4X4 MiMo 4G/5G IOT Antenna

L[X]A[X]M4-7-42[-X]

- Low Profile IOT Antenna
- 4x4 MiMo 698-960/1427-4200MHz
- Up to 4x4 MiMo WiFi 6e (Optional)
- GPS/GNSS L1/L5 or L1 only 30dB / 26dB LNA (Optional)
- Meets IK10 and IP69K

The L[X]A[X]M4-7-42[-X] MiMo antenna is designed to be a one size fits all solution for IOT applications. The robust low profile housing contains 4x 4G LTE / 5G NR elements covering 698-960/1427-4200MHz. Versions of the product also contain up to 4x optional WiFi elements supporting WiFi 6e 2.4/5.150-7.125GHz and optional L1 only or L1/L5 GPS/GNSS.

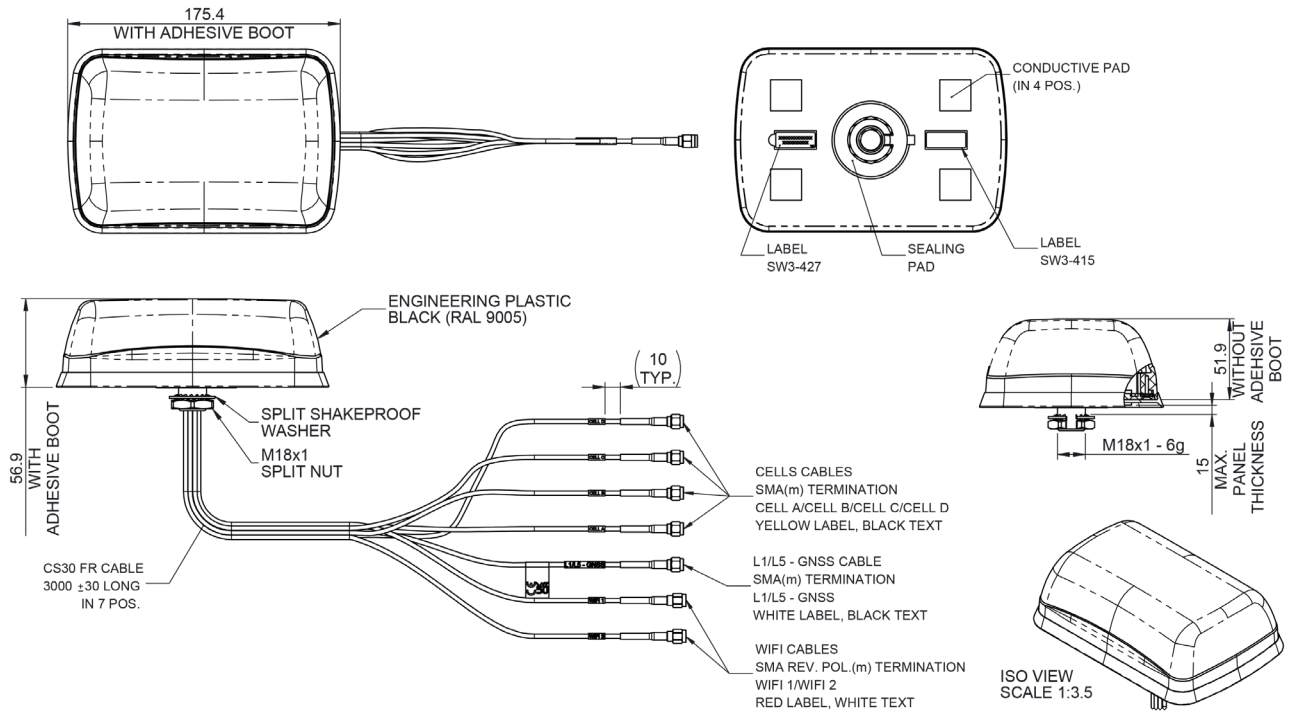
The housing is constructed from robust, flame retardant, impact resistant plastic. The subtle, curved design makes the product hardert to vandalise and the IK10 rating ensures that the product is suitable for use in tough environments and devices located in public areas. The housing is UV stable and approved to IP69K for ingress protection.

The product is supplied with integrated low loss flame retardant cables approved to UN ECE R118 and fitted connectors offer plug and play connectivity for a huge range of devices.

The L[X]A[X]M4-7-42[-X] can be installed on conductive or non-conductive panels without significant detriment to performance.

Technical Drawing

LG5ADM4-7-42 Shown



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L[X]A[X]M4-7-42[-X]

PANORAMA ANTENNAS

Product Data

Part No.		LGAQM4-7-42	LGADM4-7-42	LGAM4-742
Electrical Data				
Frequency Range (MHz)	Cell /LTE		4x 698-960 / 1427-4200	
	WiFi	4x 2396-7125	2x 2396-7125	-
	GPS/GNSS		1x 1559-1612	
Typical VSWR*	Cell Elements		<2.5:1	
	WiFi Elements		< 2:1	-
Isolation**	Cell Elements		≥6dB (698-960MHz) / ≥12dB (1427-4200MHz)	
	Wifi Elements		>25dB (2.4-7.125GHz)	-
Pattern			Omni-directional	
Impedance			50Ω	
Max Input Power (W)			5	
GPS/GNSS Data				
Frequency Range (MHz)			1559-1612	
Impedance			50Ω	
LNA Gain			26dB	
Voltage / Current			3-5v 17ma Typical	
Polarisation			Right Hand Circular	
Mechanical Data				
Dimensions (mm)	Height (unmounted)		56.9 (2.2")	
	Width		118 (4.64")	
	Length		175.4 (6.9")	
Environmental Specification				
Operating Temp (°C)			-40° / +85°C (-40° / +185°F)	
Radome Material			Lexan EXL 9330	
Radome Approvals			V0 (UL 94) / UL 746C (F1)	
Ingress Protection			IP69K	
Vandal Resistance			IK10	
Mounting Data				
Fixing			M18 (3/4") Mounting Bush	
Termination Data				
Cable Type			CS30 (Compliant to UN ECE R118)	
Cable Diameter (mm)			2.8 (0.1")	
Cable Length (m)			3m (9.8')	
Termination	4G/5G		4x SMA Plug (m)	
	WiFi	4x Reverse Polarity SMA Plug	2x Reverse Polarity SMA Plug	-
	GPS/GNSS		1x SMA Plug (m)	

*Across 90% of relevant bands when measured in free space with 0.5m (20") of CS30 cable **Worst case isolation measured for LGADM4-7-42 in free space with 0.5m (1.5') CS30 cable

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Product Data

Part No.		LG5AQM4-7-42	LG5ADM4-7-42	LG5AM4-7-42
Electrical Data				
Frequency Range (MHz)	Cell /LTE		4x 698-960 / 1427-4200	
	WiFi	4x 2396-7125	2x 2396-7125	-
	GPS/GNSS		1x 1164-1189 / 1559-1612	
Typical VSWR*	Cell Elements		<2.5:1	
	WiFi Elements		< 2:1	-
Isolation**	Cell Elements		≥6dB (698-960MHz) / ≥12dB (1427-4200MHz)	
	Wifi Elements		>25dB (2.4-7.125GHz)	-
Pattern			Omni-directional	
Impedance			50Ω	
Max Input Power (W)			5	
GPS/GNSS Data				
Frequency Range (MHz)			1164-1189 / 1559-1612	
Impedance			50Ω	
LNA Gain			30dB / 26dB	
Voltage / Current			3-5v 37ma Typical	
Polarisation			Right Hand Circular	
Mechanical Data				
Dimensions (mm)	Height		56.9 (2.2")	
	Width		118 (4.64")	
	Length		175.4 (6.9")	
Environmental Specification				
Operating Temp (°C)			-40° / +85°C (-40° / +185°F)	
Radome Material			Lexan EXL 9330	
Radome Approvals			V0 (UL 94) / UL 746C (F1)	
Ingress Protection			IP69K	
Vandal Resistance			IK10	
Mounting Data				
Fixing			M18 (3/4") Mounting Bush	
Termination Data				
Cable Type			CS30 (Compliant to UN ECE R118)	
Cable Diameter (mm)			2.8 (0.1")	
Cable Length (m)			3m (9.8')	
Termination	4G/5G		4x SMA Plug (m)	
	WiFi	4x Reverse Polarity SMA Plug	2x Reverse Polarity SMA Plug	-
	GPS/GNSS		1x SMA Plug (m)	

*Across 90% of relevant bands when measured in free space with 0.5m (20") of CS30 cable **Worst case isolation measured for LGADM4-7-42 in free space with 0.5m (1.5') CS30 cable

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Part No.				
		LPAQM4-7-42	LPADM4-7-42	LPAM4-7-42
Electrical Data				
Frequency Range (MHz)	Cell /LTE	4x 698-960 / 1427-4200		
	WiFi	4x 2396-7125	2x 2396-7125	-
Typical VSWR*	Cell Elements	<2.5:1		
	WiFi Elements	< 2:1		-
Isolation**	Cell Elements	≥6dB (698-960MHz) / ≥12dB (1427-4200MHz)		
	Wifi Elements	>25dB (2.4-7.125GHz)		-
Pattern		Omni-directional		
Impedance		50Ω		
Max Input Power (W)		5		
Mechanical Data				
Dimensions (mm)	Height	56.9 (2.2")		
	Width	118 (4.64")		
	Length	175.4 (6.9")		
Environmental Specification				
Operating Temp (°C)		-40° / +85°C (-40° / +185°F)		
Radome Material		Lexan EXL 9330		
Radome Approvals		V0 (UL 94) / UL 746C (F1)		
Ingress Protection		IP69K		
Vandal Resistance		IK10		
Mounting Data				
Fixing		M18 (3/4") Mounting Bush		
Termination Data				
Cable Type		CS30 (Compliant to UN ECE R118)		
Cable Diameter (mm)		2.8 (0.1")		
Cable Length (m)		3m (9.8')		
Termination	4G/5G	4x SMA Plug (m)		
	WiFi	4x Reverse Polarity SMA Plug	2x Reverse Polarity SMA Plug	-

*Across 90% of relevant bands when measured in free space with 0.5m (20") of CS30 cable **Worst case isolation measured for LGADM4-7-42 in free space with 0.5m (1.5') CS30 cable

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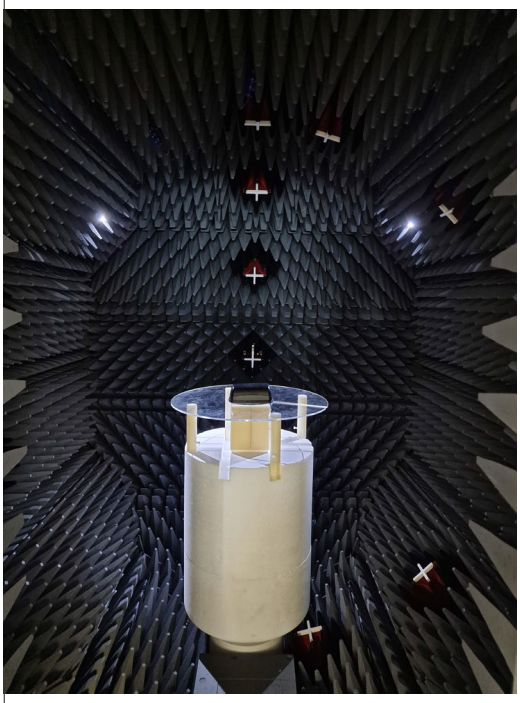
Electrical Data- Cell-Free space

Measurement Conditions

LGADM4-7-42 measured in free space with 0.5m (1.6') CS30 Cable



4G/5G Antennas

Frequency Range (MHz)	LTE Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
699-798	12,13, 14 17,28	Cell A	0.8	45
		Cell B	-0.2	45
		Cell C	-0.2	45
		Cell D	-0.1	46
807- 862	5,19,20,26,27	Cell A	1.8	50
		Cell B	0.5	50
		Cell C	0.7	50
		Cell D	0.6	52
880-960	8	Cell A	1.9	53
		Cell B	1.3	57
		Cell C	1.6	53
		Cell D	1.6	56
1427-1518	11, 21, 74,75,76	Cell A	1.3	40
		Cell B	1.8	46
		Cell C	1.0	35
		Cell D	1.5	45
1710-1920	2,3,4,9,25,35, 39,66	Cell A	2.2	52
		Cell B	2.0	47
		Cell C	2.2	48
		Cell D	1.2	44
1920-2170	1,23	Cell A	3.7	56
		Cell B	2.5	48
		Cell C	3.9	55
		Cell D	2.2	47
2300-2400	30,40	Cell A	4.4	63
		Cell B	1.3	53
		Cell C	4.5	60
		Cell D	1.4	51
2496-2690	7,38,41	Cell A	5.4	64
		Cell B	3.3	53
		Cell C	5.2	61
		Cell D	2.6	54
3300-4200	22,42,43,48,77, 78,79	Cell A	6.3	65
		Cell B	4.5	47
		Cell C	4.9	62
		Cell D	4.4	47

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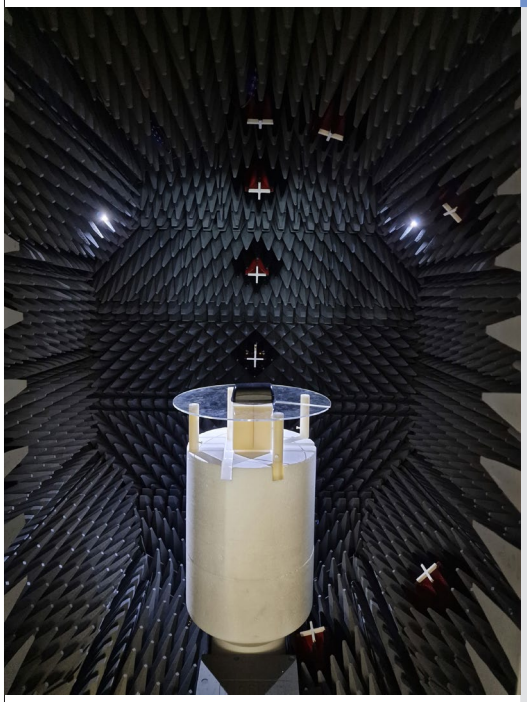
Electrical Data - WiFi-Free Space

Measurement Conditions

LGADM4-7-42 measured in free space with 0.5m (1.6') CS30 Cable



WiFi Antennas

Frequency Range (MHz)	WiFi Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
2396-2485	2.5GHz	WiFi 1	3.6	60
		WiFi 2	3.4	57
5150-5250	UNII-1	WiFi 1	6.6	64
		WiFi 2	6.2	61
5250-5350	UNII-2A	WiFi 1	6.3	63
		WiFi 2	6.6	61
5470-5725	UNII-2B	WiFi 1	6.1	61
		WiFi 2	6.5	55
5725-5900	UNII-3	WiFi 1	6.0	65
		WiFi 2	6.2	56
5845-5885	UNII-4	WiFi 1	5.3	64
		WiFi 2	5.5	55
5935-6415	UNII-5	WiFi 1	5.3	63
		WiFi 2	5.3	57
6435-6515	UNII-6	WiFi 1	5.4	61
		WiFi 2	5.5	60
6535-6875	UNII-7	WiFi 1	5.2	57
		WiFi 2	6.2	58
6875-7125	UNII-8	WiFi 1	4.8	51
		WiFi 2	5.6	58

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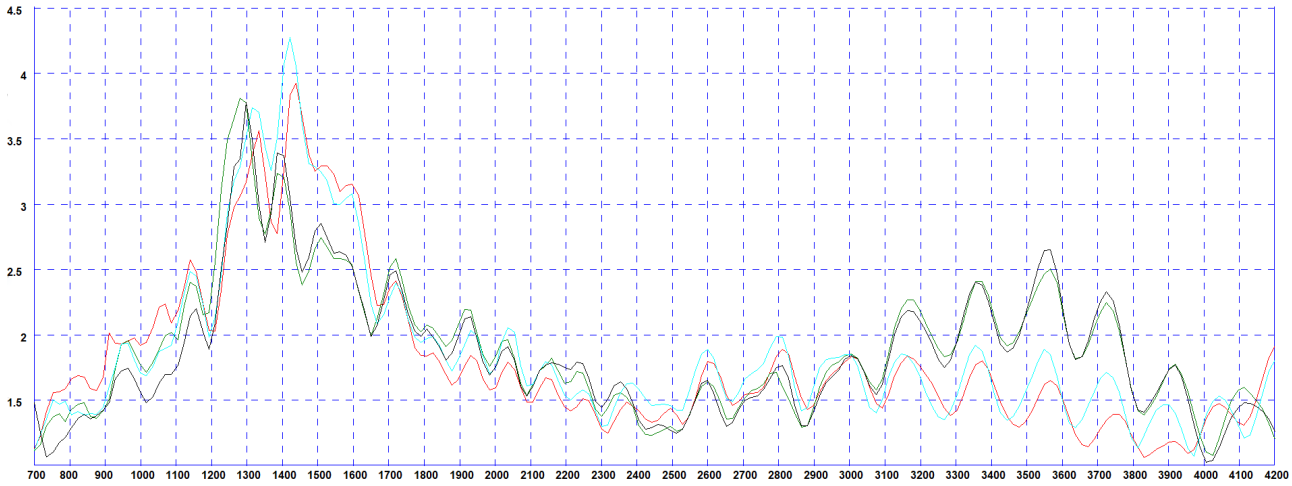
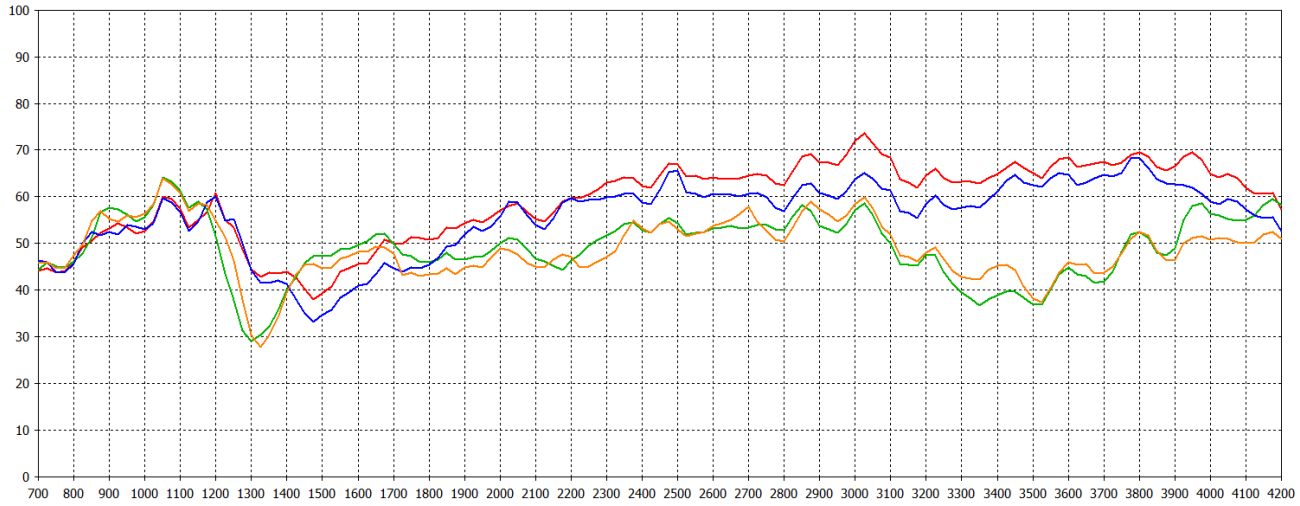
Electrical Data- Cell- Free space

