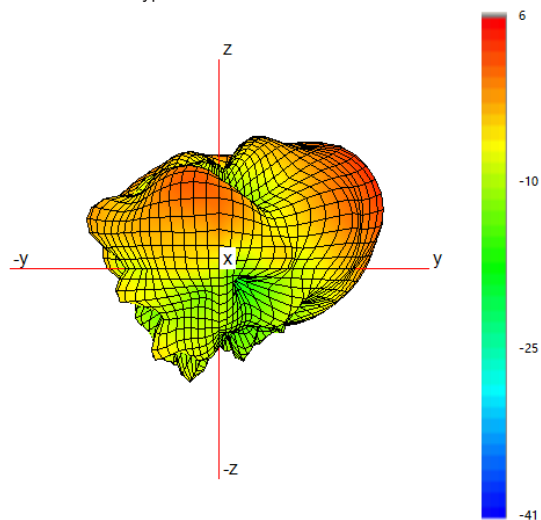
Typical 3D Pattern- Cell 1 - 1475 MHz



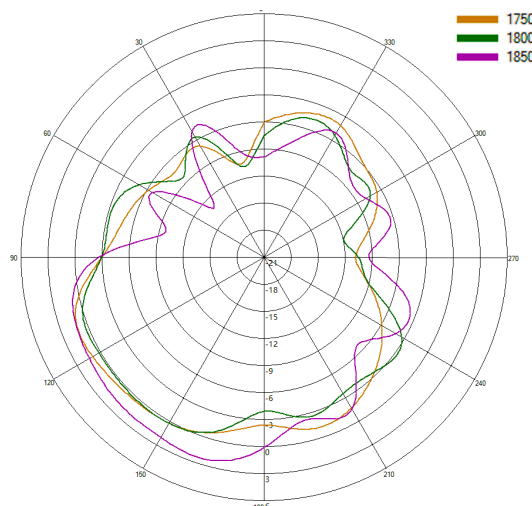
Typical H Plane- Cell 1- Patterns- 1450-1500 MHz



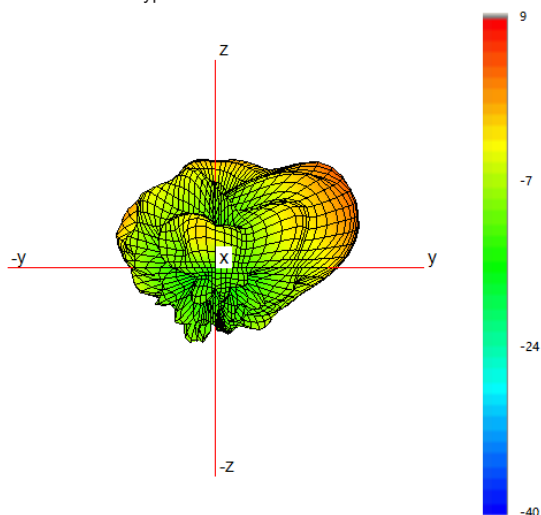
Typical 3D Pattern- Cell 1 - 1800 MHz



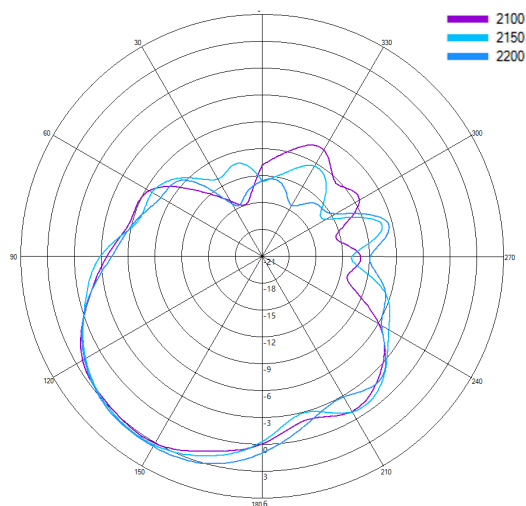
Typical H Plane- Cell 1- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell 1 - 2150 MHz



Typical H Plane- Cell 1- Patterns- 2100-2200 MHz



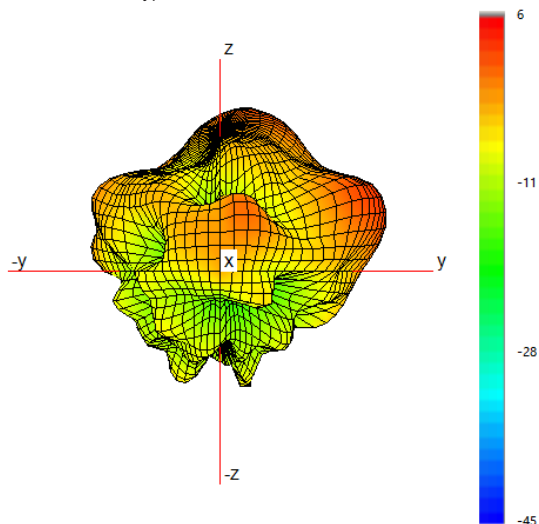
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

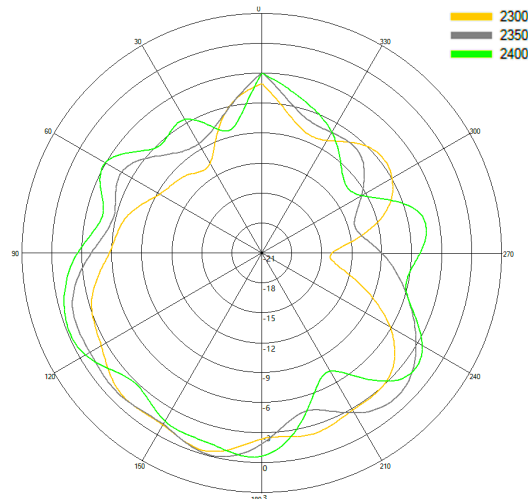
PANORAMA ANTENNAS

3D Patterns Cell 1
on Ground Plane

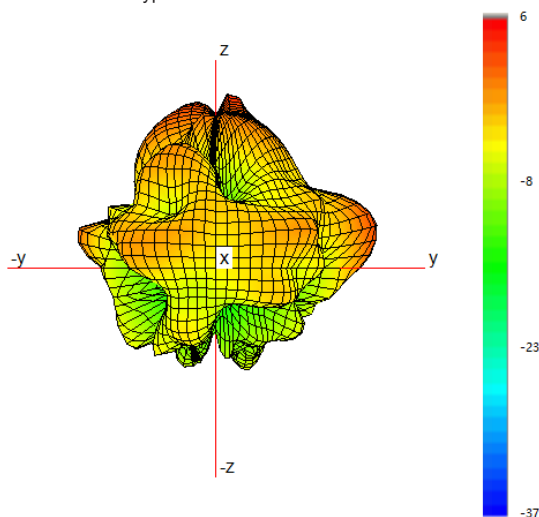
Typical 3D Pattern- Cell 1 - 2350 MHz



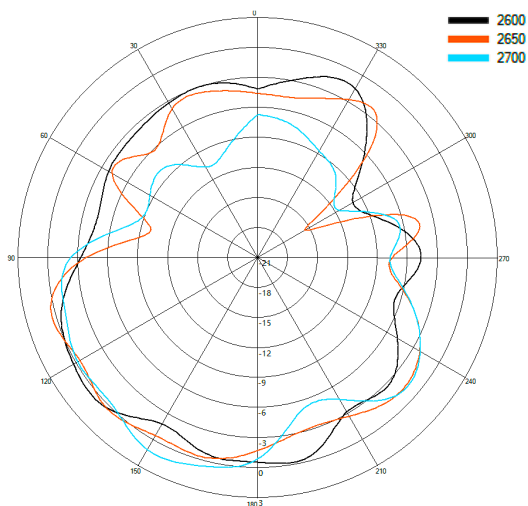
Typical H Plane- Cell 1 - Patterns- 2300-2400 MHz



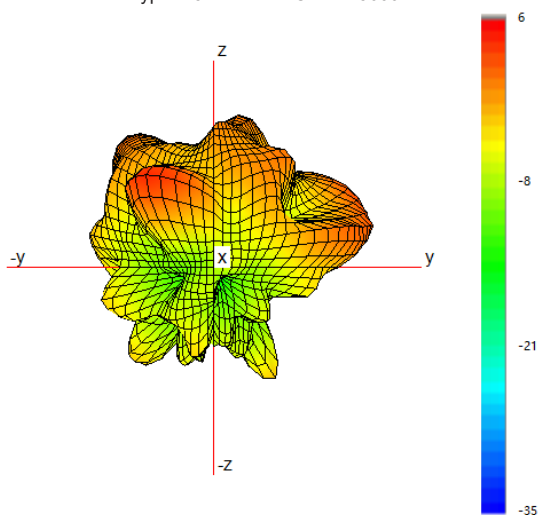
Typical 3D Pattern- Cell 1 - 2650 MHz



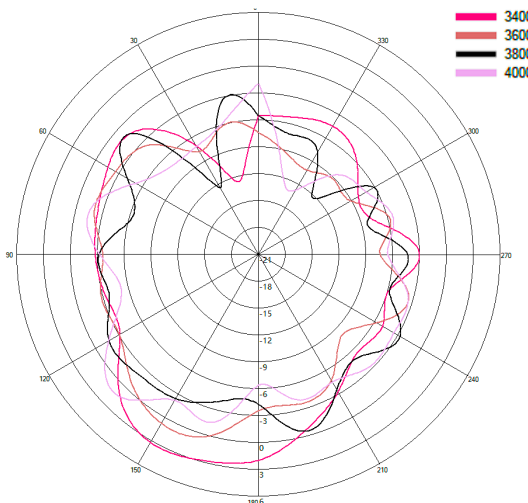
Typical H Plane- Cell 1 - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell 1 - 3600 MHz