Typical VSWR*



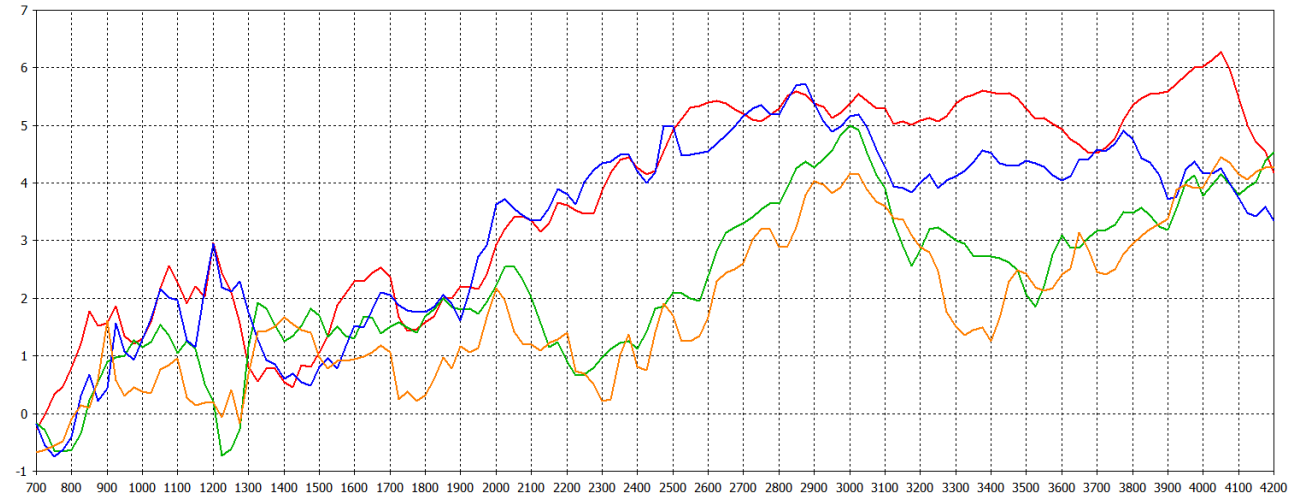
VSWR measured in free space with 0.5m (1.6') of CS30 cable

Typical Efficiency*



*Efficiency measured in free space with 0.5m (1.6') of CS30 cable

Typical Swept Peak Gain*



* Swept peak gain measured in free space with 0.5m (1.6') of CS30 cable

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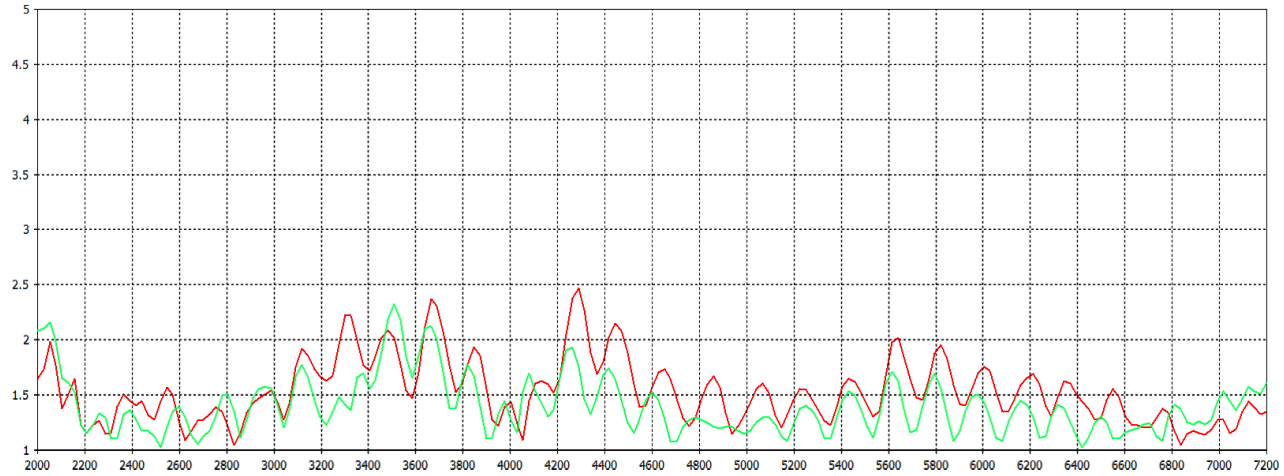
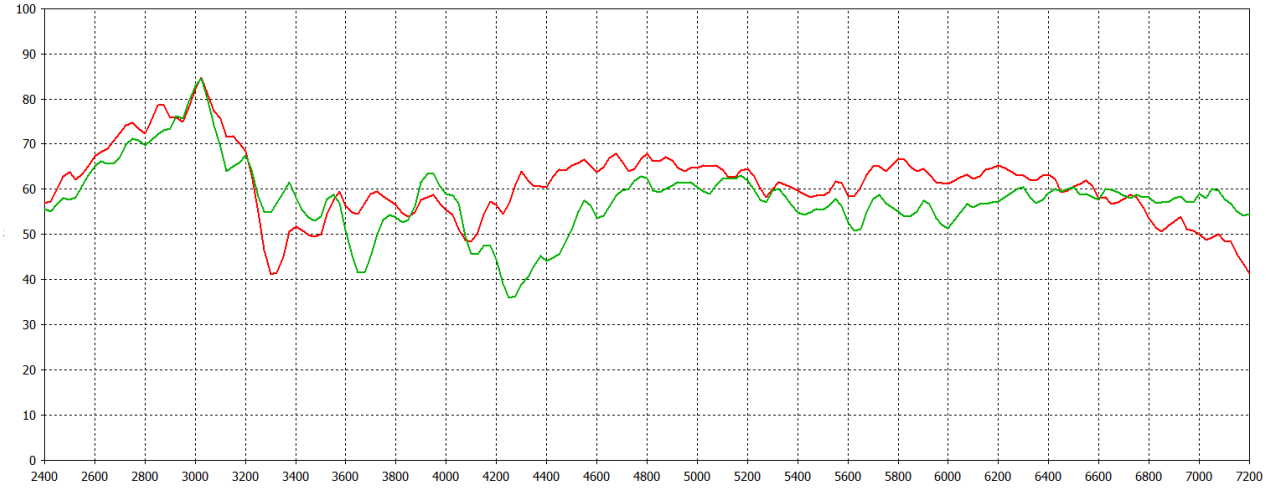
Typical VSWR*



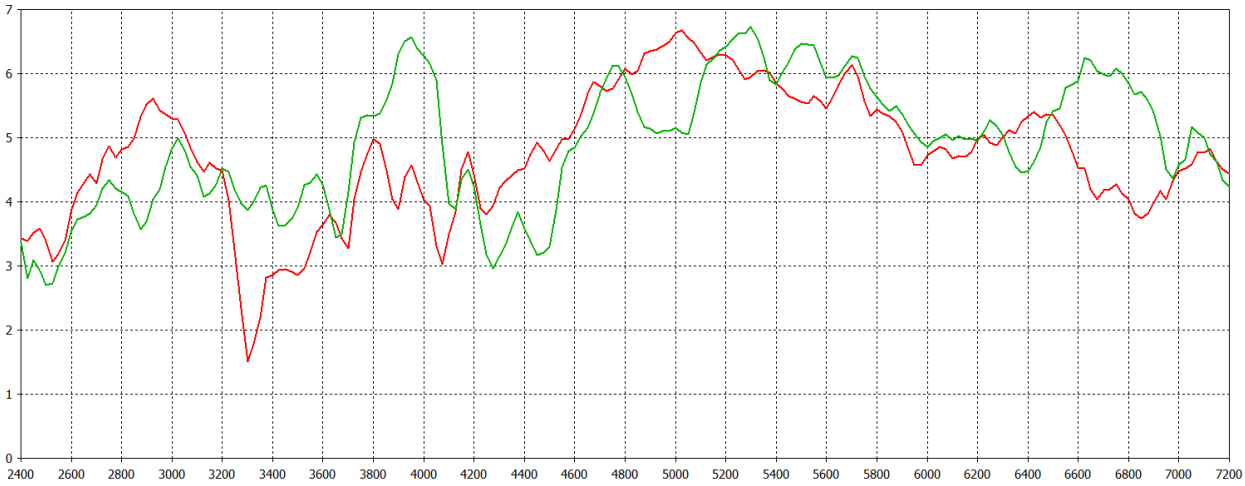
*VSWR measured in free space with 0.5m (1.6') of CS30 cable

Typical Efficiency*



*Efficiency measured in free space with 0.5m (1.6') of CS30 cable

Typical Swept Peak Gain*



* Swept peak gain measured in free space with 0.5m (1.6') of CS30 cable

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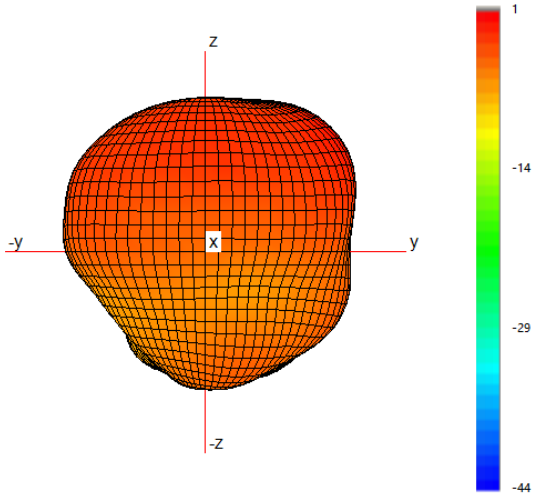
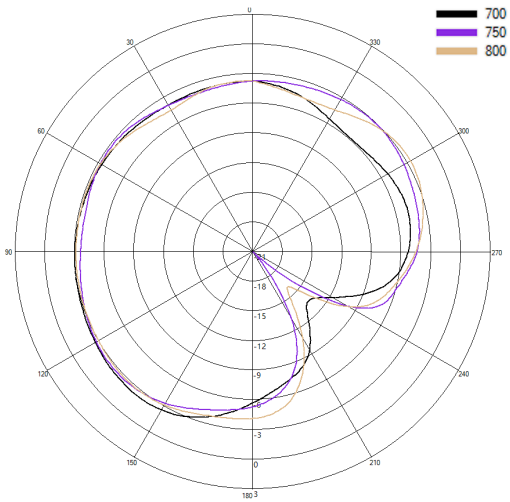
3D Pattern Data in Free Space Cell A

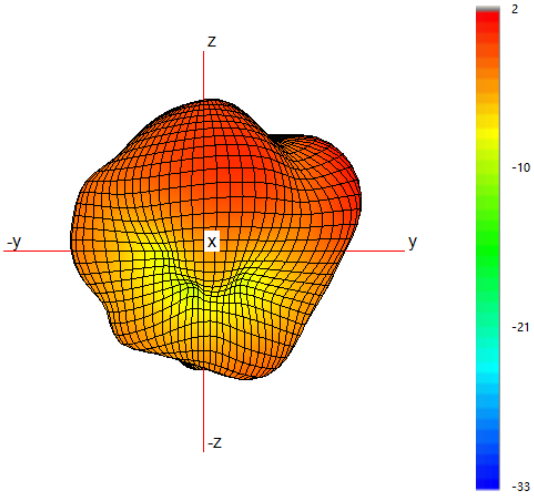
Typical 3D Pattern- Cell A - 750 MHz



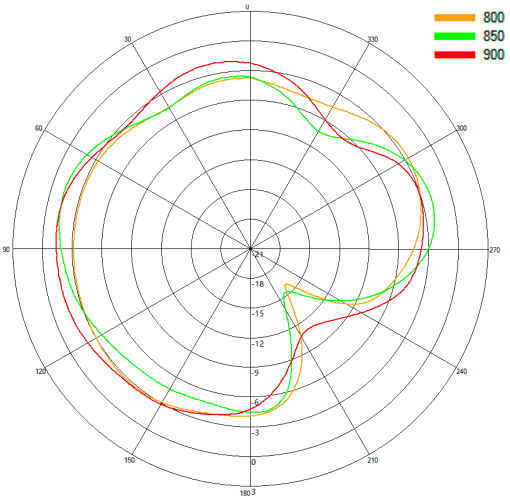
Typical H Plane- Cell A - Patterns- 700-800MHz



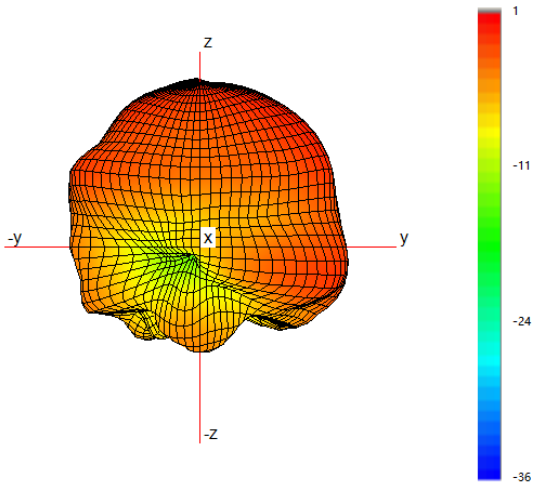
Typical 3D Pattern- Cell A - 850 MHz



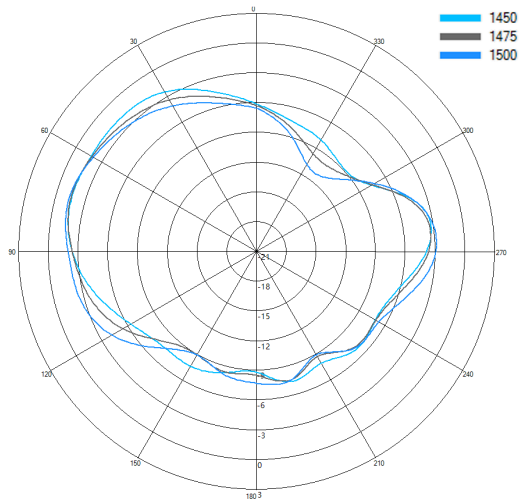
Typical H Plane- Cell A - Patterns- 800-900MHz



Typical 3D Pattern- Cell A - 1475 MHz



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



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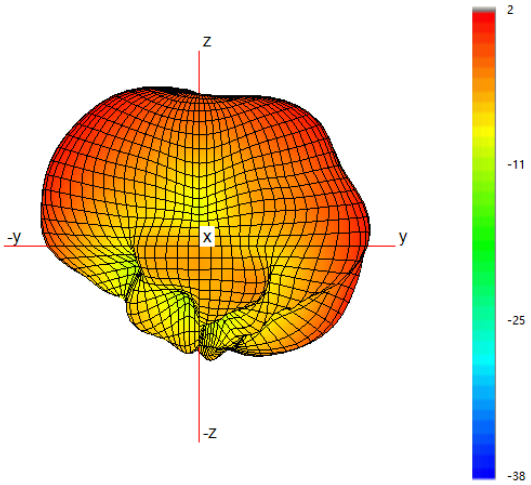
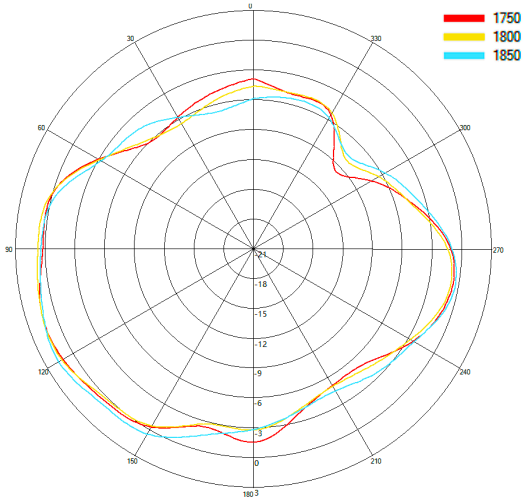
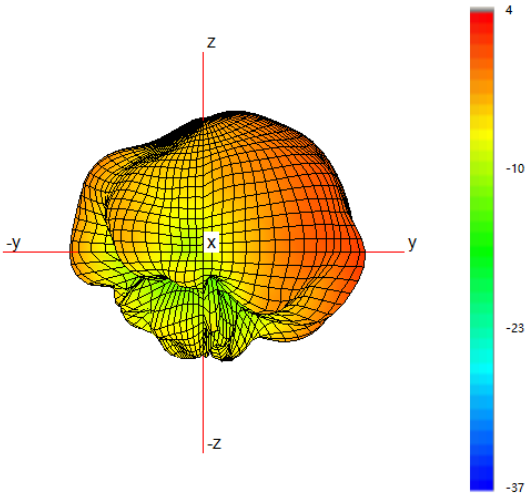
Typical 3D Pattern- Cell A - 1800 MHz



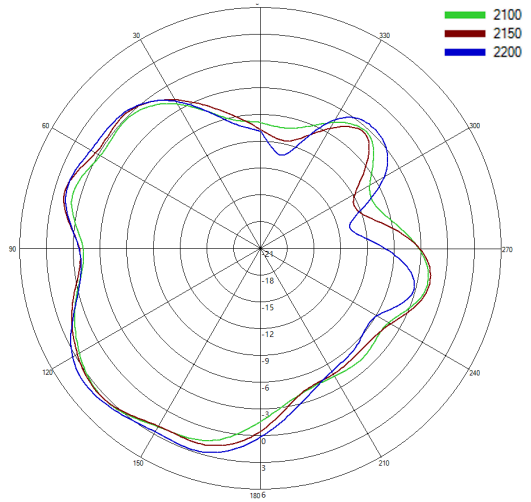
Typical H Plane- Cell A- Patterns- 1750-1850 MHz



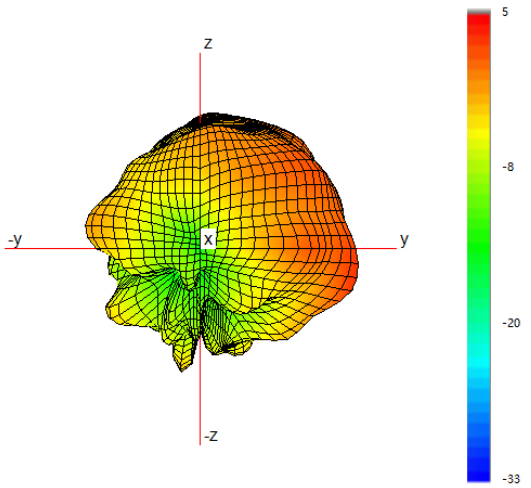
Typical 3D Pattern- Cell A - 2150 MHz



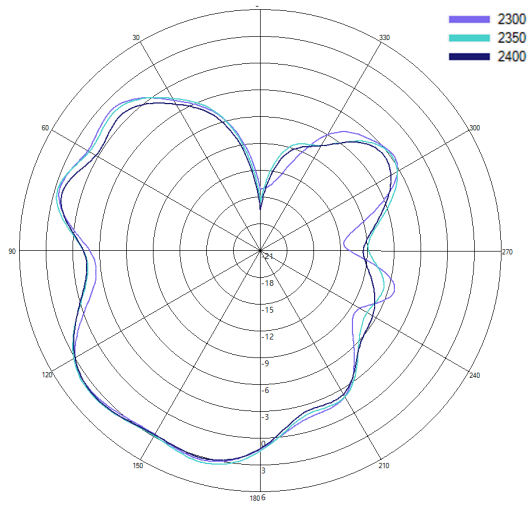
Typical H Plane- Cell A- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell A - 2350 MHz



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



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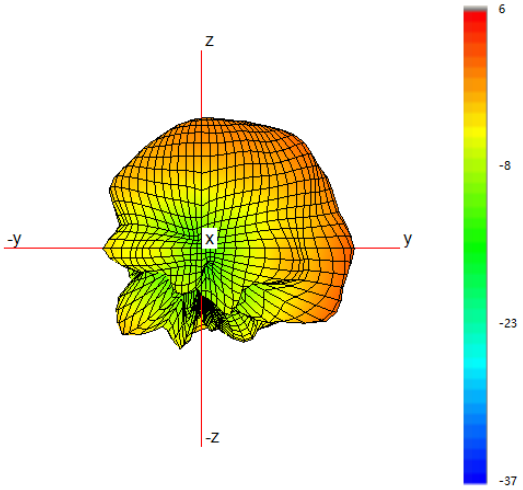
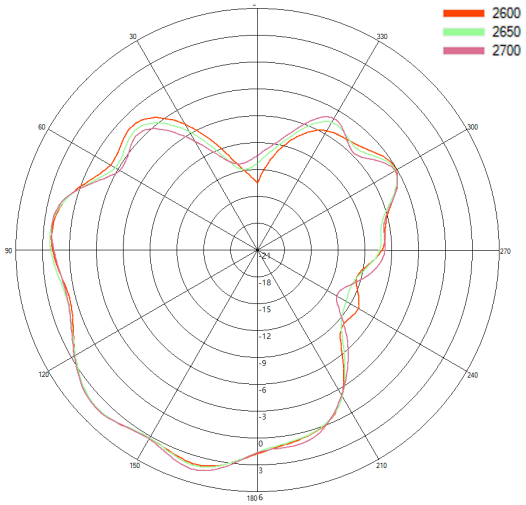
3D Pattern Data in Free Space Cell A

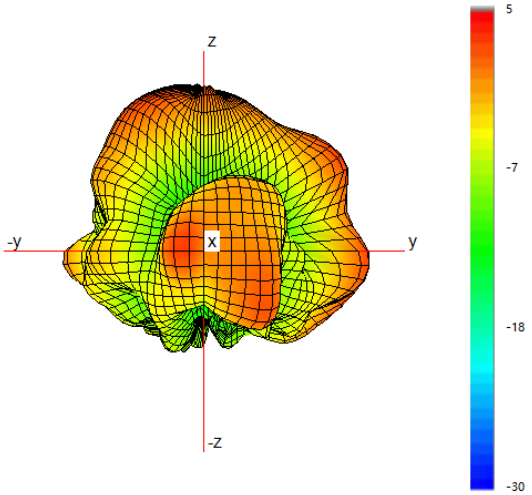
Typical 3D Pattern- Cell A - 2650 MHz



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



Typical 3D Pattern- Cell A - 3600 MHz



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

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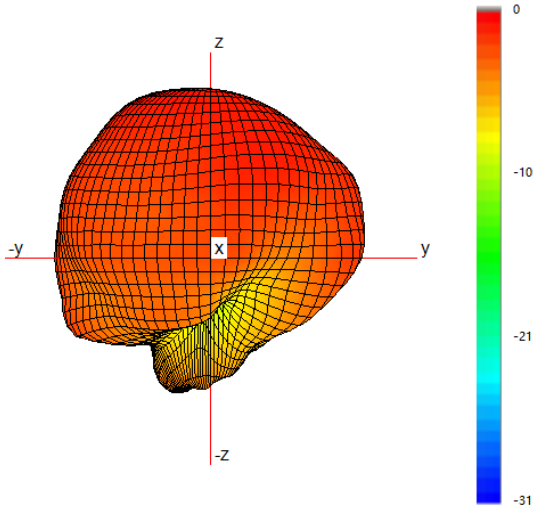
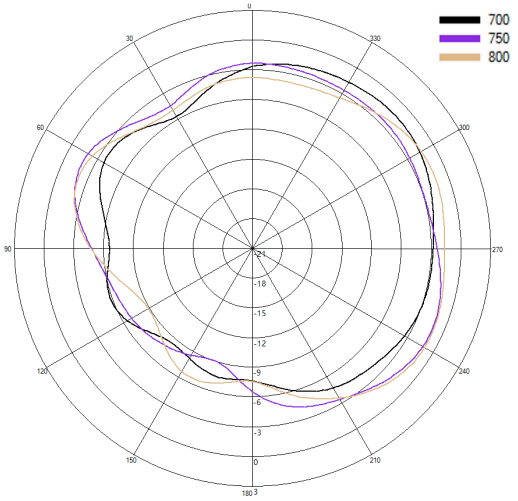
3D Pattern Data in Free Space Cell B

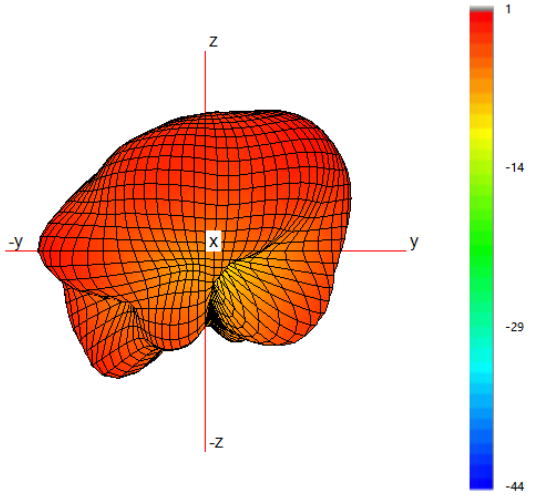
Typical 3D Pattern- Cell B - 750 MHz



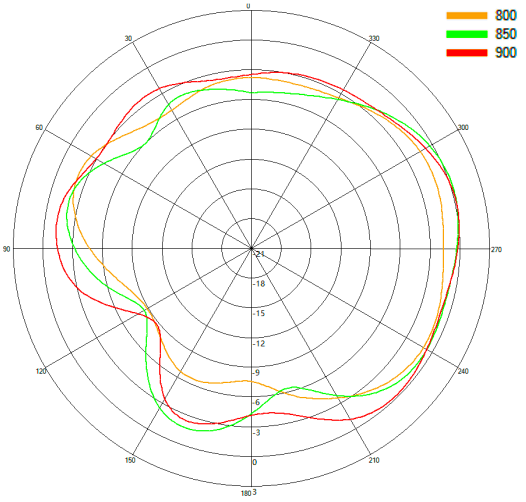
Typical H Plane- Cell B - Patterns- 700-800MHz



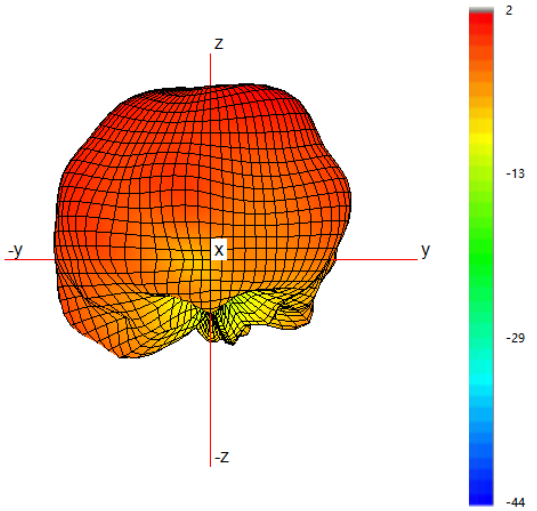
Typical 3D Pattern- Cell B - 850 MHz



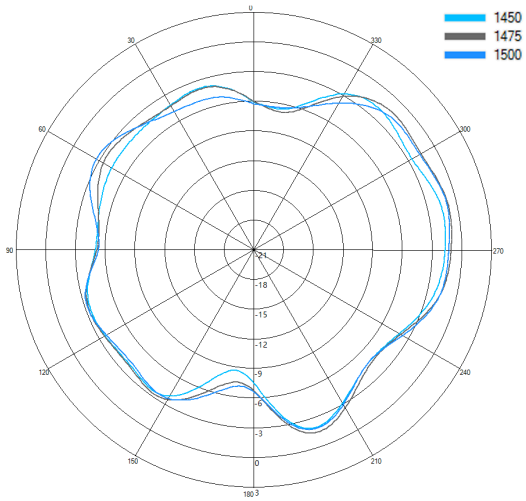
Typical H Plane- Cell B - Patterns- 800-900MHz



Typical 3D Pattern- Cell B - 1475 MHz



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



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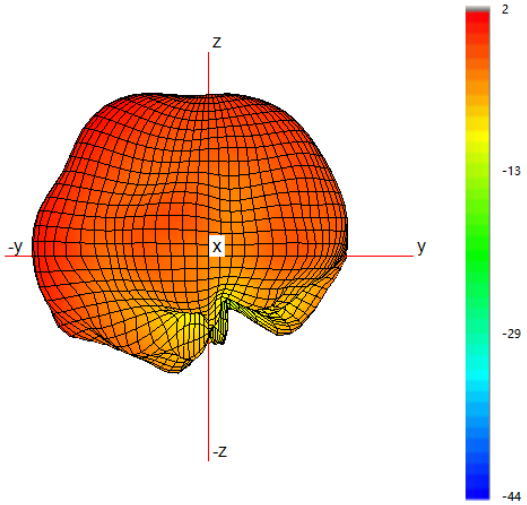
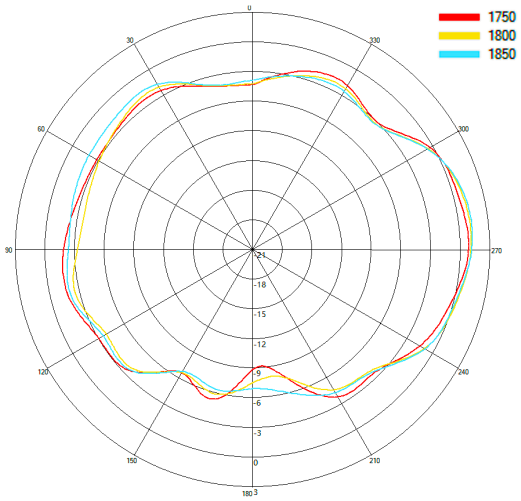
3D Pattern Data in Free Space Cell B

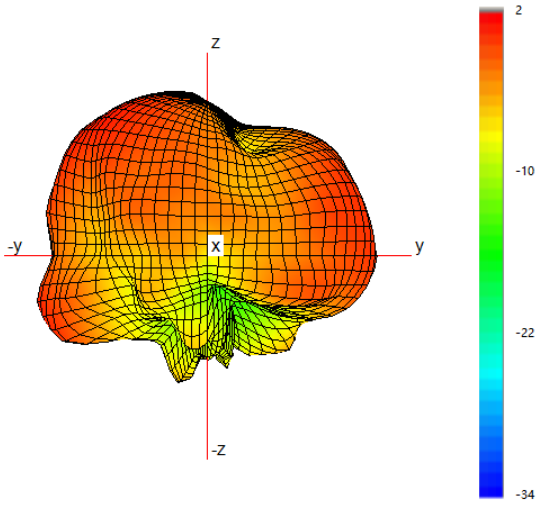
Typical 3D Pattern- Cell B - 1800 MHz



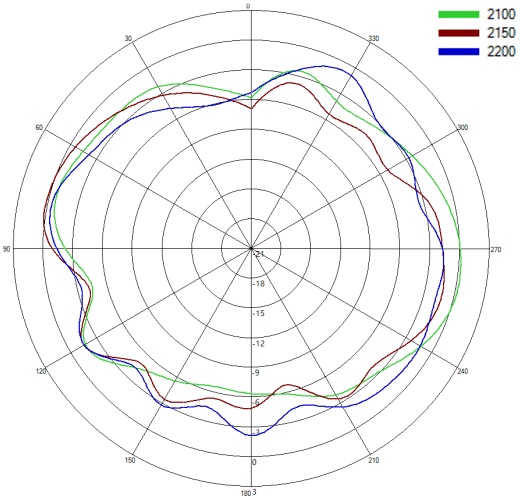
Typical H Plane- Cell B- Patterns- 1750-1850 MHz



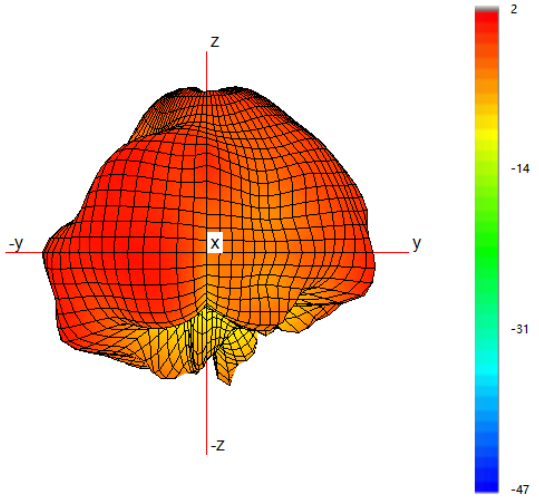
Typical 3D Pattern- Cell B - 2150 MHz



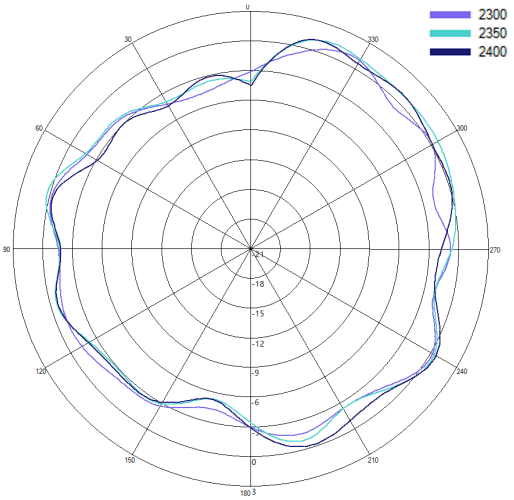
Typical H Plane- Cell B- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell B - 2350 MHz



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



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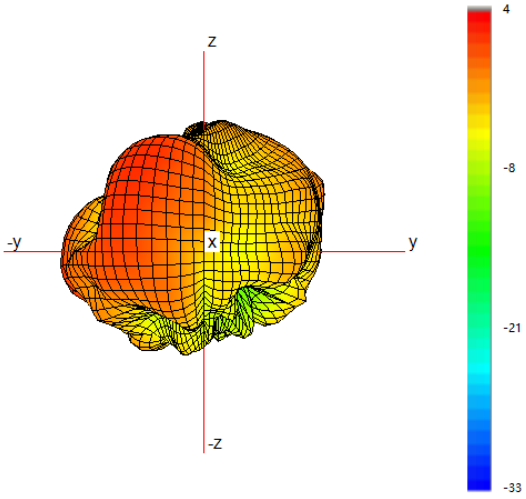
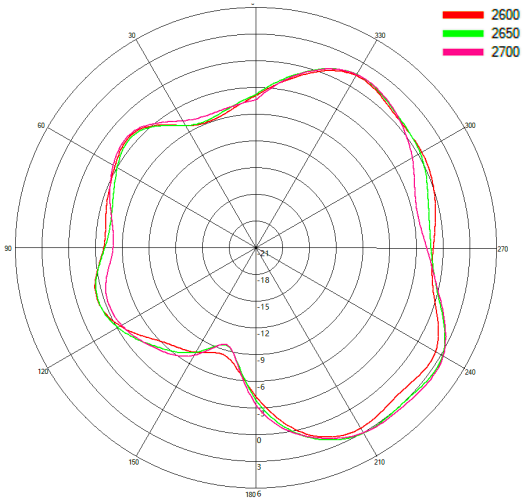
3D Pattern Data in Free Space Cell B