Typical H Plane- Cell 1 - Patterns- 3400-4000 MHz



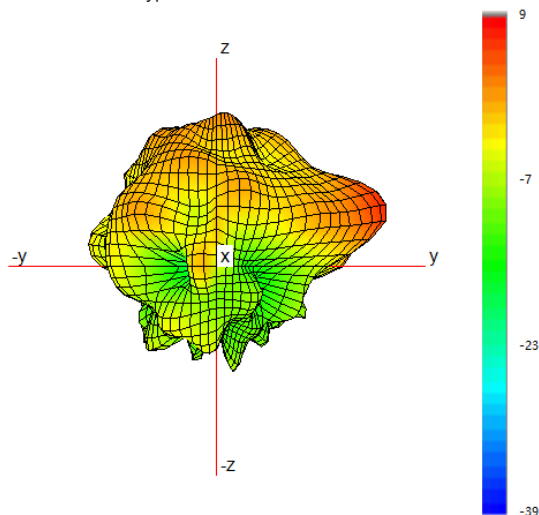
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

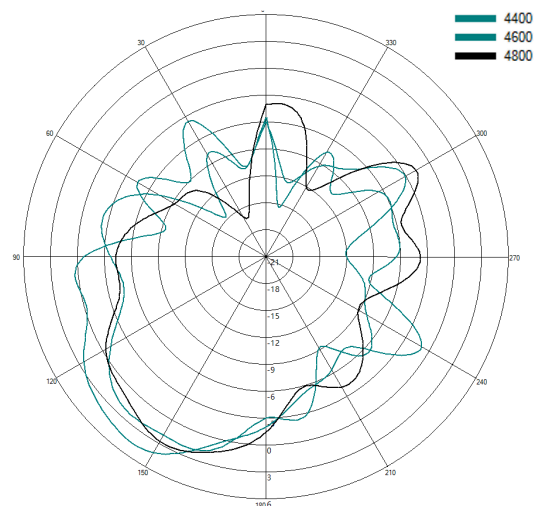
PANORAMA ANTENNAS

3D Patterns Cell 1 on Ground Plane

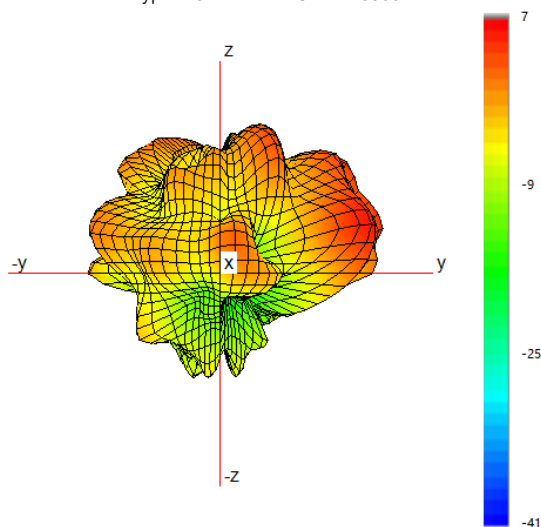
Typical 3D Pattern- Cell 1 - 4700 MHz



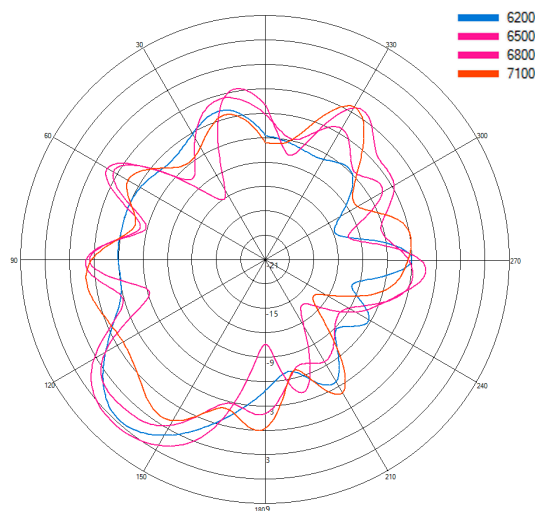
Typical H Plane- Cell 1 - Patterns- 4400-4800 MHz



Typical 3D Pattern- Cell 1 - 6500 MHz



Typical H Plane- Cell 1 - Patterns- 6200-7100 MHz



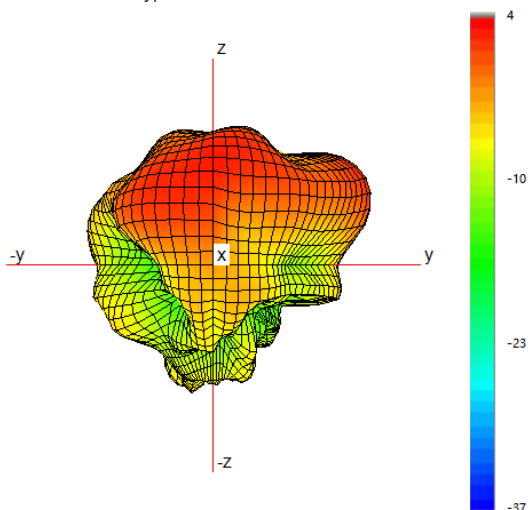
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

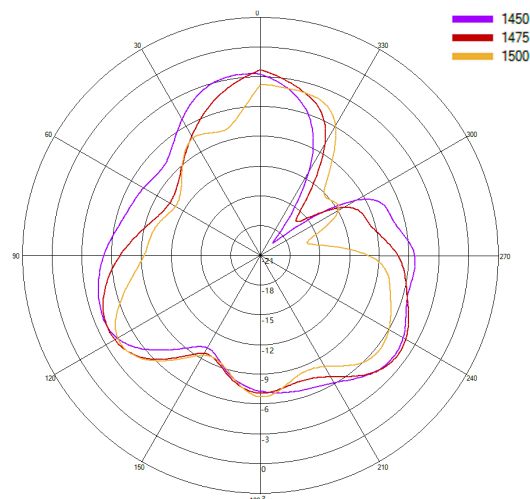
PANORAMA ANTENNAS

3D Patterns Cell 2
on Ground Plane

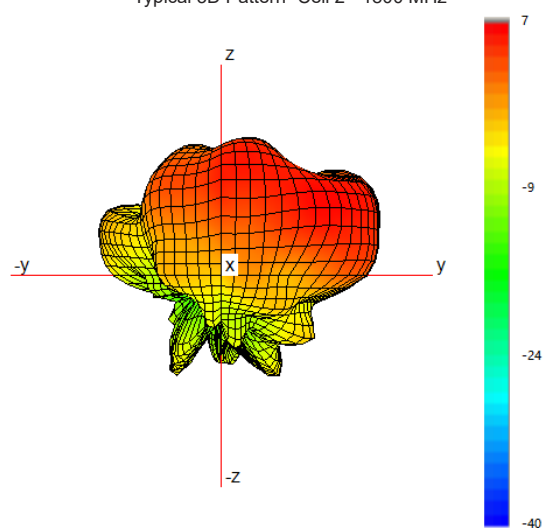
Typical 3D Pattern- Cell 2 - 1475 MHz



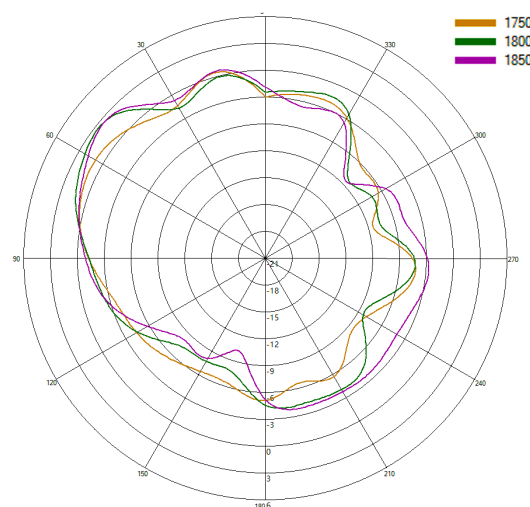
Typical H Plane- Cell 2- Patterns- 1450-1500 MHz



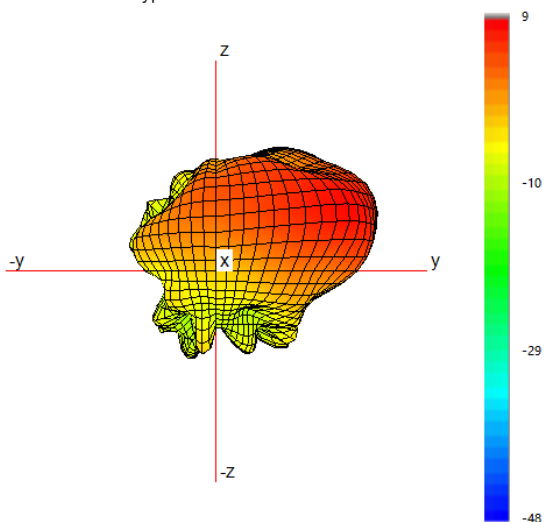
Typical 3D Pattern- Cell 2 - 1800 MHz



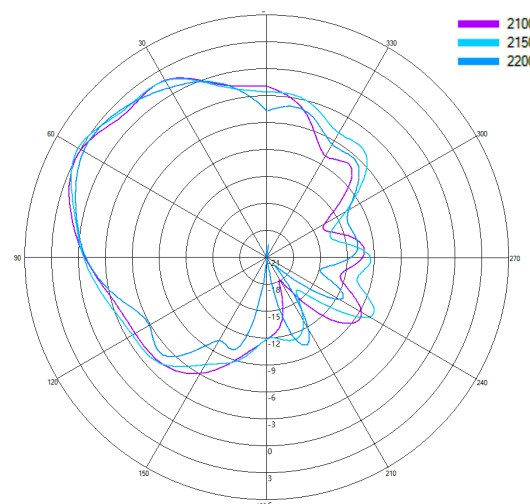
Typical H Plane- Cell 2- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell 2 - 2150 MHz