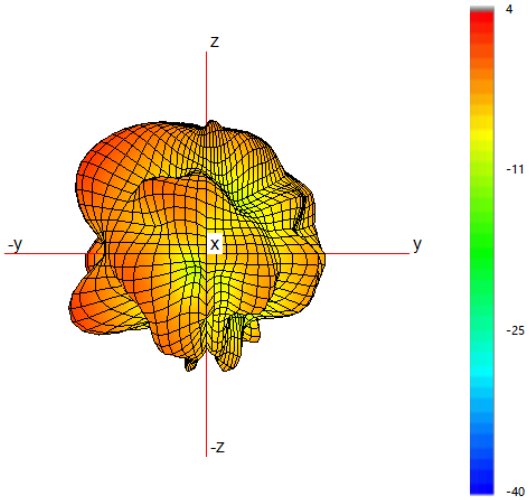
Typical 3D Pattern- Cell B - 2650 MHz



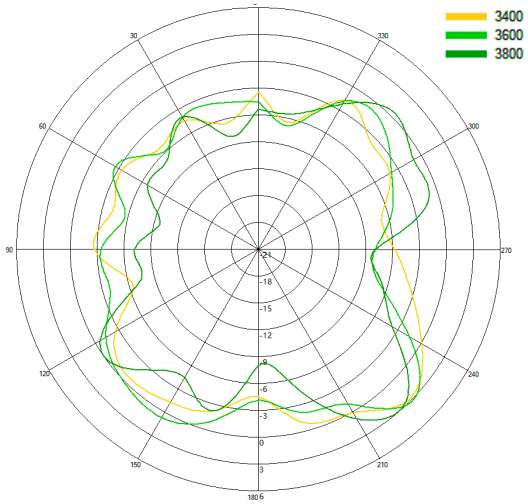
Typical H Plane- Cell B - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell B - 3600 MHz



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



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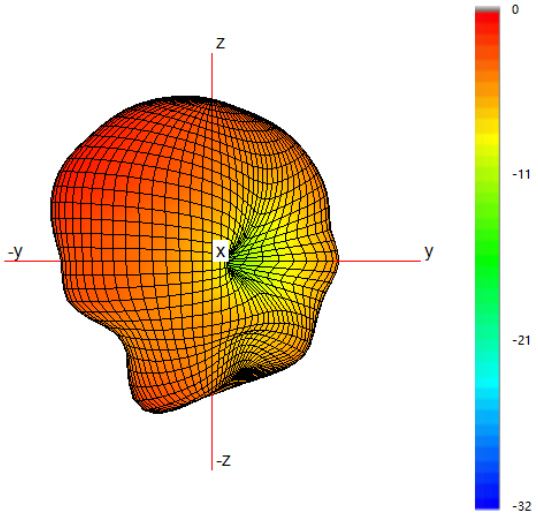
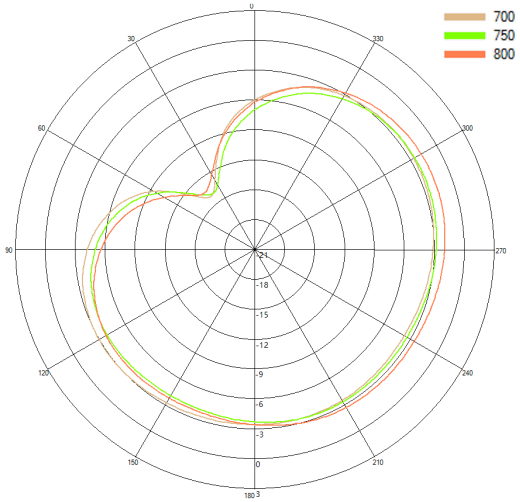
3D Pattern Data in Free Space Cell C

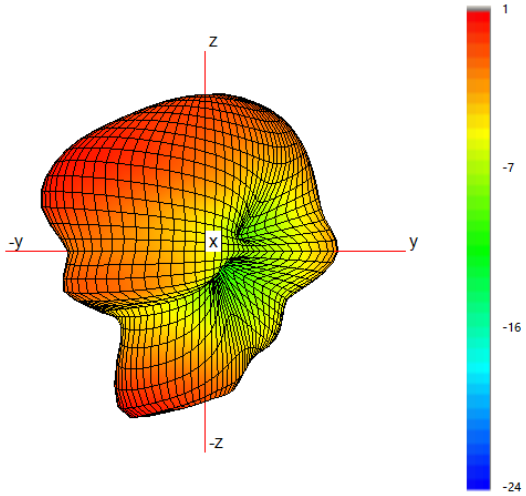
Typical 3D Pattern- Cell C - 750 MHz



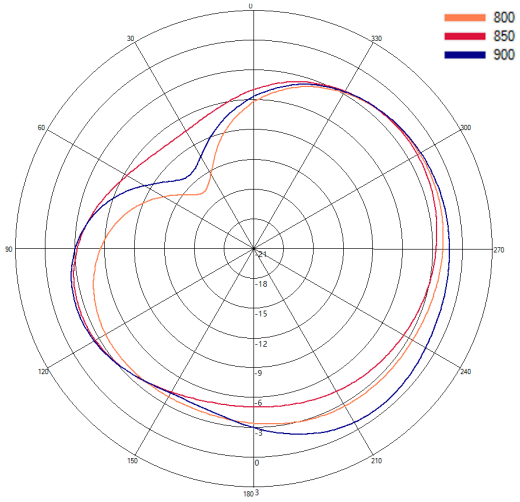
Typical H Plane- Cell C - Patterns- 700-800MHz



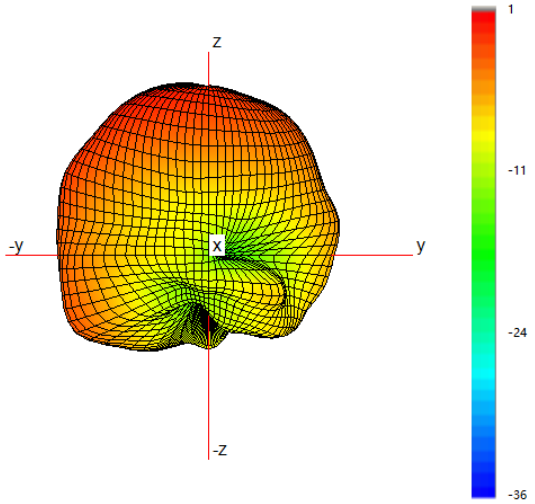
Typical 3D Pattern- Cell C - 850 MHz



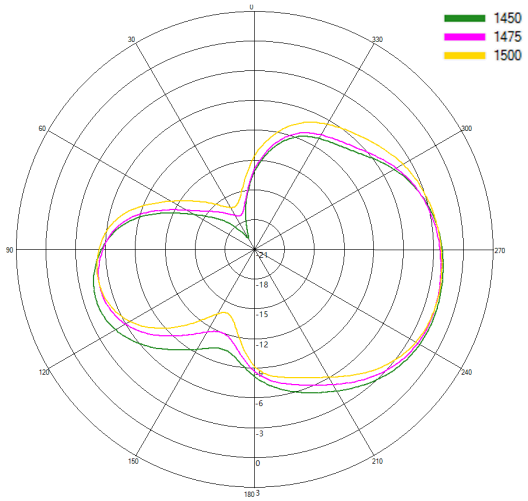
Typical H Plane- Cell C - Patterns- 800-900MHz



Typical 3D Pattern- Cell C - 1475 MHz



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



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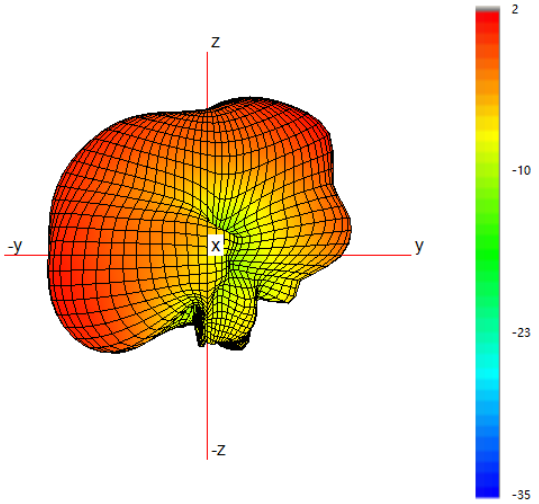
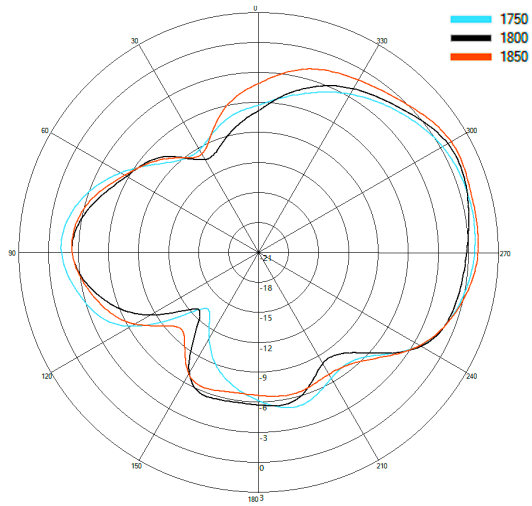
3D Pattern Data in Free Space Cell C

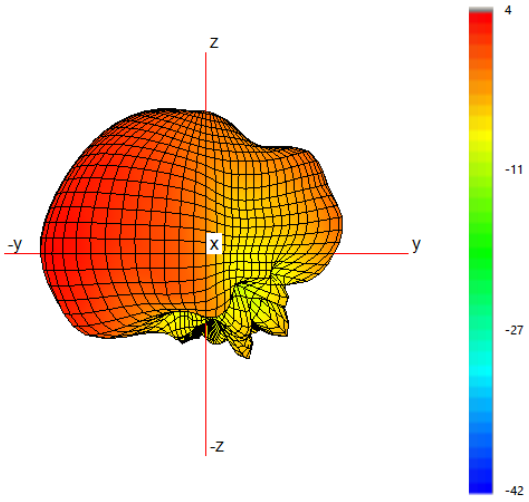
Typical 3D Pattern- Cell C - 1800 MHz



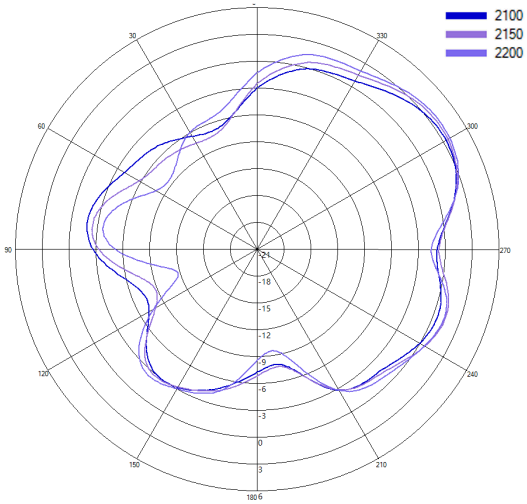
Typical H Plane- Cell C- Patterns- 1750-1850 MHz



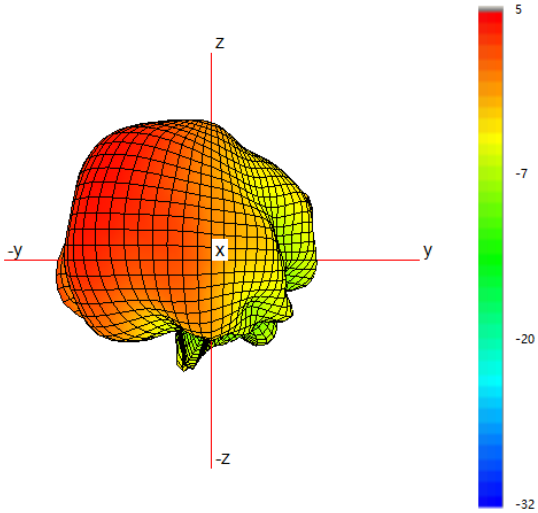
Typical 3D Pattern- Cell C - 2150 MHz



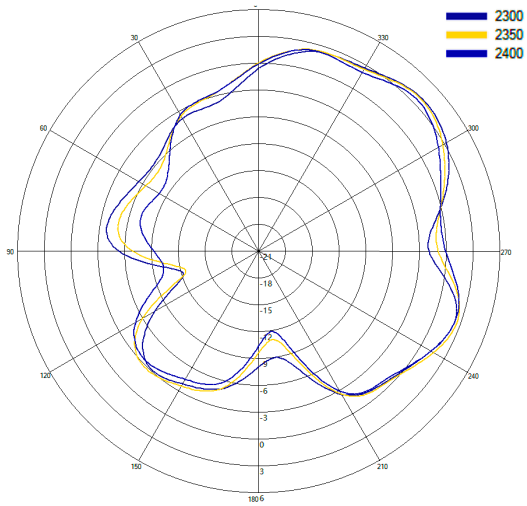
Typical H Plane- Cell C- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell C - 2350 MHz



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



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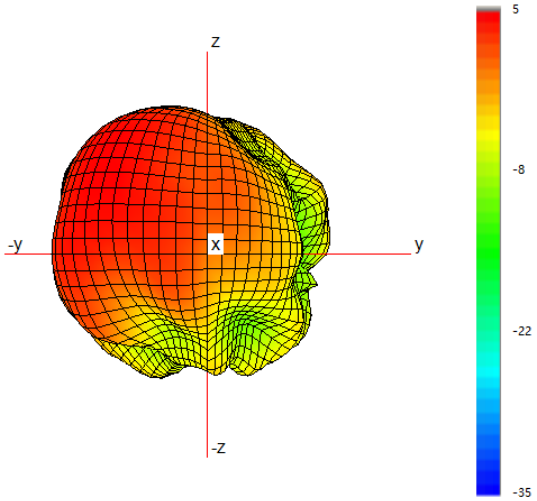
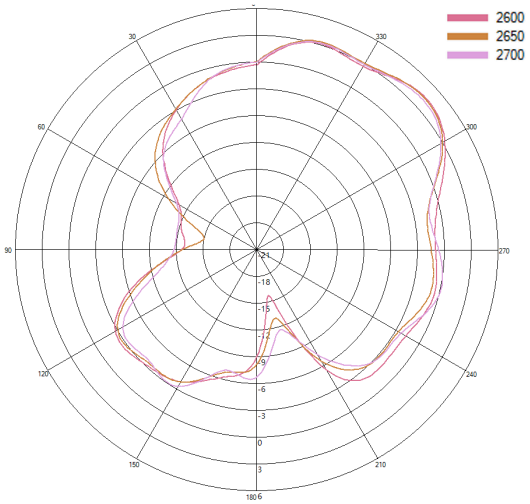
3D Pattern Data in Free Space Cell C

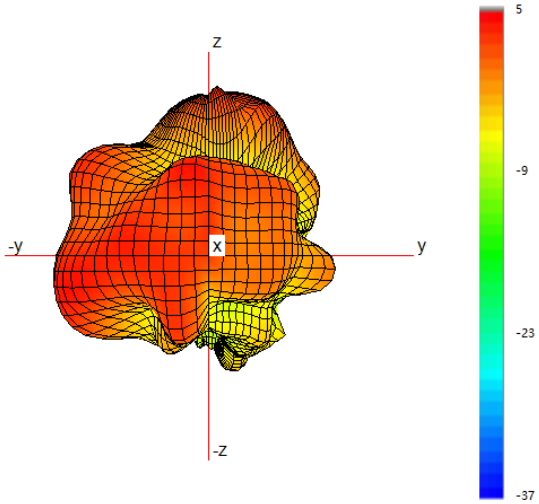
Typical 3D Pattern- Cell C - 2650 MHz



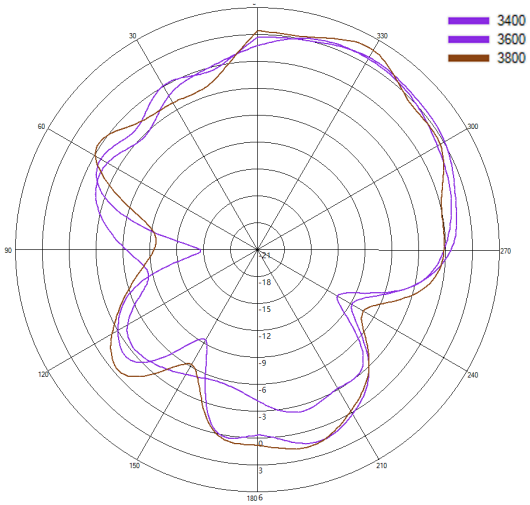
Typical H Plane- Cell C - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell C - 3600 MHz



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



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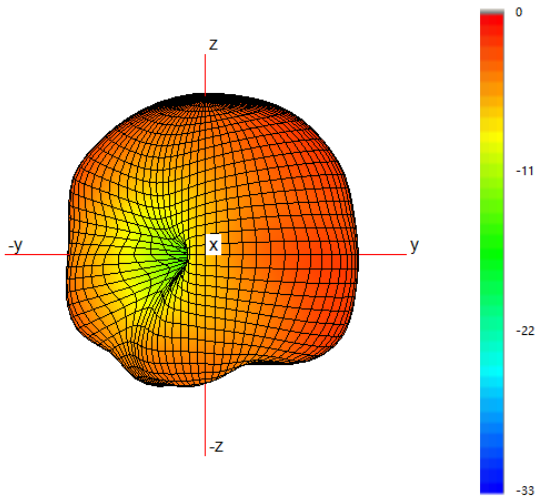
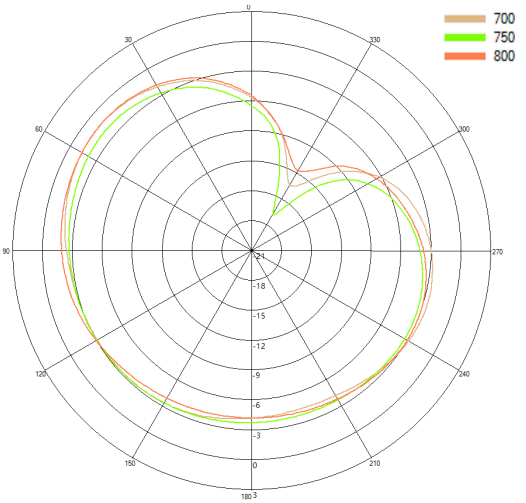
3D Pattern Data in Free Space Cell D