Typical H Plane- Cell 2- Patterns- 2100-2200 MHz



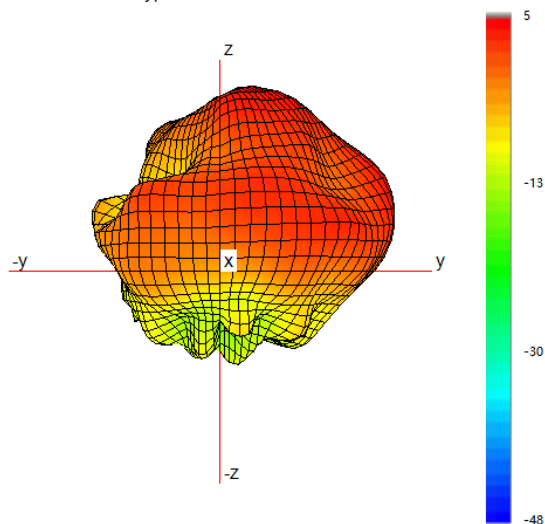
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

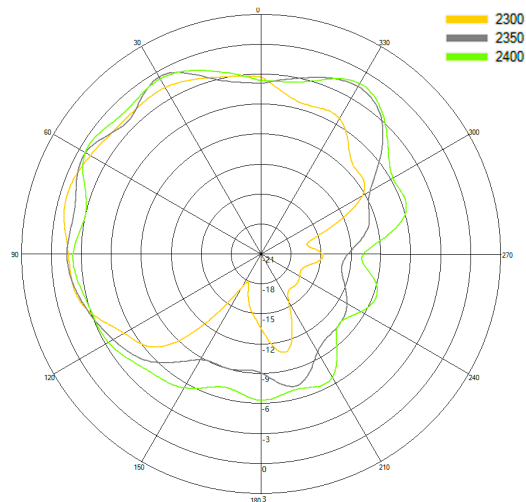
PANORAMA ANTENNAS

3D Patterns Cell 2 on Ground Plane

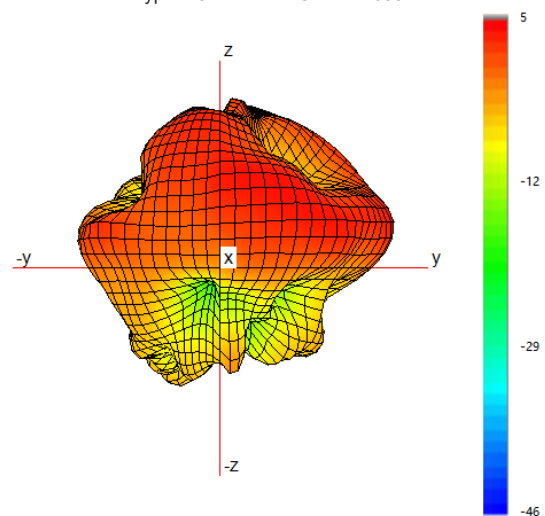
Typical 3D Pattern- Cell 2 - 2350 MHz



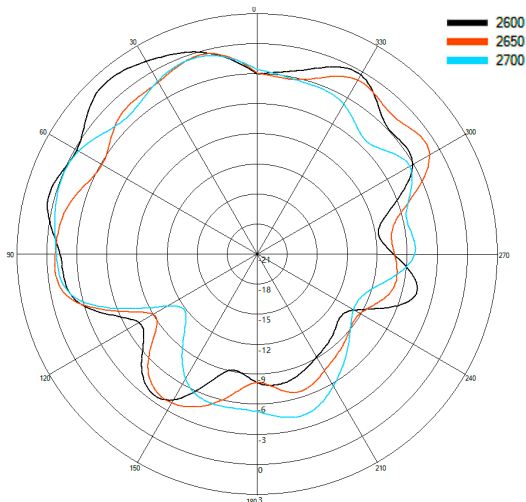
Typical H Plane- Cell 2 - Patterns- 2300-2400 MHz



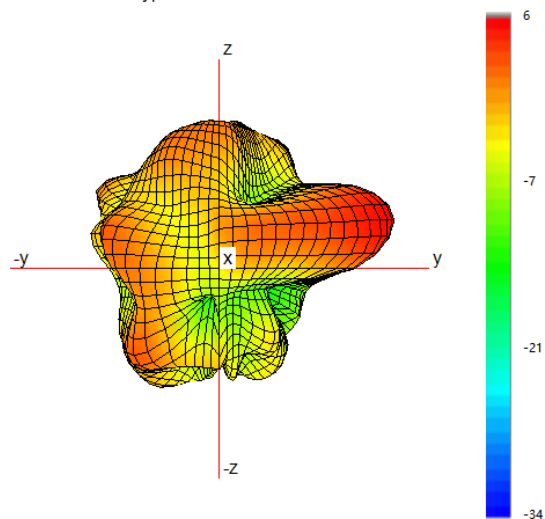
Typical 3D Pattern- Cell 2 - 2650 MHz



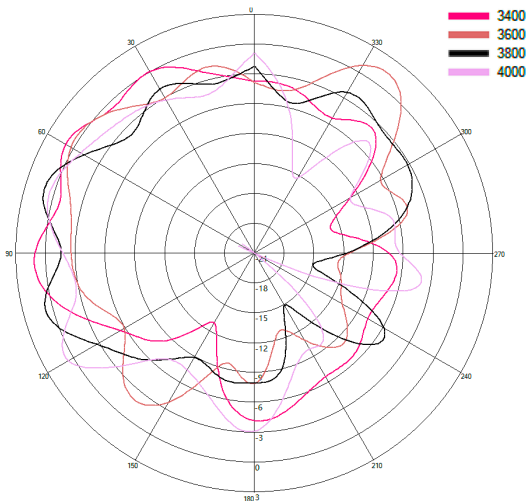
Typical H Plane- Cell 2 - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell 2 - 3600 MHz



Typical H Plane- Cell 2 - Patterns- 3400-4000 MHz



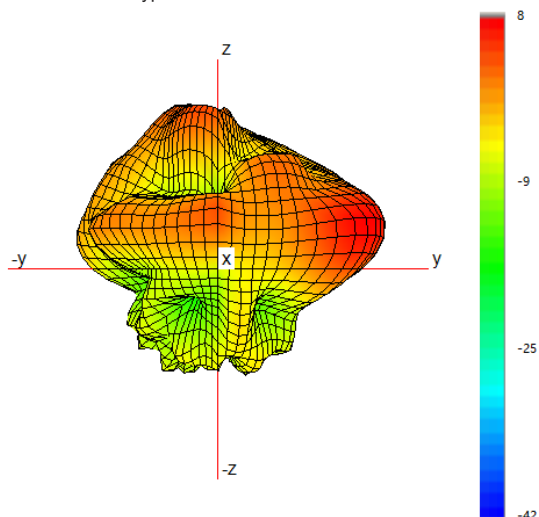
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

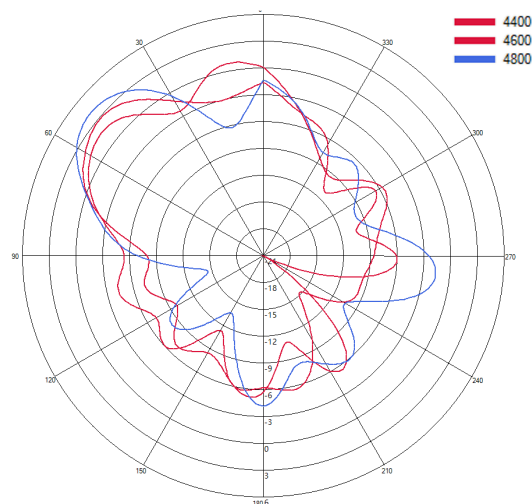
PANORAMA ANTENNAS

3D Patterns Cell 2
on Ground Plane

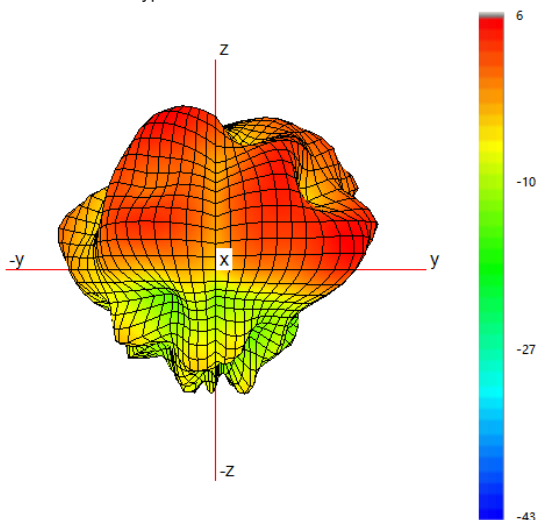
Typical 3D Pattern- Cell 2 - 4700 MHz



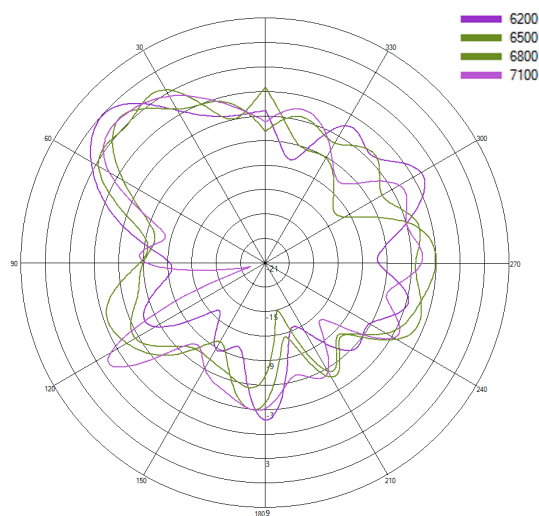
Typical H Plane- Cell 2 - Patterns- 4400-4800 MHz



Typical 3D Pattern- Cell 2 - 6500 MHz



Typical H Plane- Cell 2 - Patterns- 6200-7100 MHz



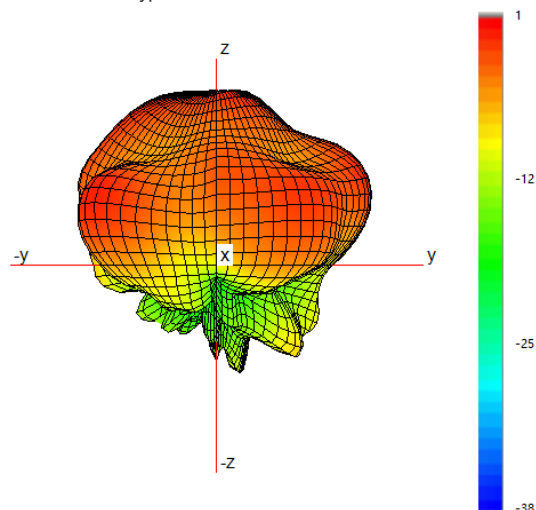
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

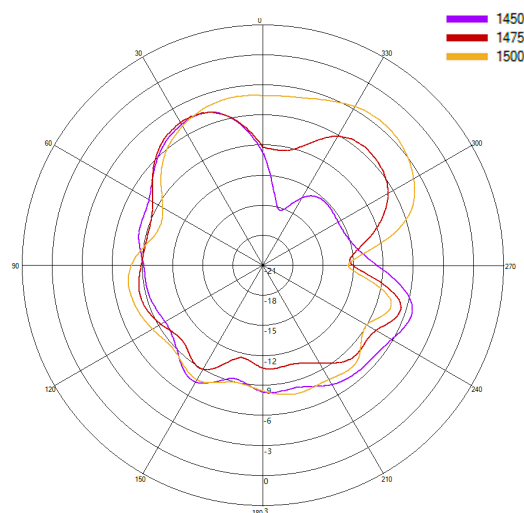
PANORAMA ANTENNAS

3D Patterns Cell 3 on Ground Plane

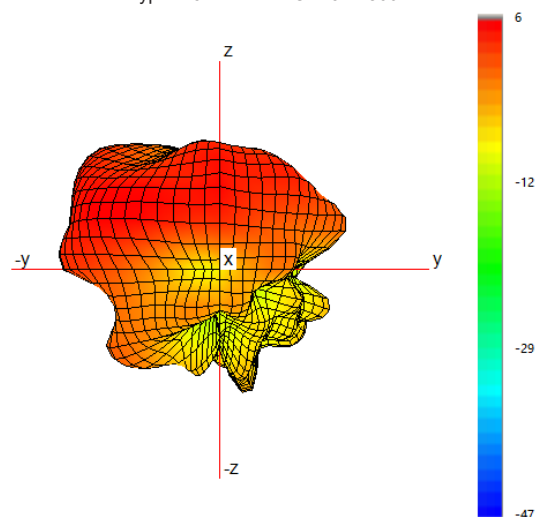
Typical 3D Pattern- Cell 3 - 1475 MHz



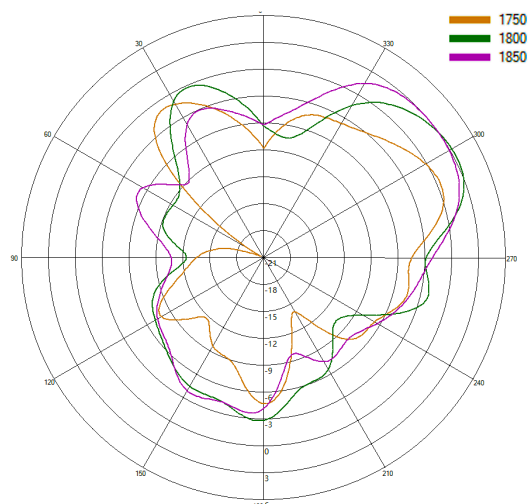
Typical H Plane- Cell 3- Patterns- 1450-1500 MHz



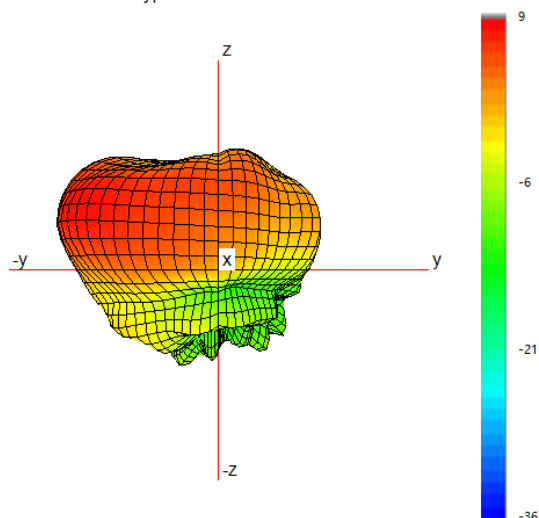
Typical 3D Pattern- Cell 3 - 1800 MHz



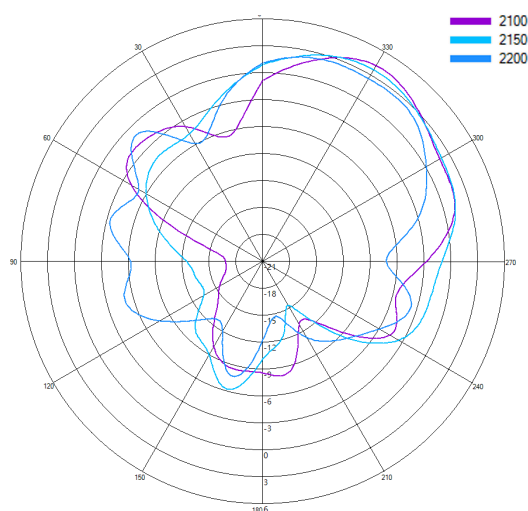
Typical H Plane- Cell 3- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell 3 - 2150 MHz



Typical H Plane- Cell 3- Patterns- 2100-2200 MHz



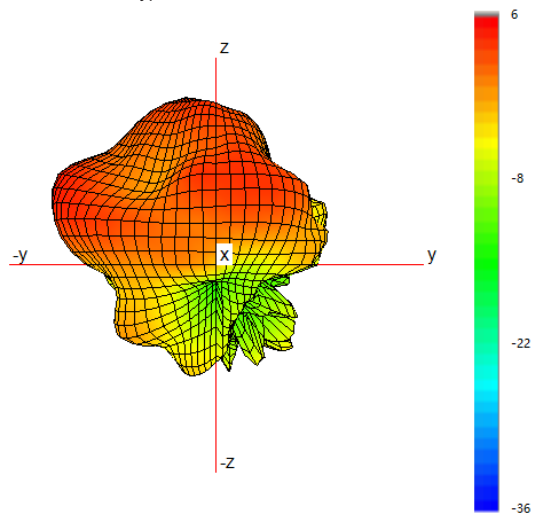
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

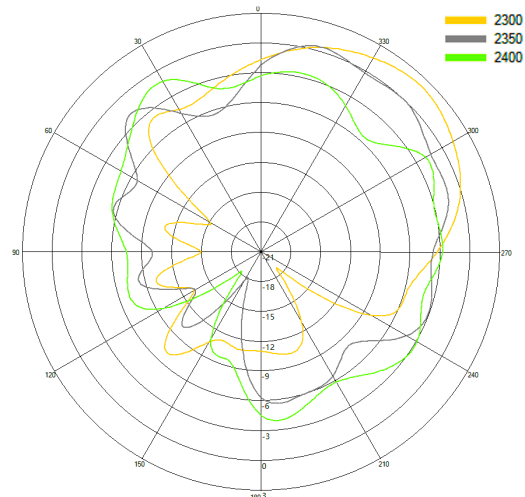
PANORAMA ANTENNAS

3D Patterns Cell 3
on Ground Plane

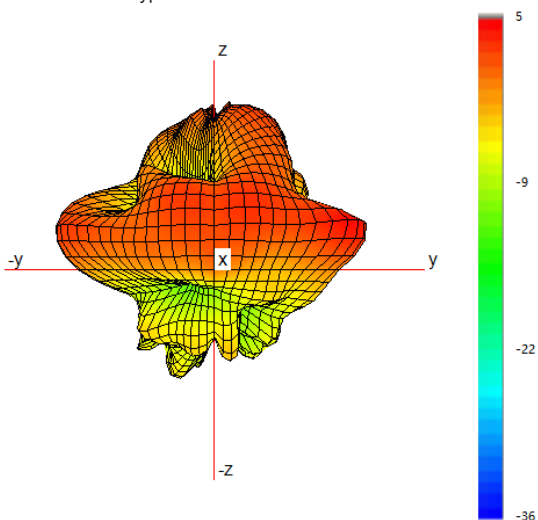
Typical 3D Pattern- Cell 3 - 2350 MHz



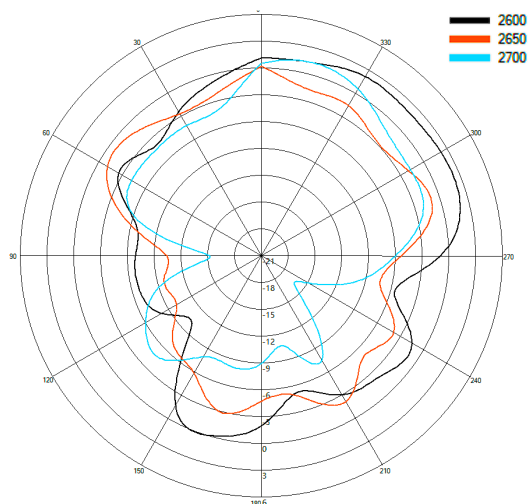
Typical H Plane- Cell 3 - Patterns- 2300-2400 MHz