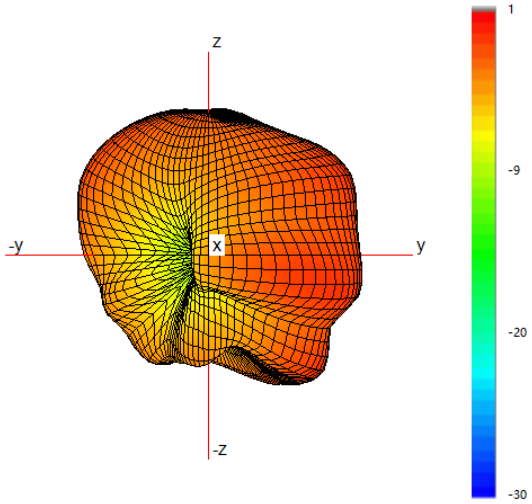
Typical 3D Pattern- Cell D - 750 MHz



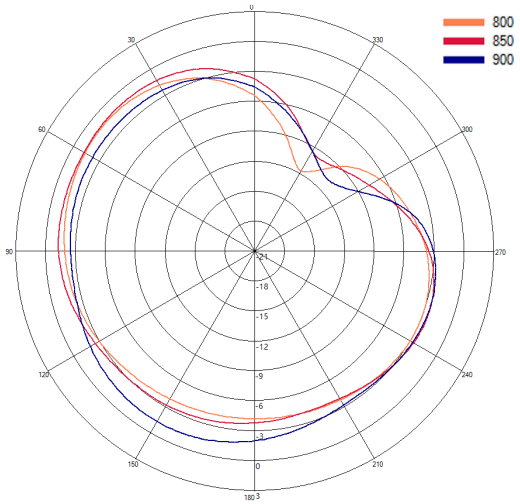
Typical H Plane- Cell D - Patterns- 700-800MHz



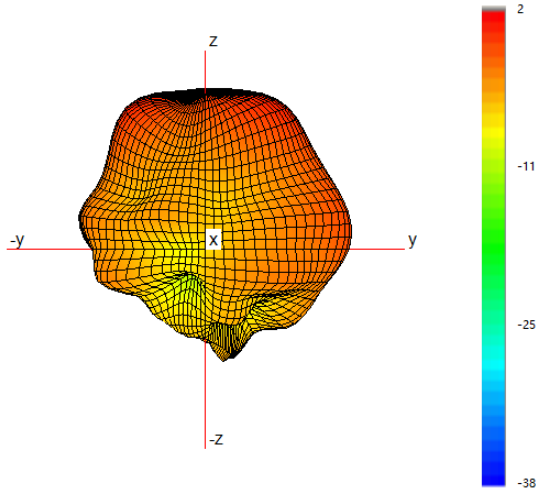
Typical 3D Pattern- Cell D - 850 MHz



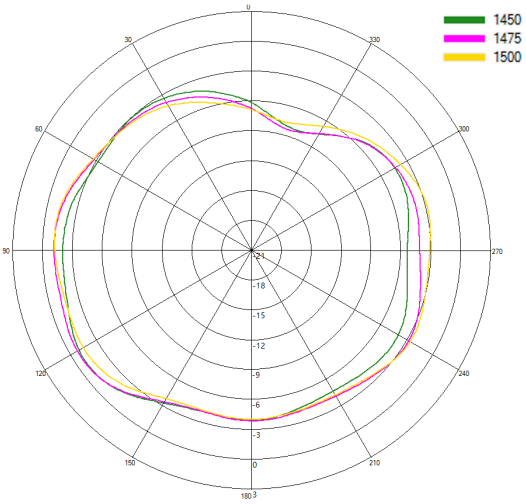
Typical H Plane- Cell D - Patterns- 800-900MHz



Typical 3D Pattern- Cell D - 1475 MHz



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



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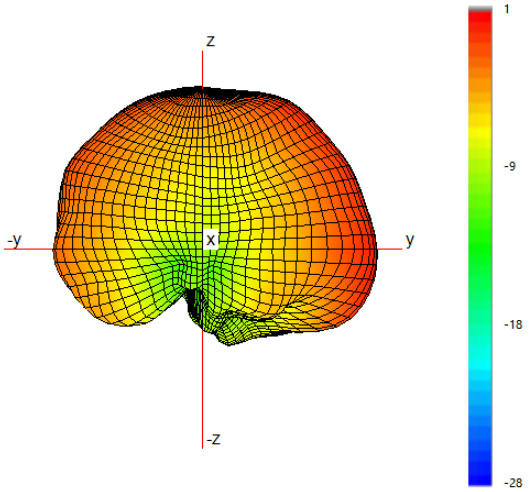
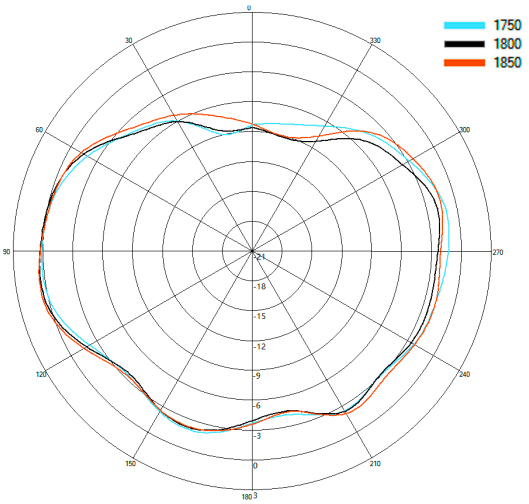
3D Pattern Data in Free Space Cell D

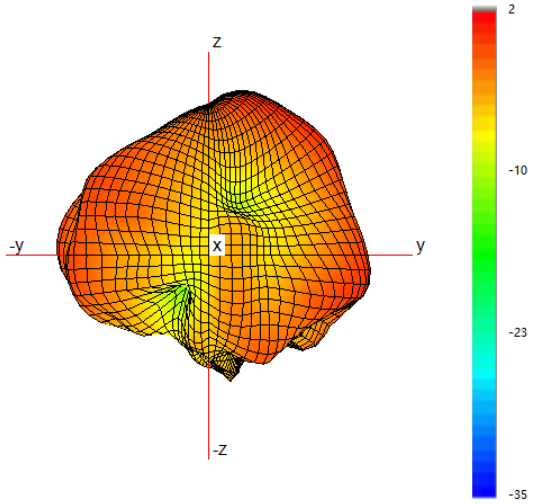
Typical 3D Pattern- Cell D - 1800 MHz



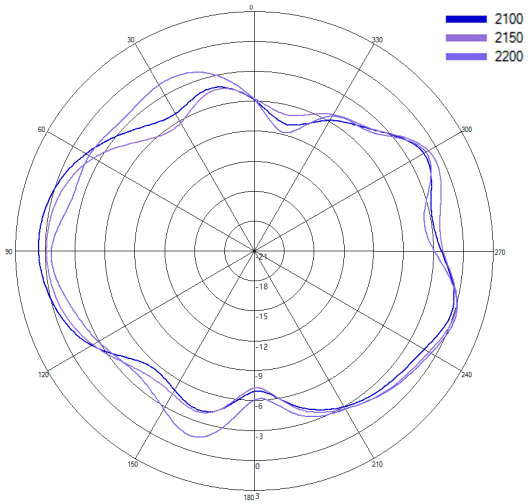
Typical H Plane- Cell D- Patterns- 1750-1850 MHz



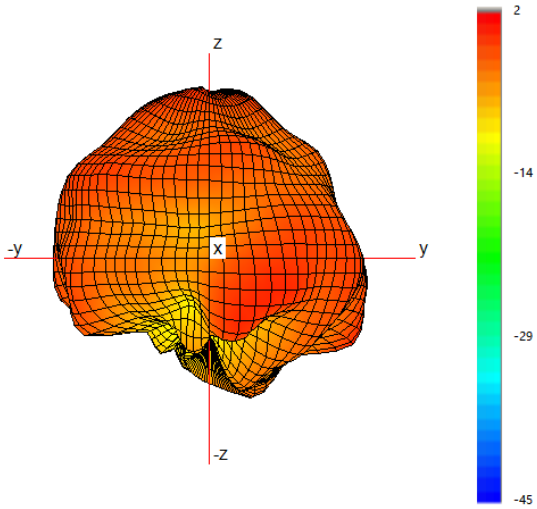
Typical 3D Pattern- Cell D - 2150 MHz



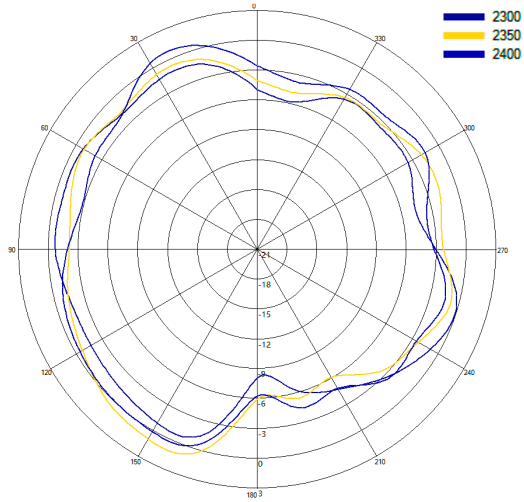
Typical H Plane- Cell D- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell D - 2350 MHz



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



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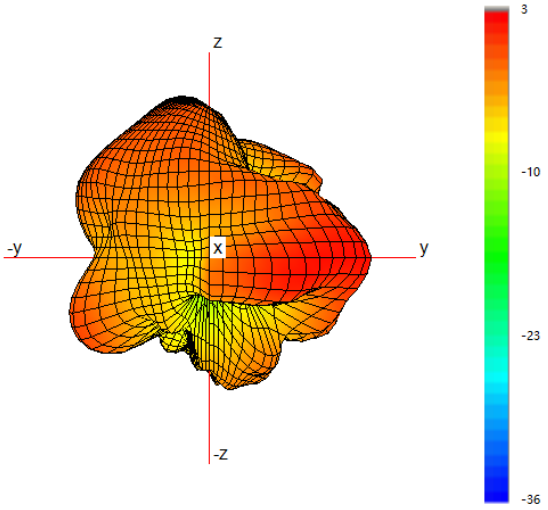
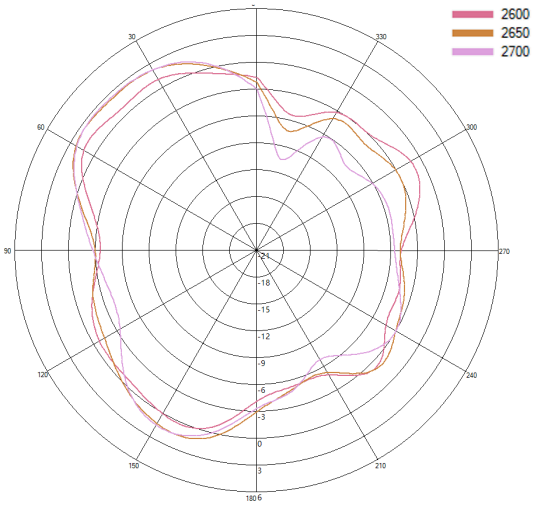
3D Pattern Data in Free Space Cell D

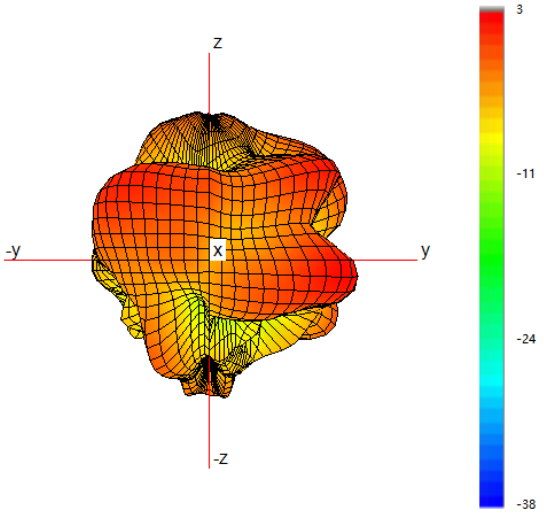
Typical 3D Pattern- Cell D - 2650 MHz



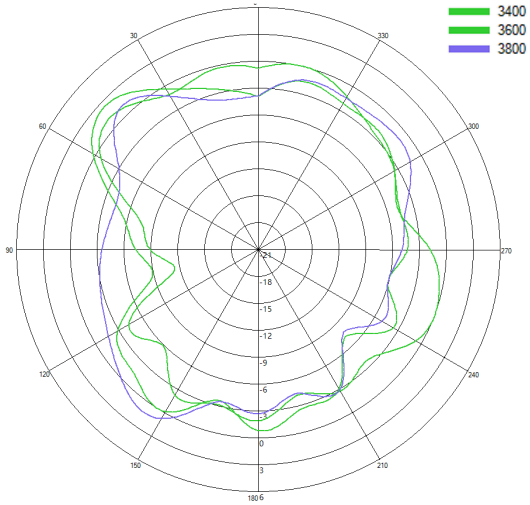
Typical H Plane- Cell D - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell D - 3600 MHz



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



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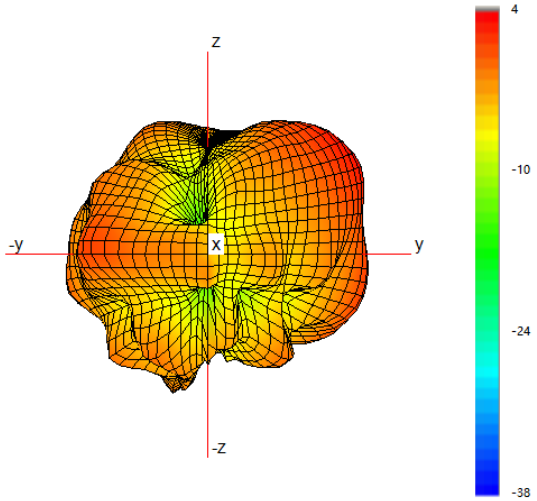
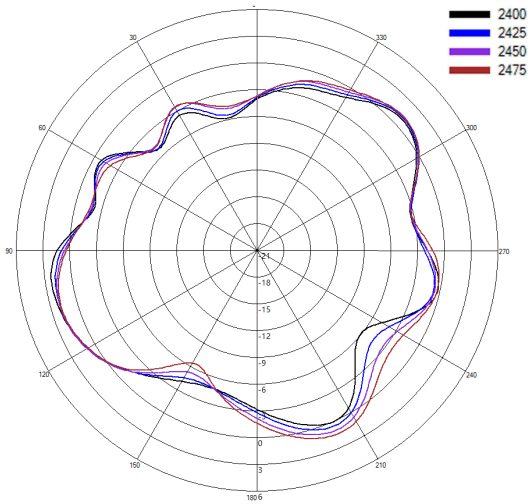
WiFi Pattern-Data in Free Space -WiFi -1

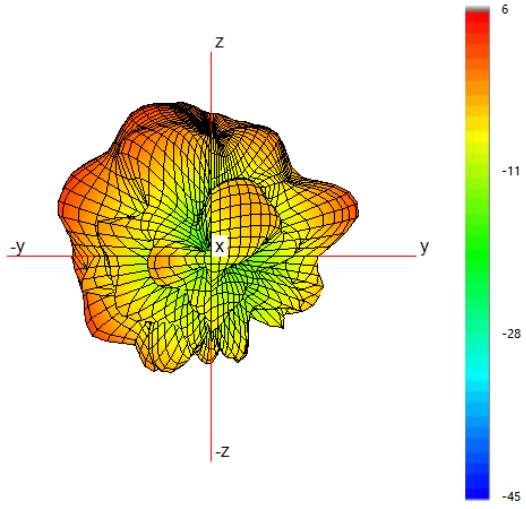
Typical 3D Pattern- WiFi - 1 - 2450 MHz



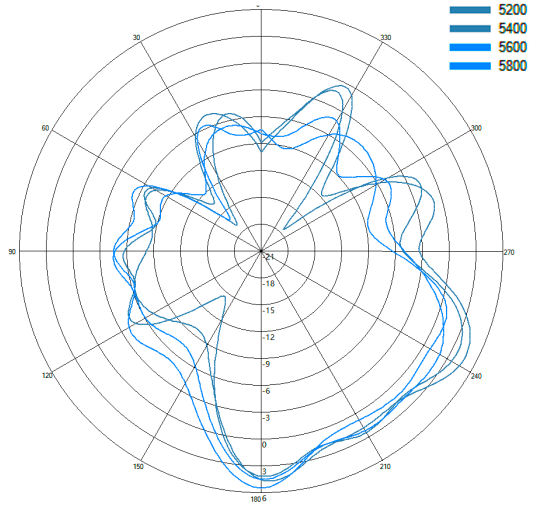
Typical H Plane- WiFi - 1 - Patterns- 2400-2475MHz



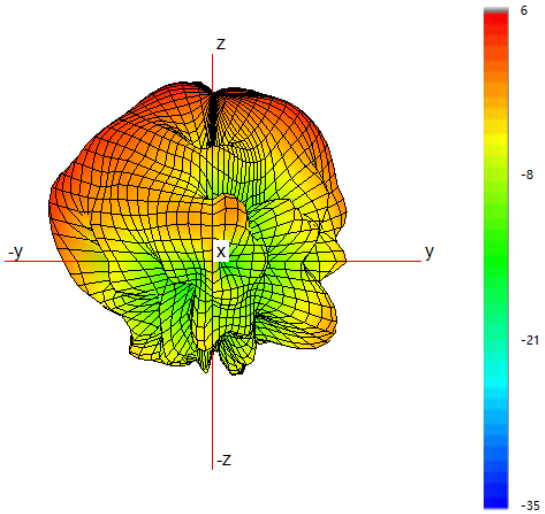
Typical 3D Pattern- WiFi - 1 - 5500 MHz



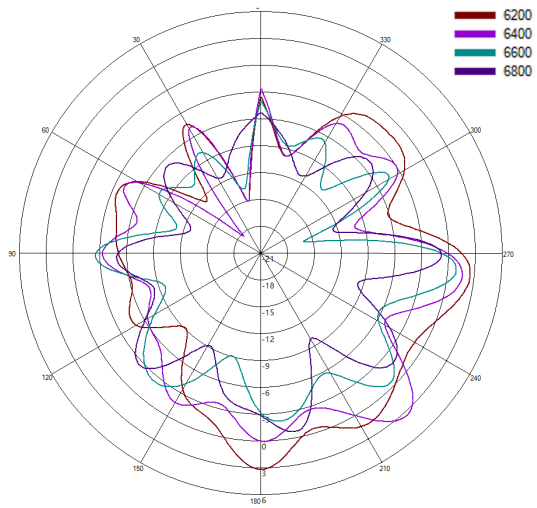
Typical H Plane- WiFi - 1 - Patterns- 5200-5800MHz