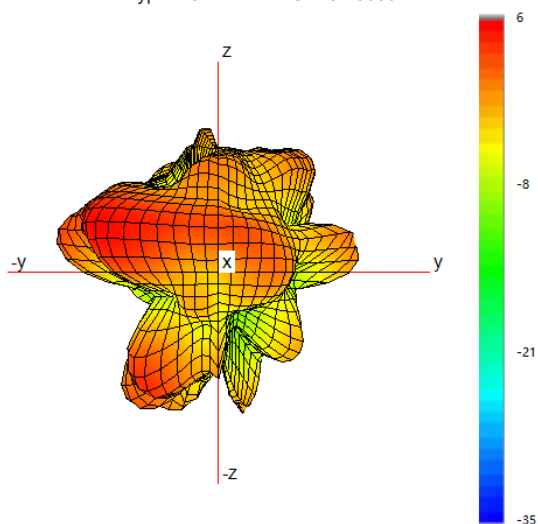
Typical 3D Pattern- Cell 3 - 2650 MHz



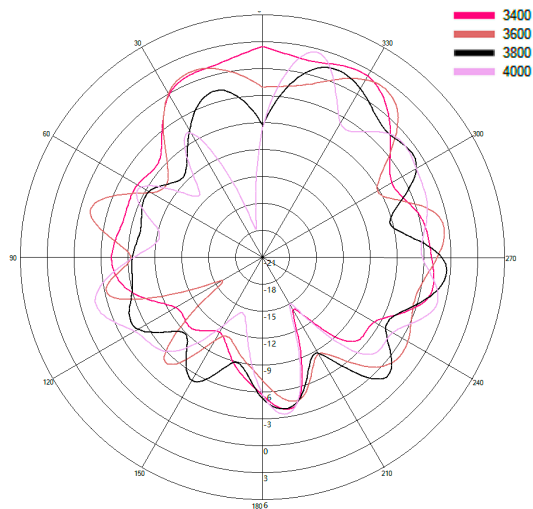
Typical H Plane- Cell 3 - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell 3 - 3600 MHz



Typical H Plane- Cell 3 - Patterns- 3400-4000 MHz



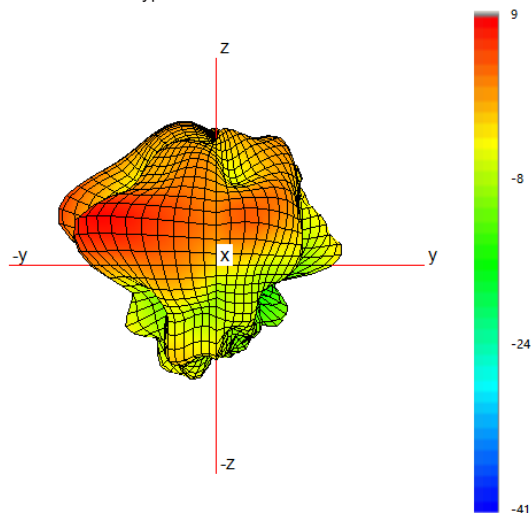
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

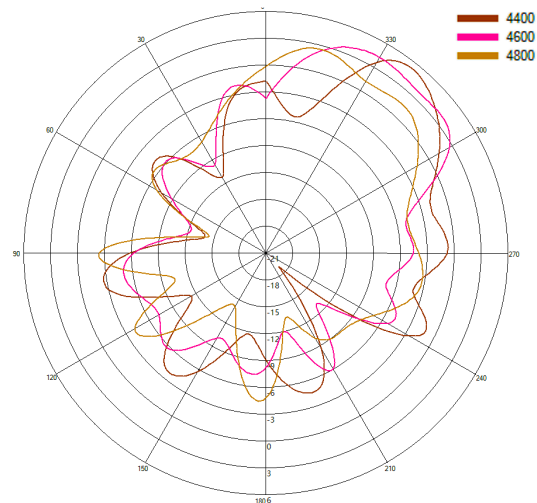
PANORAMA  ANTENNAS

3D Patterns Cell 3 on Ground Plane

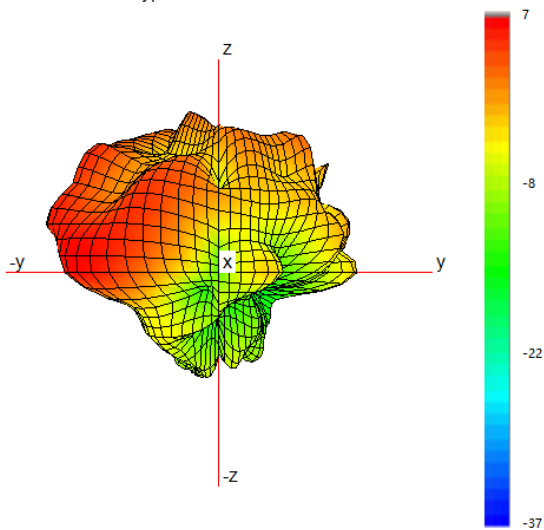
Typical 3D Pattern- Cell 3 - 4700 MHz



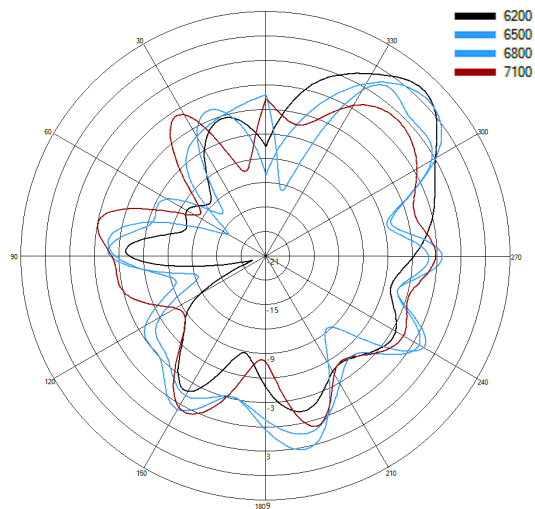
Typical H Plane- Cell 3 - Patterns- 4400-4800 MHz



Typical 3D Pattern- Cell 3 - 6500 MHz



Typical H Plane- Cell 3 - Patterns- 6200-7100 MHz



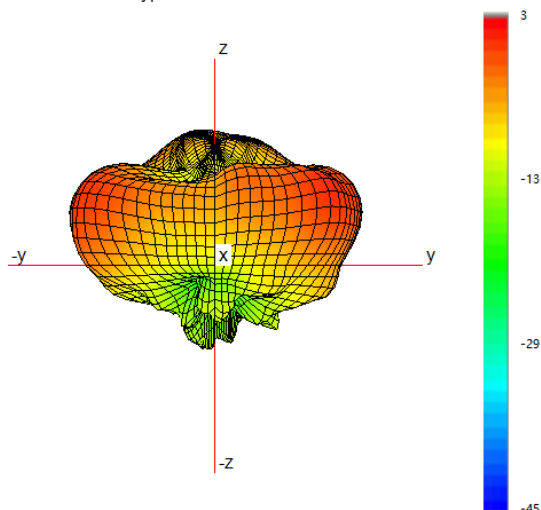
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

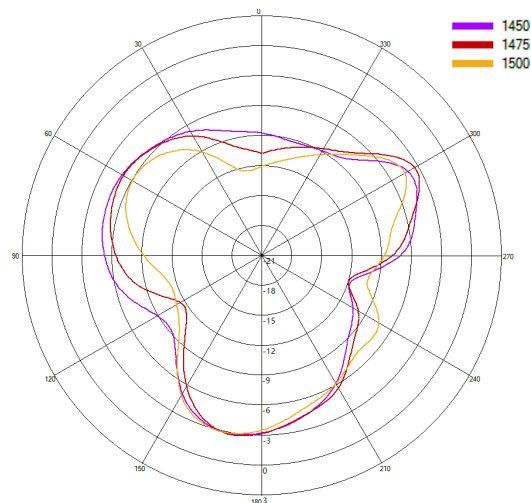
PANORAMA ANTENNAS

3D Patterns Cell 4
on Ground Plane

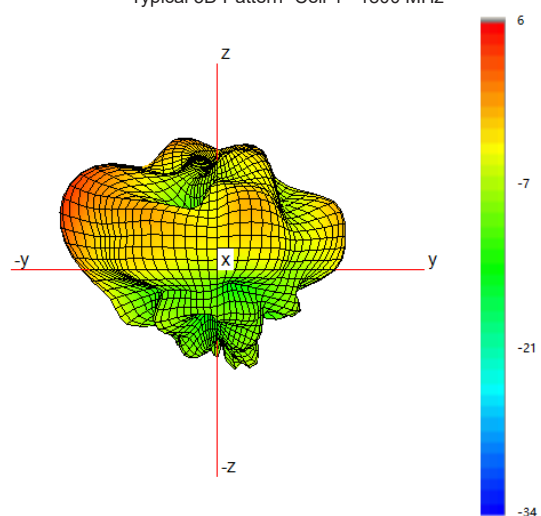
Typical 3D Pattern- Cell 4 - 1475 MHz



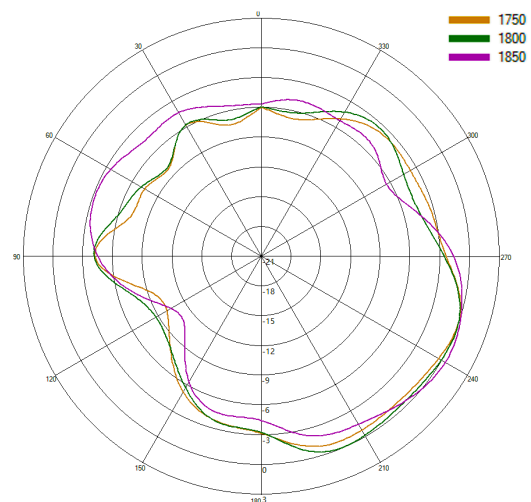
Typical H Plane- Cell 4- Patterns- 1450-1500 MHz