Typical 3D Pattern- WiFi - 1 - 6500 MHz



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



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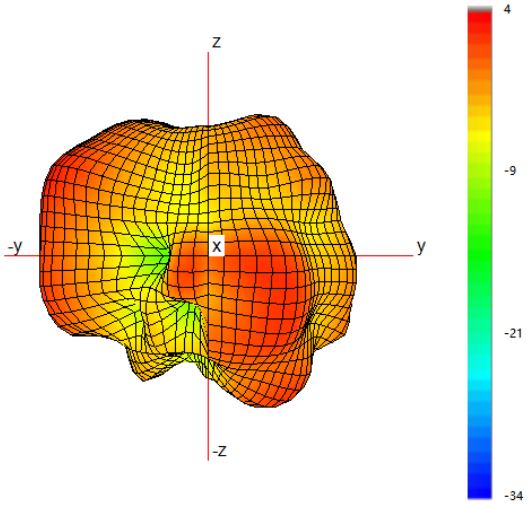
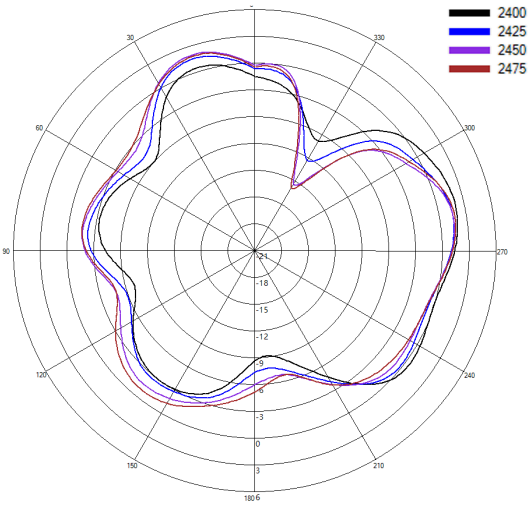
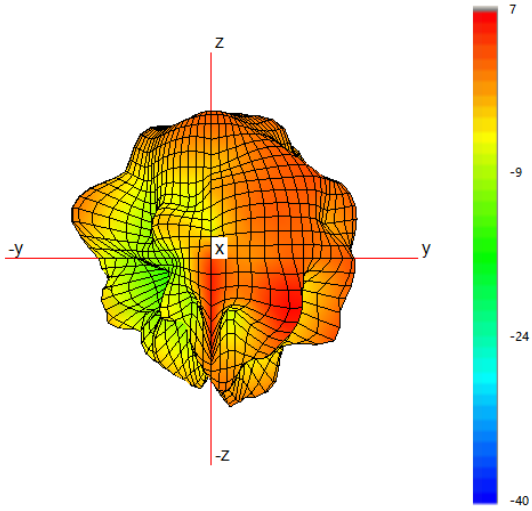
Typical 3D Pattern- WiFi - 2 - 2450 MHz



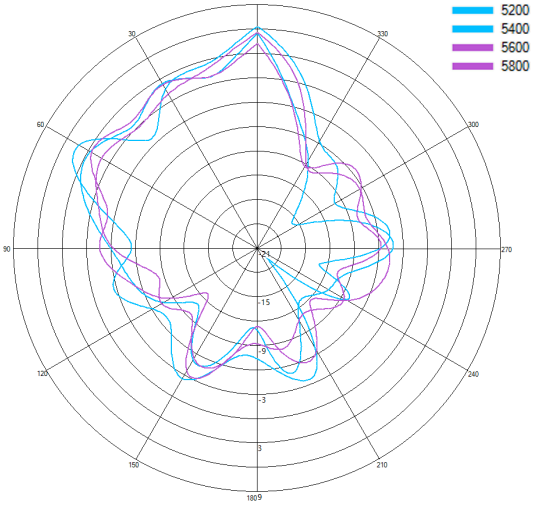
Typical H Plane- WiFi - 2 - Patterns- 2400-2475MHz



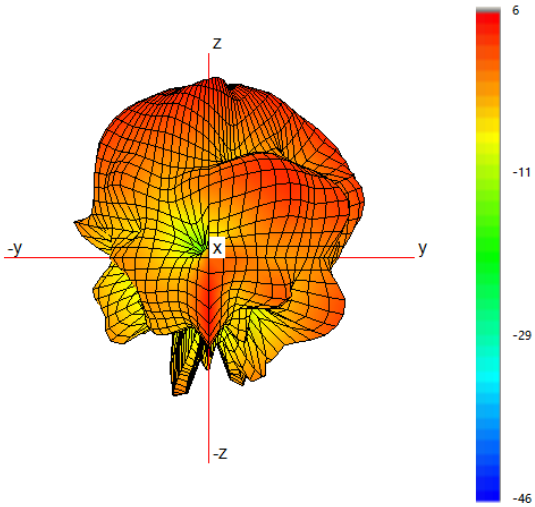
Typical 3D Pattern- WiFi - 2 - 5500 MHz



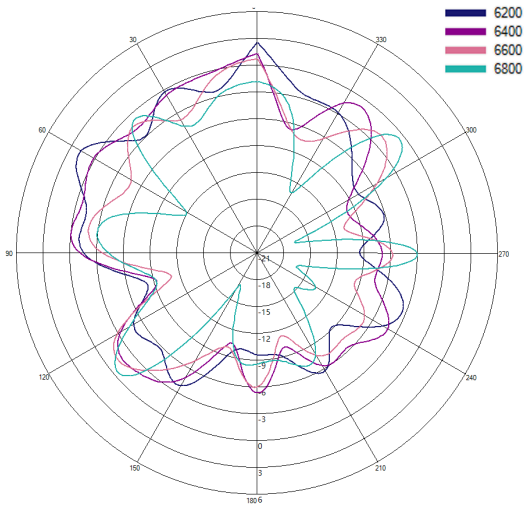
Typical H Plane- WiFi - 2 - Patterns- 5200-5800MHz



Typical 3D Pattern- WiFi - 2 - 6500 MHz



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



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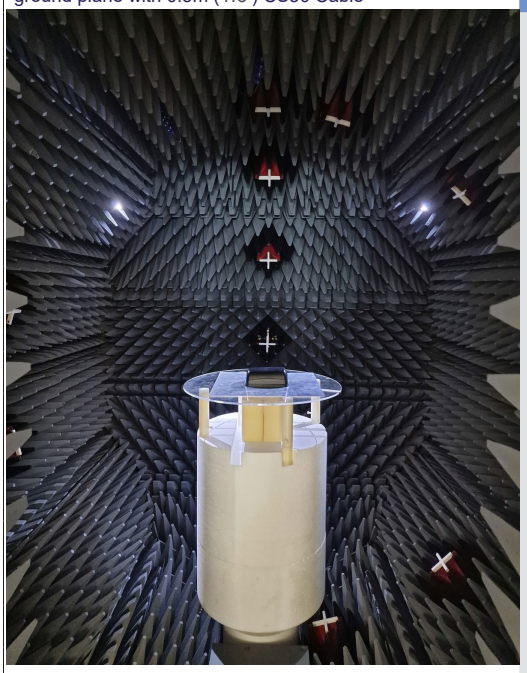
Electrical Data Cell on Ground Plane

Measurement Conditions

LGADM4-7-42 measured on 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') CS30 Cable



4G/5G Antennas

Frequency Range (MHz)	LTE Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
699-798	12,13, 14 17,28	Cell A	3.5	44
		Cell B	3.0	46
		Cell C	3.7	40
		Cell D	2.4	46
807- 862	5,19,20,26,27	Cell A	3.8	46
		Cell B	4.0	49
		Cell C	3.5	43
		Cell D	3.9	50
880-960	8	Cell A	4.2	64
		Cell B	4.2	55
		Cell C	4.5	59
		Cell D	3.9	56
1427-1518	11, 21, 74,75,76	Cell A	3.3	31
		Cell B	4.4	47
		Cell C	3.3	35
		Cell D	4.1	46
1710-1920	2,3,4,9,25,35, 39,66	Cell A	5.6	54
		Cell B	4.8	47
		Cell C	5.0	49
		Cell D	4.4	47
1920-2170	1,23	Cell A	7.6	61
		Cell B	5.9	49
		Cell C	7.1	58
		Cell D	5.2	49
2300-2400	30,40	Cell A	8.6	64
		Cell B	6.1	49
		Cell C	7.8	61
		Cell D	5.5	51
2496-2690	7,38,41	Cell A	7.8	57
		Cell B	7.2	56
		Cell C	7.5	59
		Cell D	6.5	54
3300-4200	22,42,43,48,77, 78,79	Cell A	6.9	61
		Cell B	6.8	49
		Cell C	7.1	61
		Cell D	6.6	49

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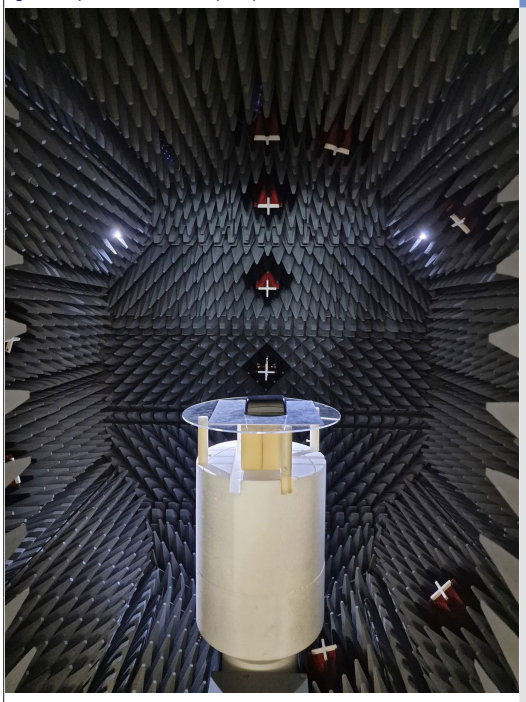
Measurement Conditions

LGADM4-7-42 measured on 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') CS30 Cable



WiFi Antennas

Frequency Range (MHz)	WiFi Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
2396-2485	2.5GHz	WiFi 1	5.7	55
		WiFi 2	5.6	47
5150-5250	UNII-1	WiFi 1	7.8	57
		WiFi 2	8.1	59
5250-5350	UNII-2A	WiFi 1	8.0	57
		WiFi 2	8.6	60
5470-5725	UNII-2B	WiFi 1	6.7	55
		WiFi 2	7.0	52
5725-5900	UNII-3	WiFi 1	5.9	60
		WiFi 2	6.6	55
5845-5885	UNII-4	WiFi 1	5.8	58
		WiFi 2	6.0	53
5935-6415	UNII-5	WiFi 1	7.8	60
		WiFi 2	6.8	57
6435-6515	UNII-6	WiFi 1	7.3	60
		WiFi 2	6.4	58
6535-6875	UNII-7	WiFi 1	5.9	62
		WiFi 2	5.8	58
6875-7125	UNII-8	WiFi 1	5.7	59
		WiFi 2	5.5	56

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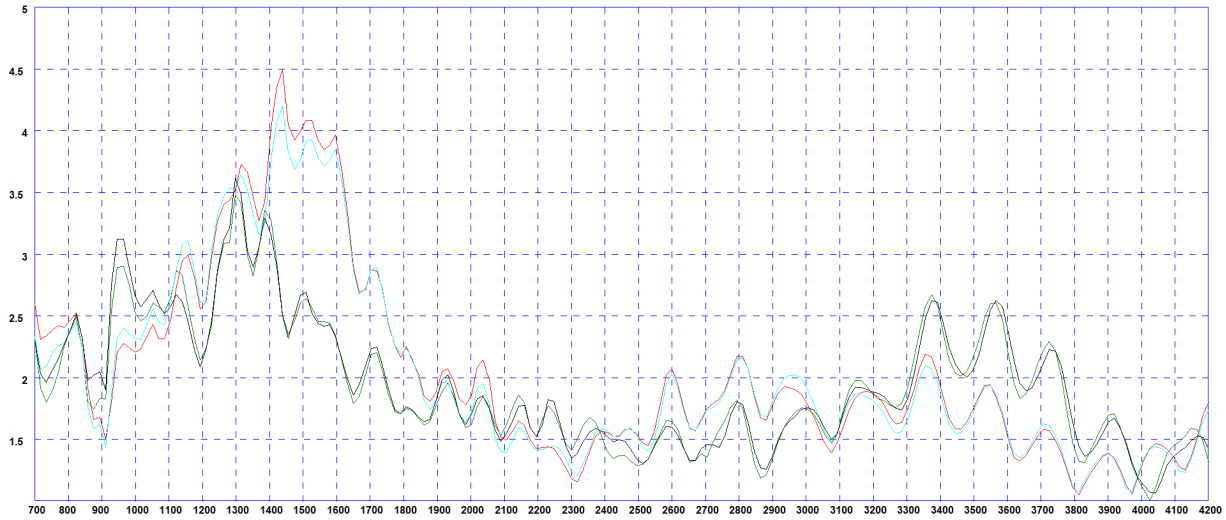
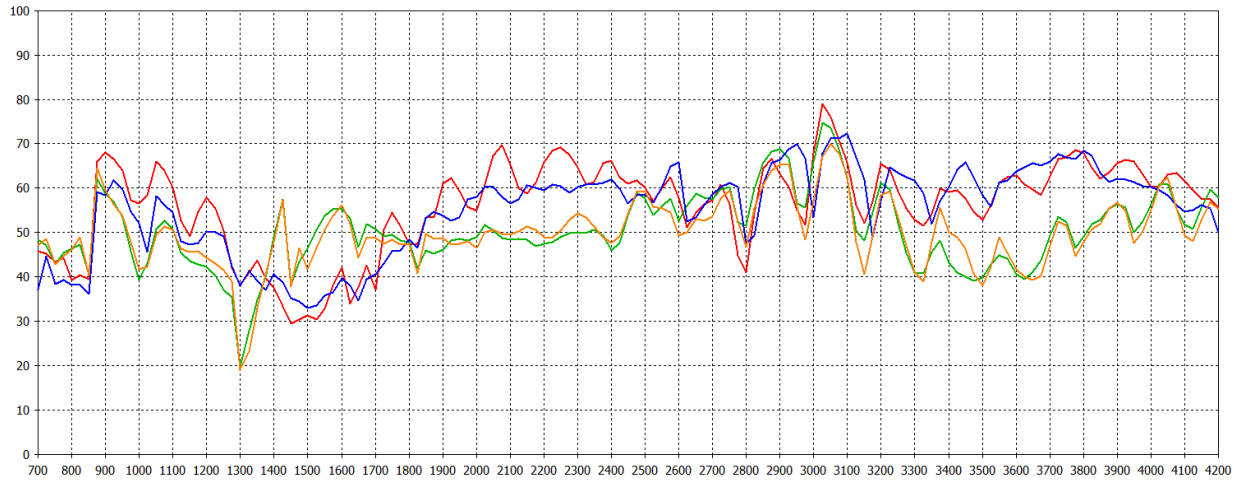
Electrical Data Cell on Ground Plane

Typical VSWR*



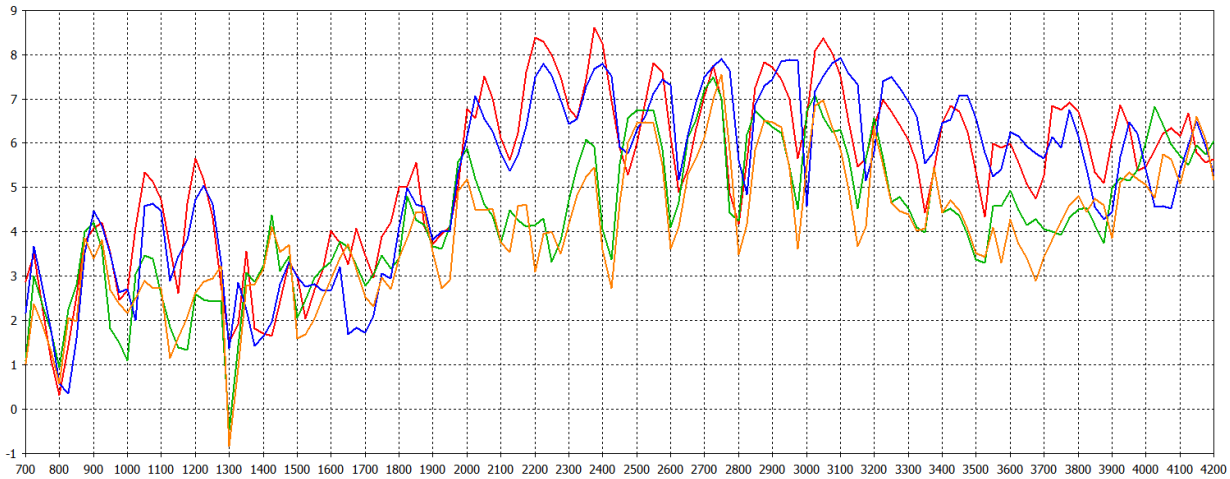
*VSWR measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

Typical Efficiency*



*Efficiency measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

Typical Swept Peak Gain*



* Swept peak gain measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

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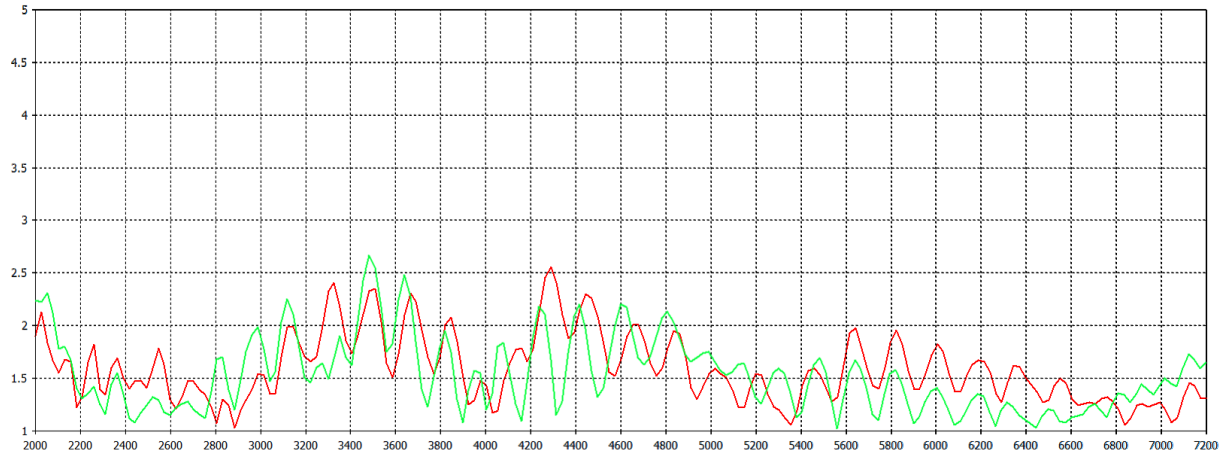
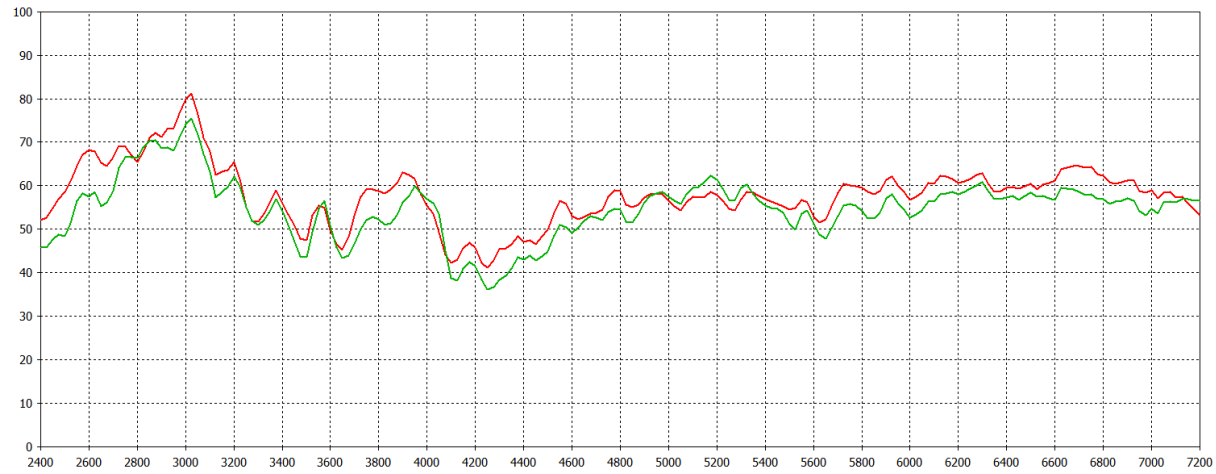
Typical VSWR*



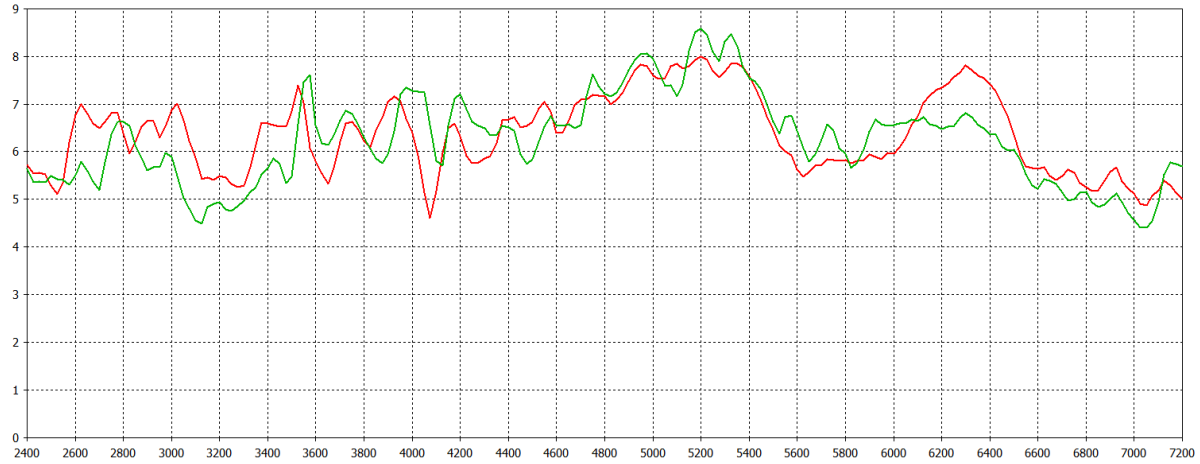
*VSWR measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

Typical Efficiency*



*Efficiency measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

Typical Swept Peak Gain*



* Swept peak gain measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

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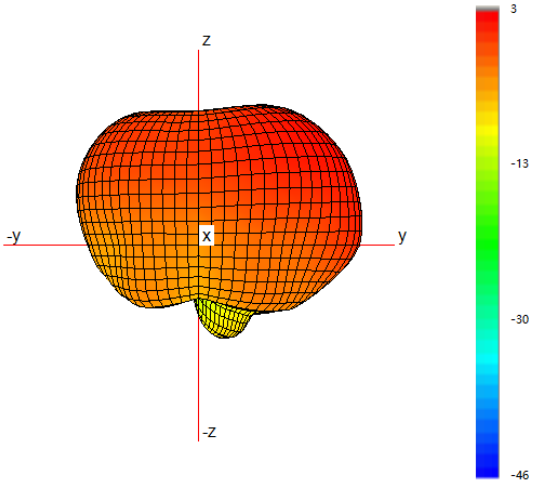
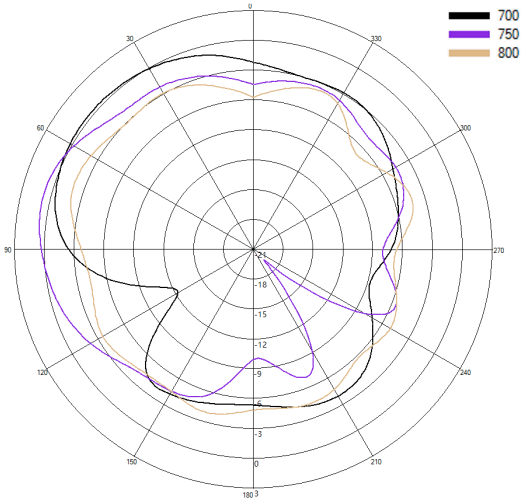
3D Pattern Data on Ground Plane Cell A

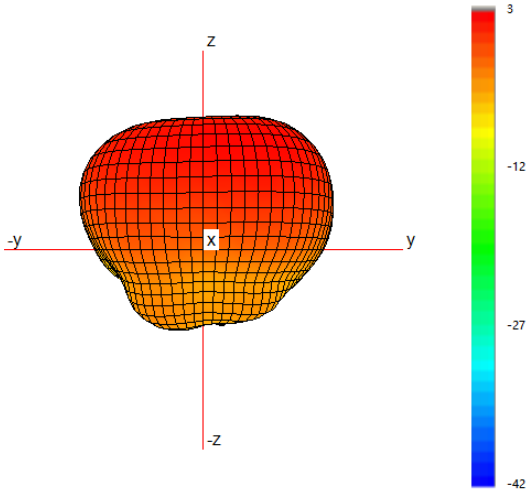
Typical 3D Pattern- Cell A - 750 MHz



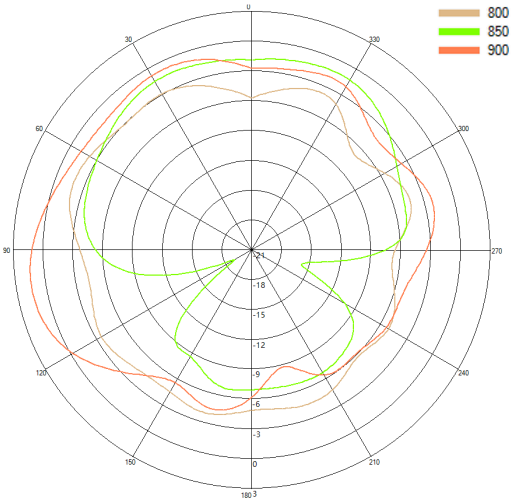
Typical H Plane- Cell A - Patterns- 700-800MHz



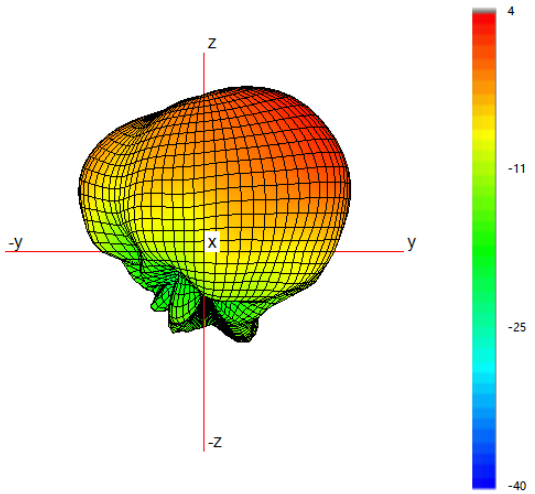
Typical 3D Pattern- Cell A - 850 MHz



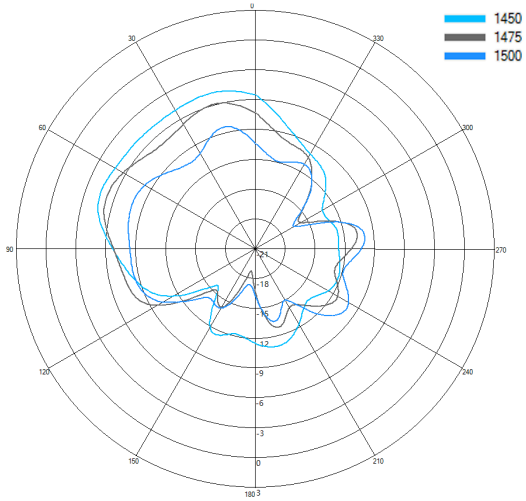
Typical H Plane- Cell A - Patterns- 800-900MHz



Typical 3D Pattern- Cell A - 1475 MHz



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



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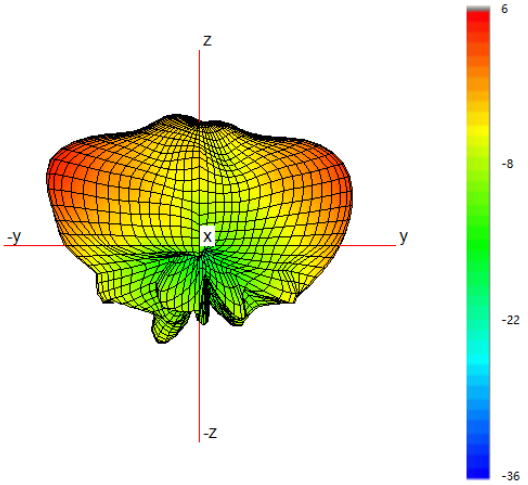
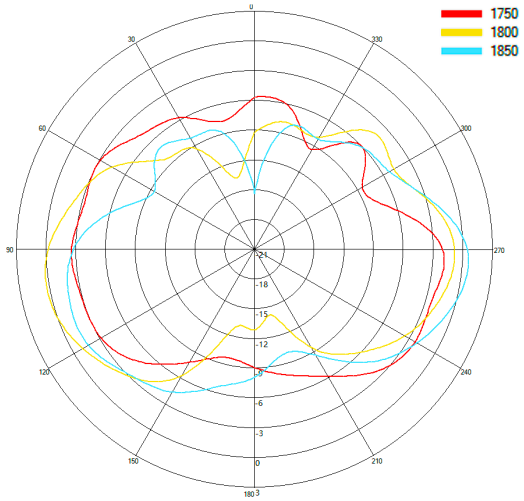
3D Pattern Data on Ground Plane Cell A

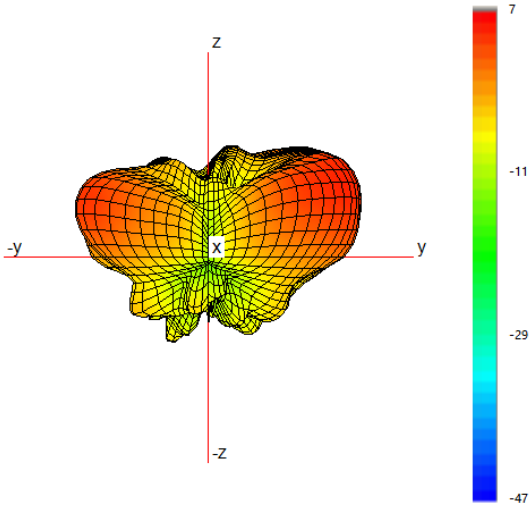
Typical 3D Pattern- Cell A - 1800 MHz



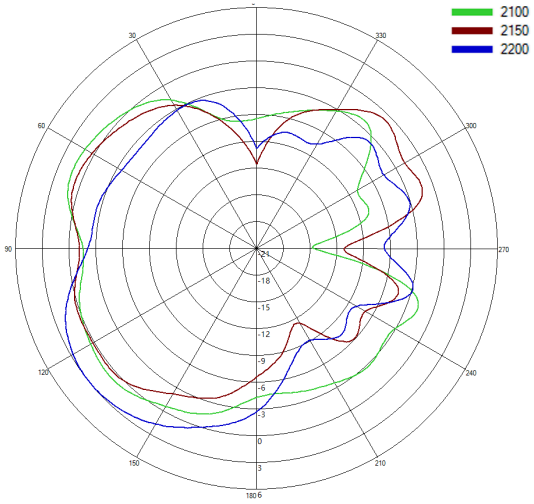
Typical H Plane- Cell A- Patterns- 1750-1850 MHz



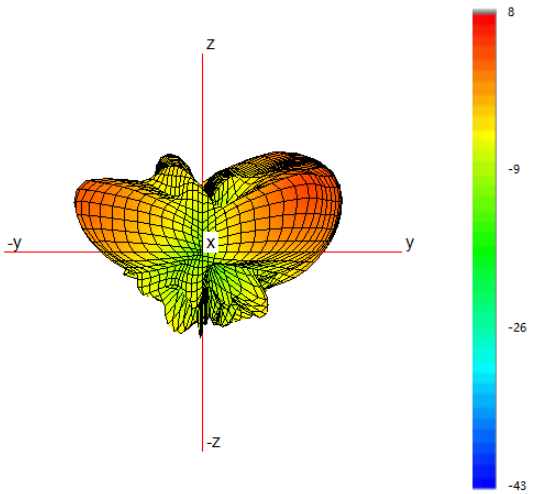
Typical 3D Pattern- Cell A - 2150 MHz



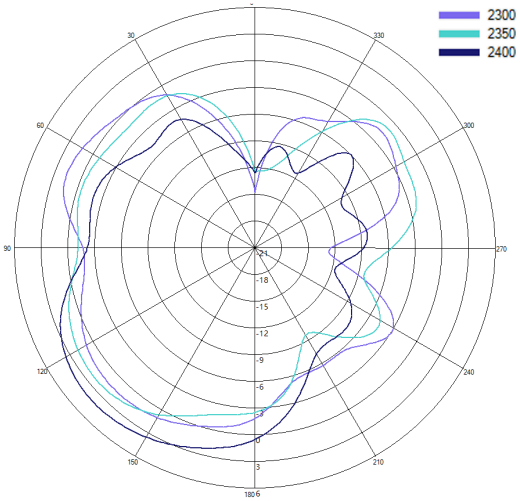
Typical H Plane- Cell A- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell A - 2350 MHz



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



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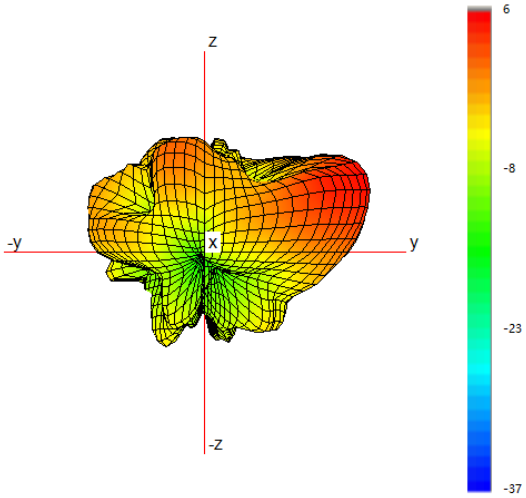
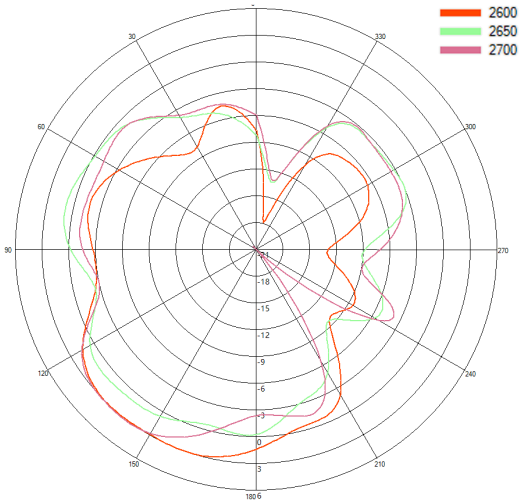
3D Pattern Data on Ground Plane Cell A