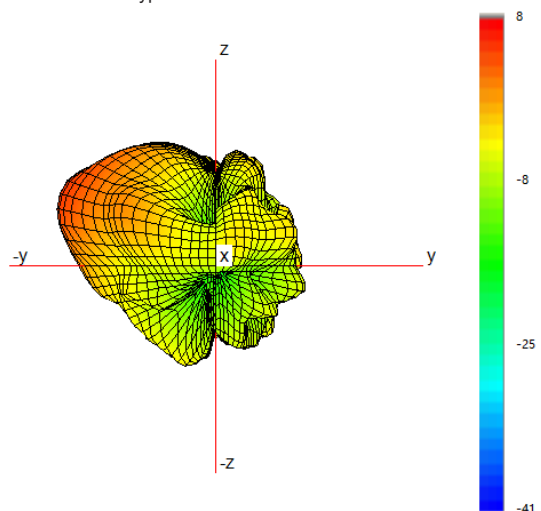
Typical 3D Pattern- Cell 4 - 1800 MHz



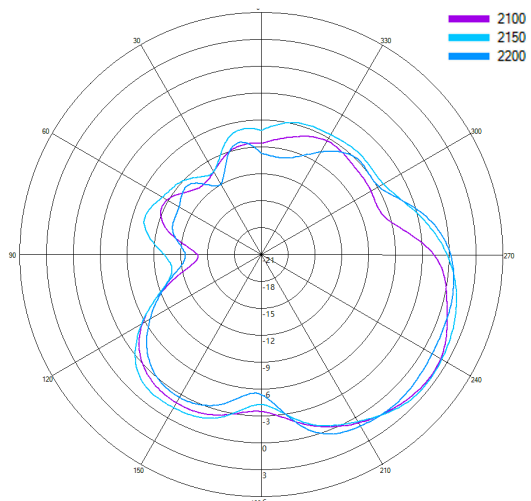
Typical H Plane- Cell 4- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell 4 - 2150 MHz



Typical H Plane- Cell 4- Patterns- 2100-2200 MHz



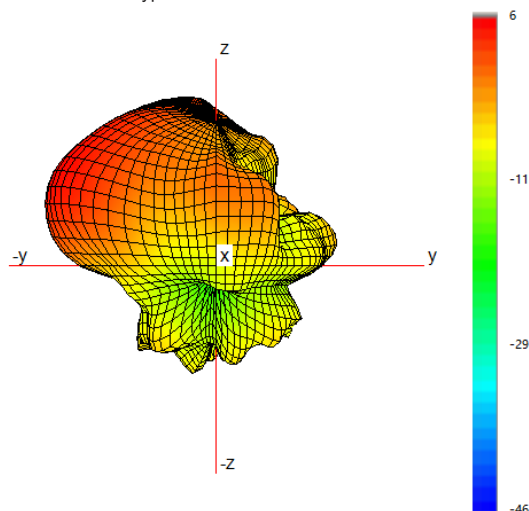
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

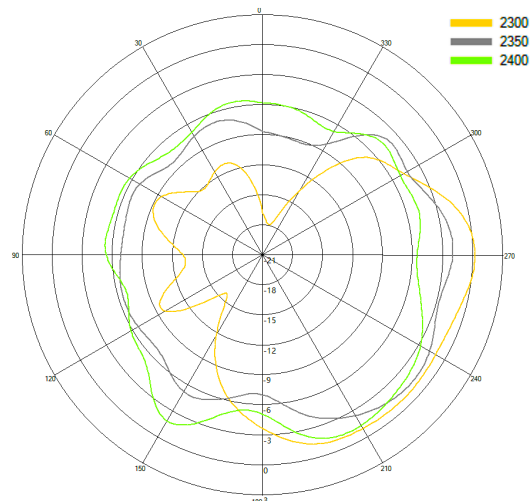
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3D Patterns Cell 4 on Ground Plane

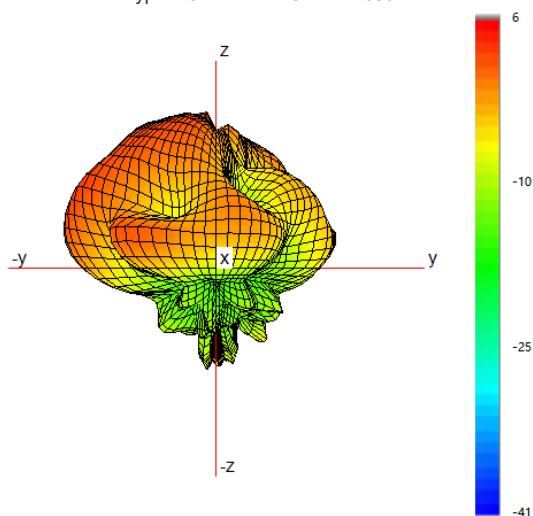
Typical 3D Pattern- Cell 4 - 2350 MHz



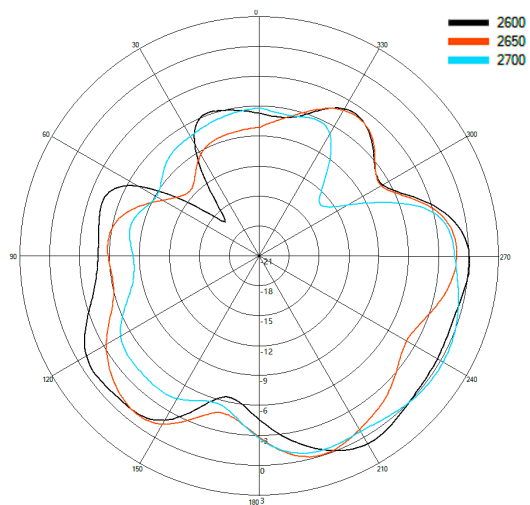
Typical H Plane- Cell 4 - Patterns- 2300-2400 MHz



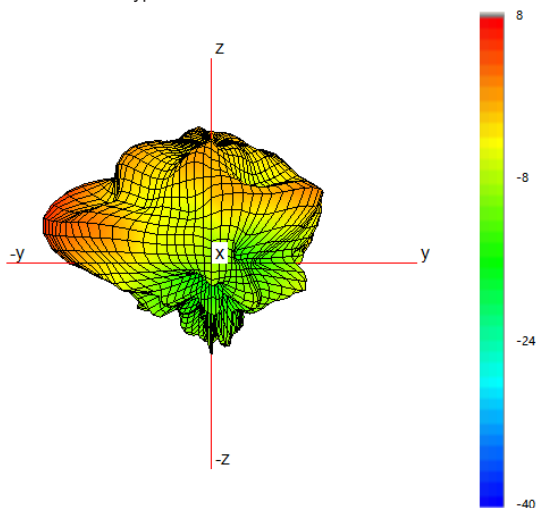
Typical 3D Pattern- Cell 4 - 2650 MHz



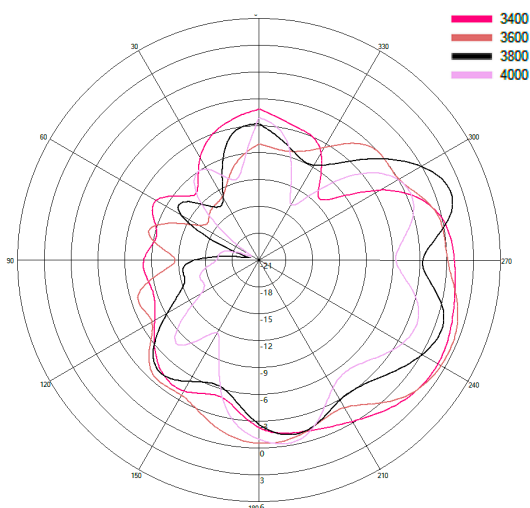
Typical H Plane- Cell 4 - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell 4 - 3600 MHz



Typical H Plane- Cell 4 - Patterns- 3400-4000 MHz



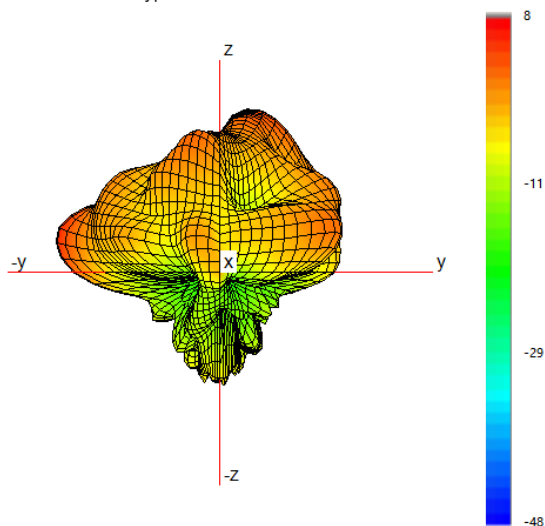
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

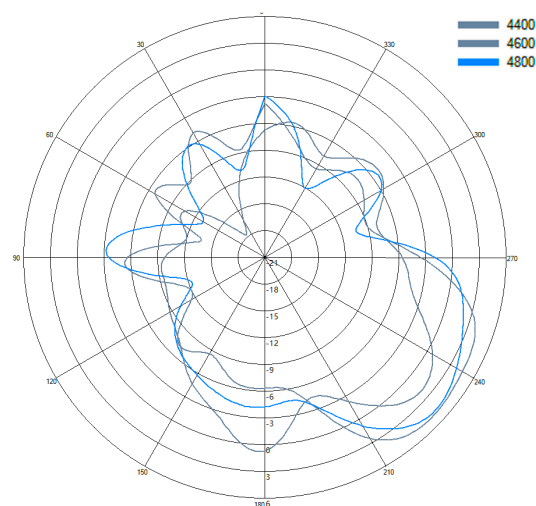
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3D Patterns Cell 4
on Ground Plane

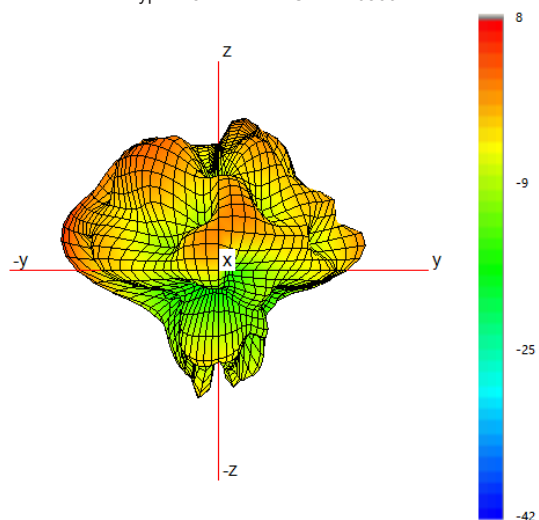
Typical 3D Pattern- Cell 4 - 4700 MHz



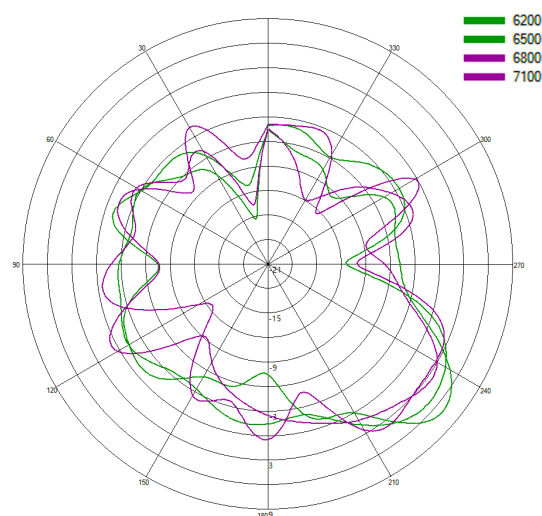
Typical H Plane- Cell 4 - Patterns- 4400-4800 MHz



Typical 3D Pattern- Cell 4 - 6500 MHz



Typical H Plane- Cell 4 - Patterns- 6200-7100 MHz



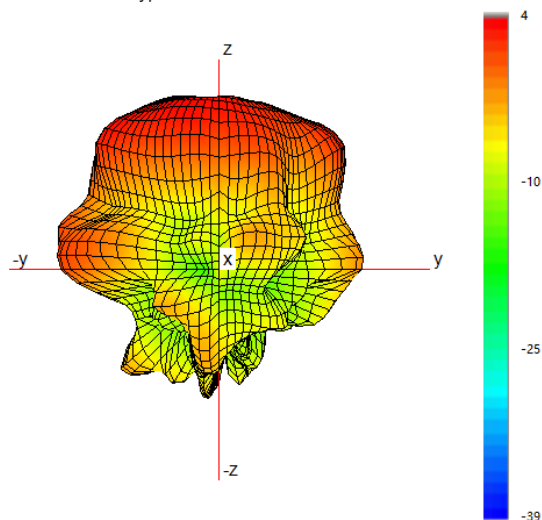
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

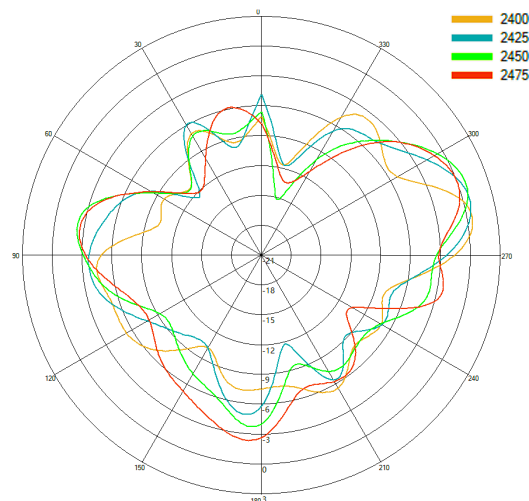
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3D Patterns WiFi 1 on Ground Plane

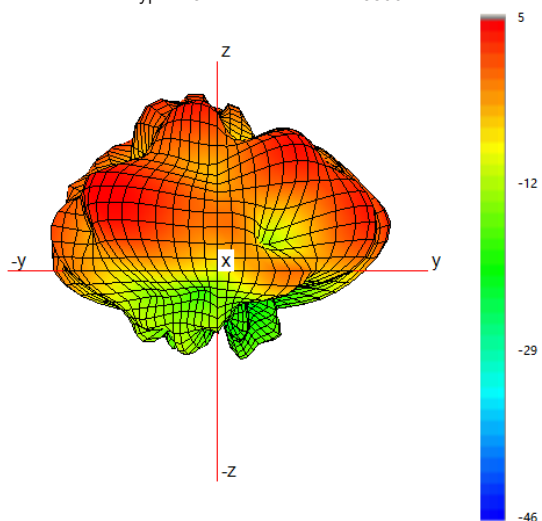
Typical 3D Pattern- WiFi 1 - 2450 MHz



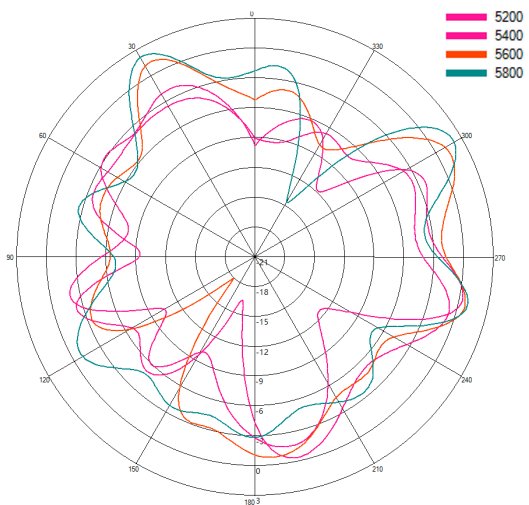
Typical H Plane- WiFi 1 - Patterns- 2400-2475 MHz



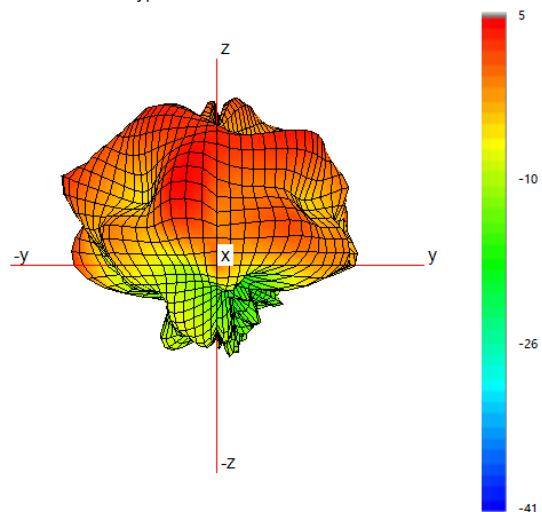
Typical 3D Pattern- WiFi 1 - 5500 MHz



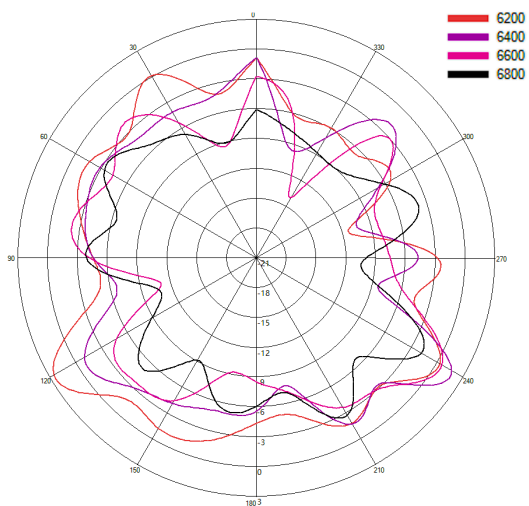
Typical H Plane- WiFi 1 - Patterns- 5200-5800 MHz



Typical 3D Pattern- WiFi 1 - 6500 MHz



Typical H Plane- WiFi 1 - Patterns- 6200-6800 MHz



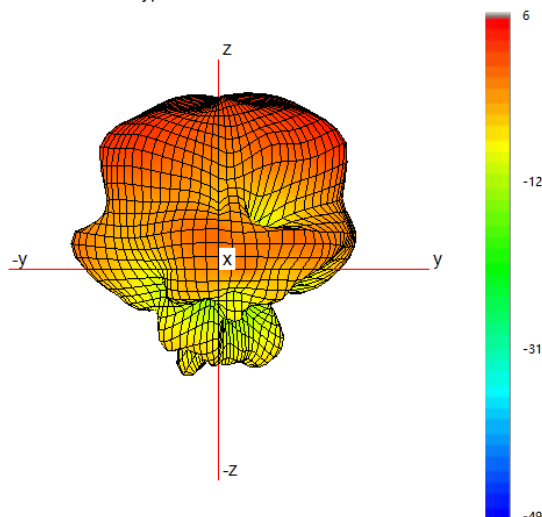
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72

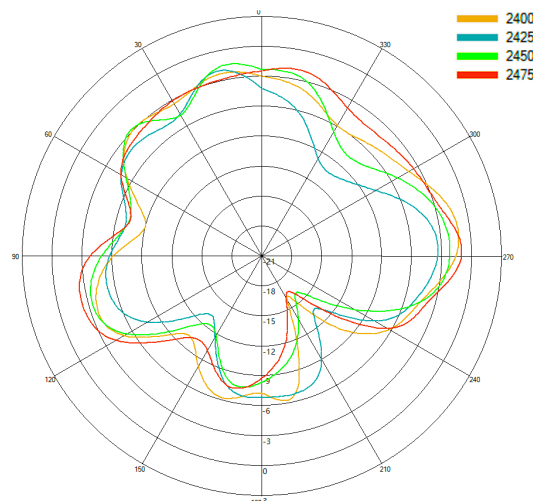
PANORAMA ANTENNAS

3D Patterns WiFi 2
on Ground Plane

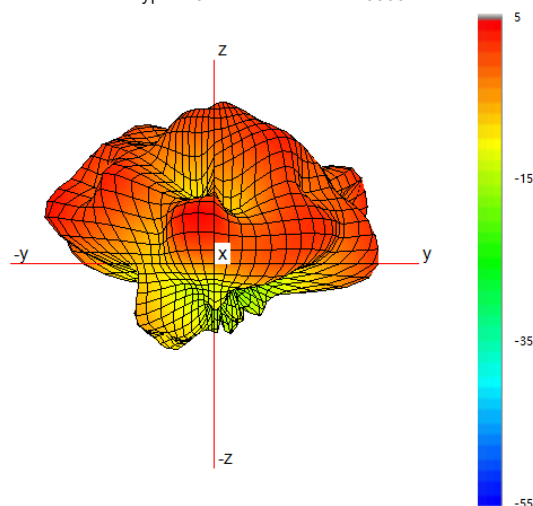
Typical 3D Pattern- WiFi 2 - 2450 MHz



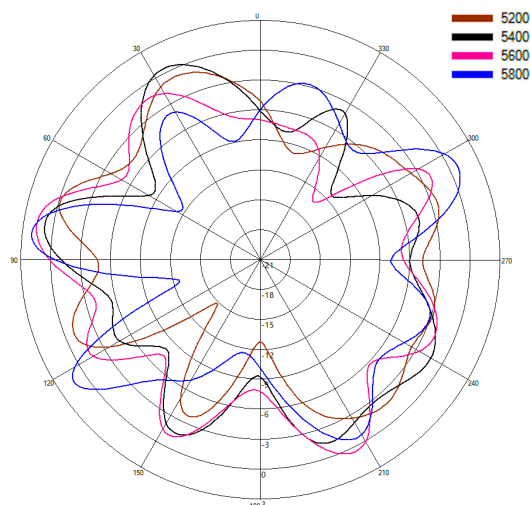
Typical H Plane- WiFi 2 - Patterns- 2400-2475 MHz



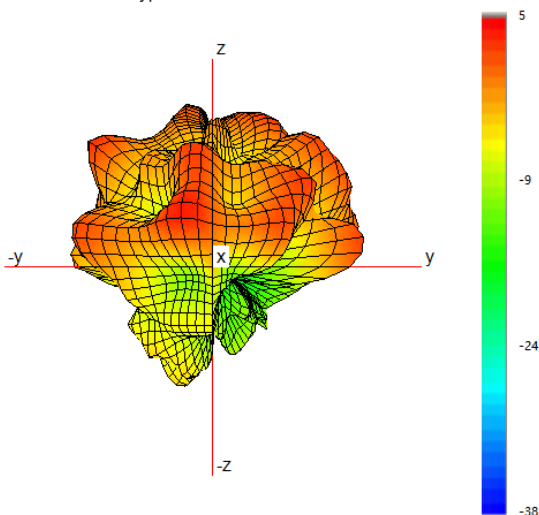
Typical 3D Pattern- WiFi 2 - 5500 MHz



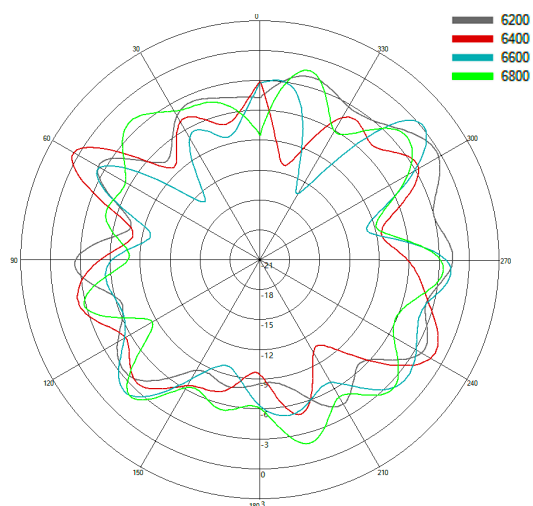
Typical H Plane- WiFi 2 - Patterns- 5200-5800 MHz



Typical 3D Pattern- WiFi 2 - 6500 MHz



Typical H Plane- WiFi 2 - Patterns- 6200-6800 MHz



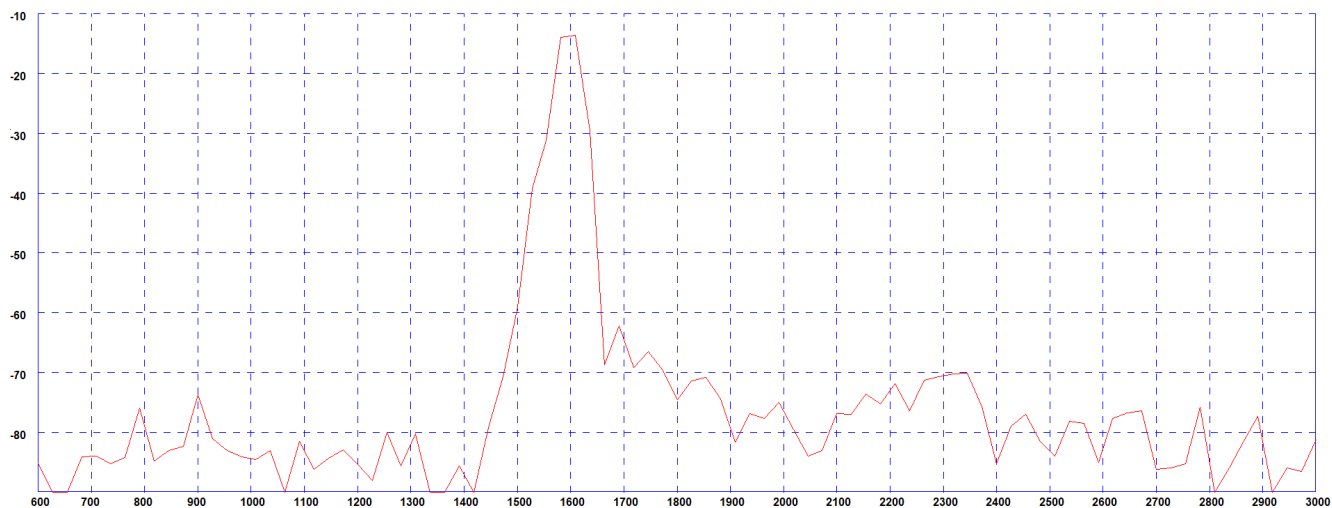
MiMo 4G/5G Dome Combination Antenna Range

L[X]M[X]M4[X]-6-60-[X]14-72]

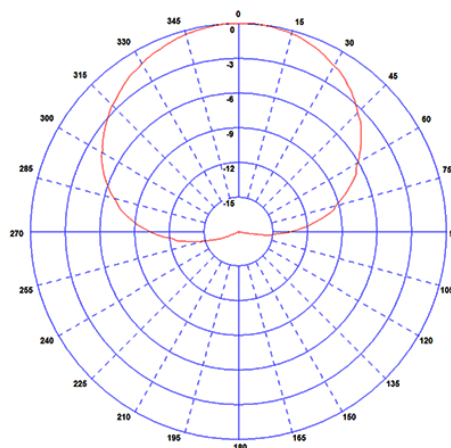
PANORAMA ANTENNAS

Electrical Data- L1 GPS/GNSS

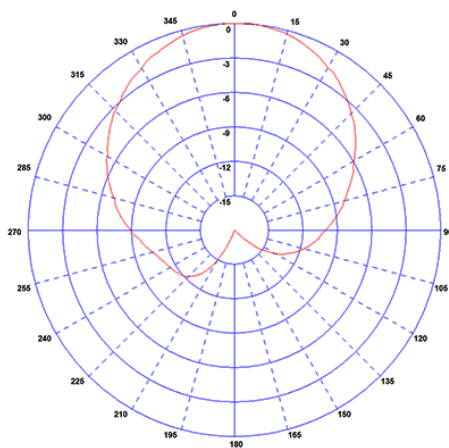
Swept Peak Gain GPS/GNSS



Typical E Plane Pattern - GPS/GNSS 1575 MHz



Typical E Plane Pattern - GPS/GNSS 1602 MHz



GPS/GNSS Measurements taken on 190x190mm (7.4" x 7.4") ground plane excluding cable loss