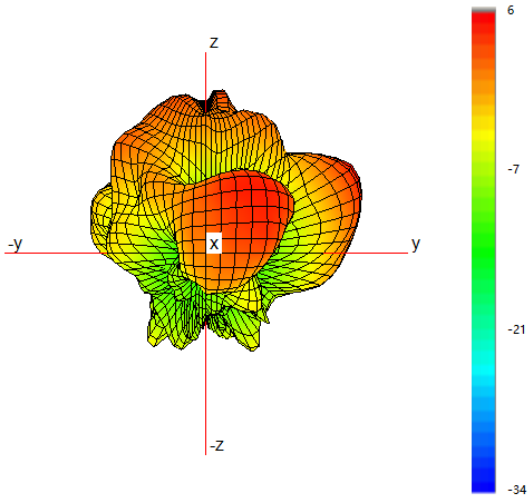
Typical 3D Pattern- Cell A - 2650 MHz



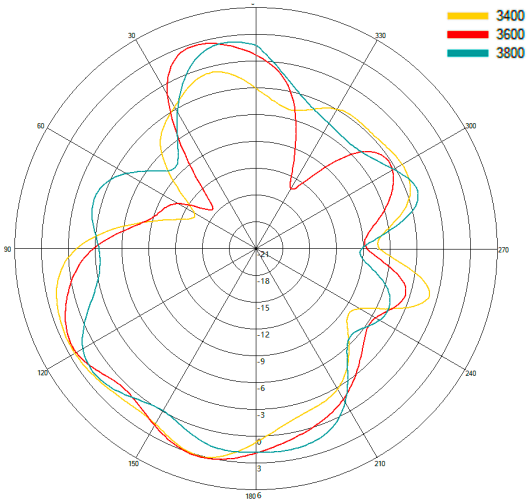
Typical H Plane- Cell A - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell A - 3600 MHz



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



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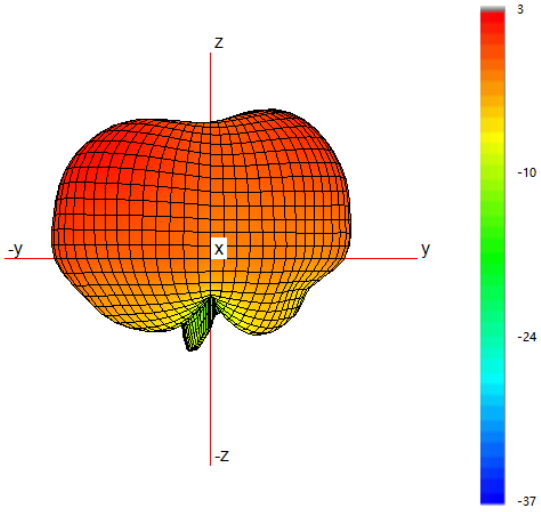
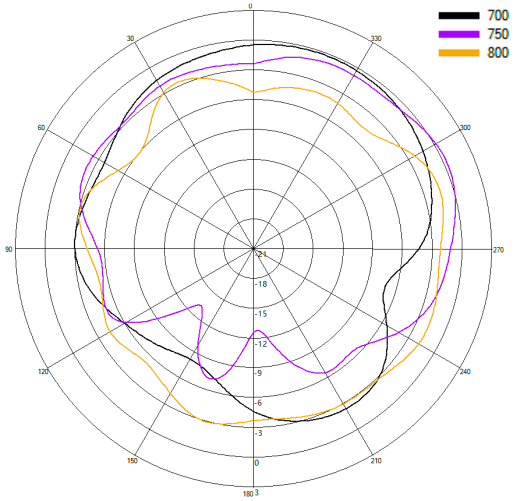
3D Pattern Data on Ground Plane Cell B

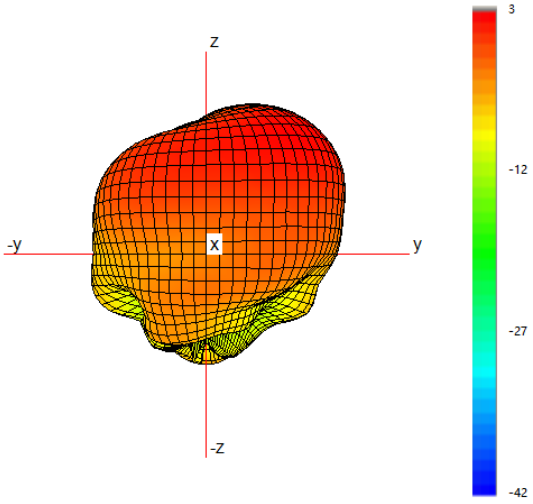
Typical 3D Pattern- Cell B - 750 MHz



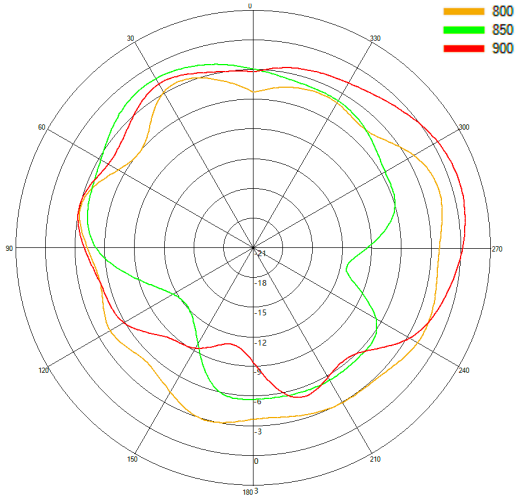
Typical H Plane- Cell B - Patterns- 700-800MHz



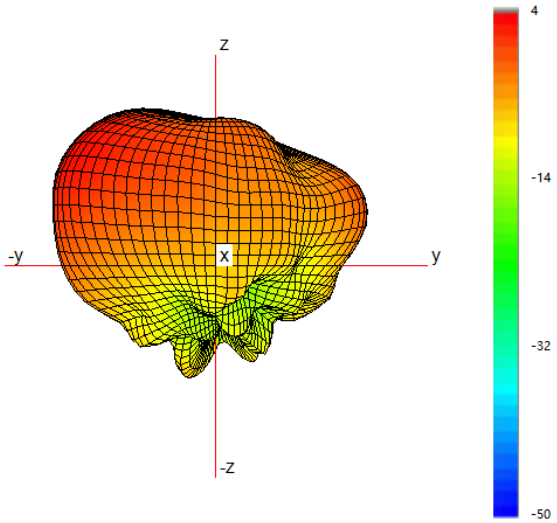
Typical 3D Pattern- Cell B - 850 MHz



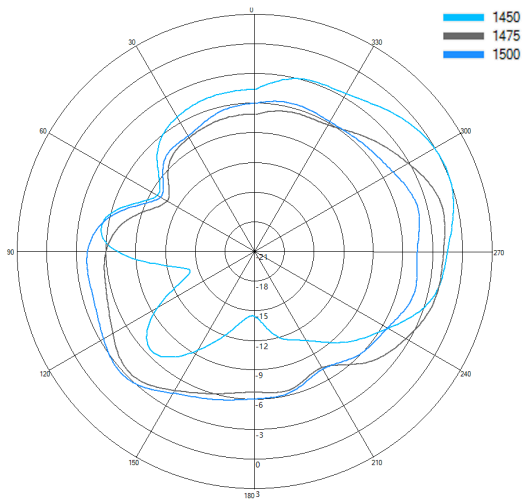
Typical H Plane- Cell B - Patterns- 800-900MHz



Typical 3D Pattern- Cell B - 1475 MHz



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



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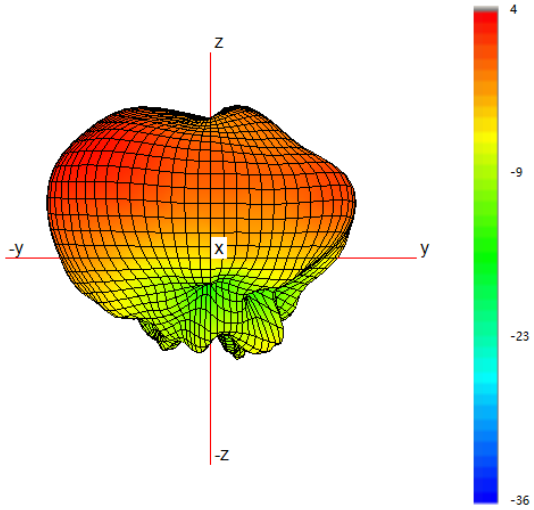
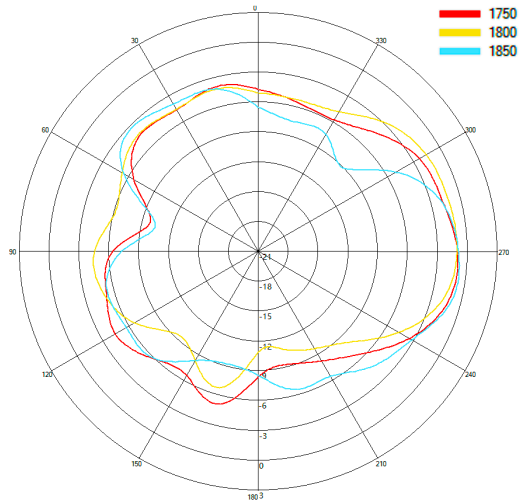
3D Pattern Data on Ground Plane Cell B

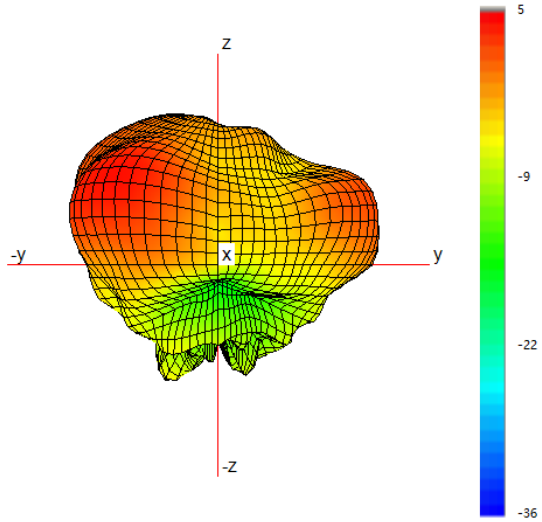
Typical 3D Pattern- Cell B - 1800 MHz



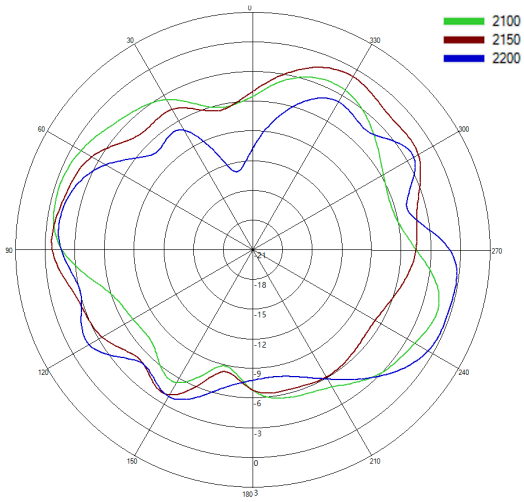
Typical H Plane- Cell B- Patterns- 1750-1850 MHz



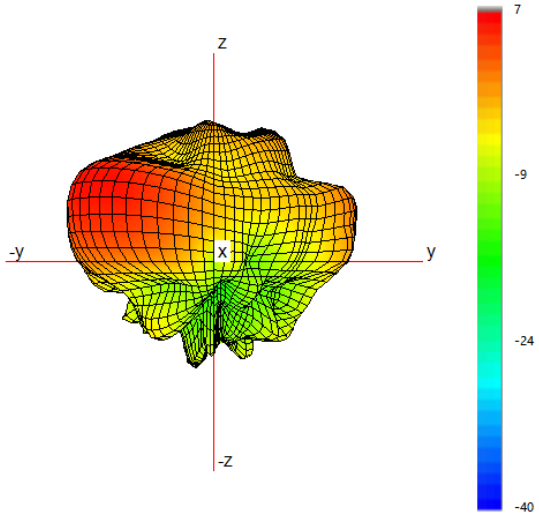
Typical 3D Pattern- Cell B - 2150 MHz



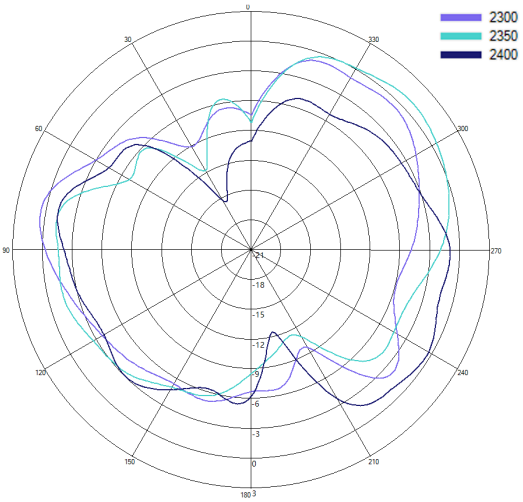
Typical H Plane- Cell B- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell B - 2350 MHz



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



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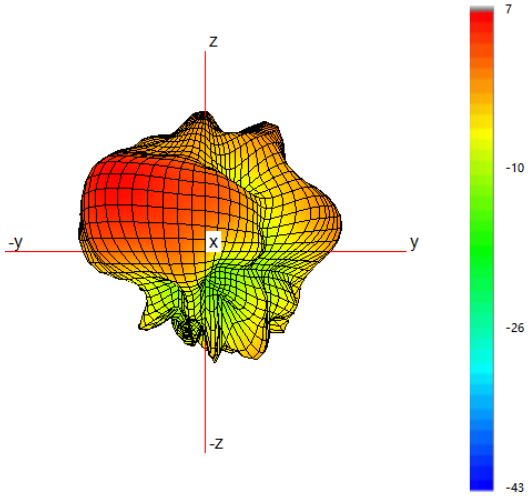
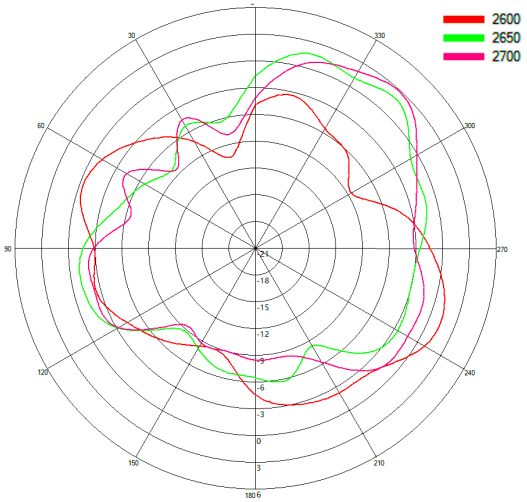
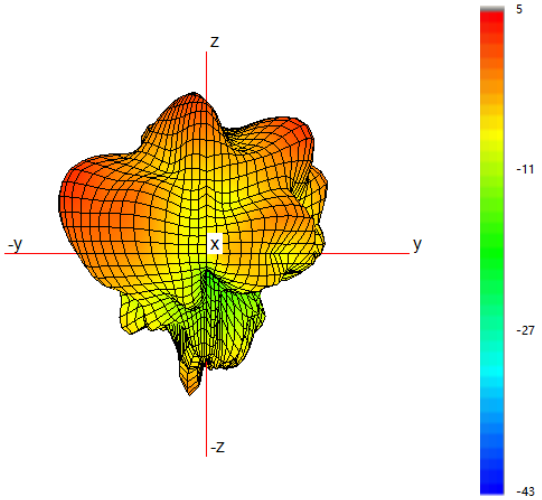
Typical 3D Pattern- Cell B - 2650 MHz



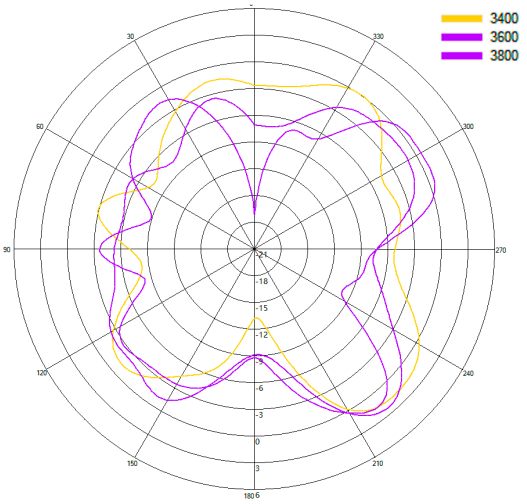
Typical H Plane- Cell B - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell B - 3600 MHz



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



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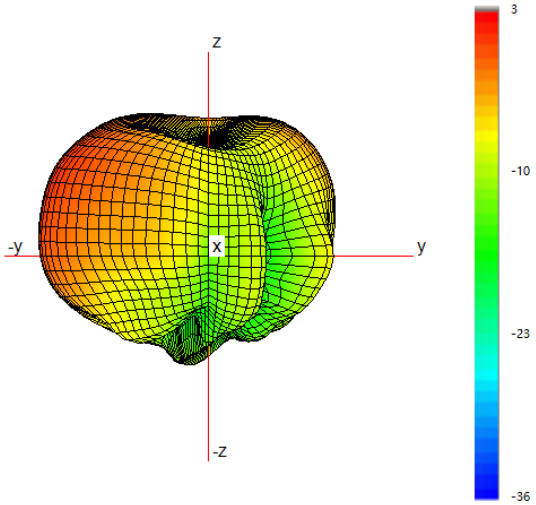
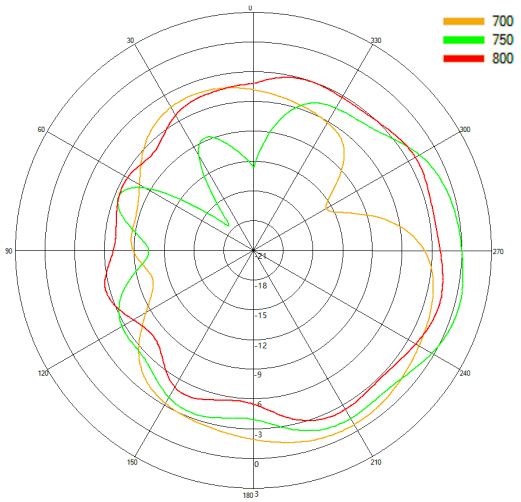
3D Pattern Data on Ground Plane Cell C

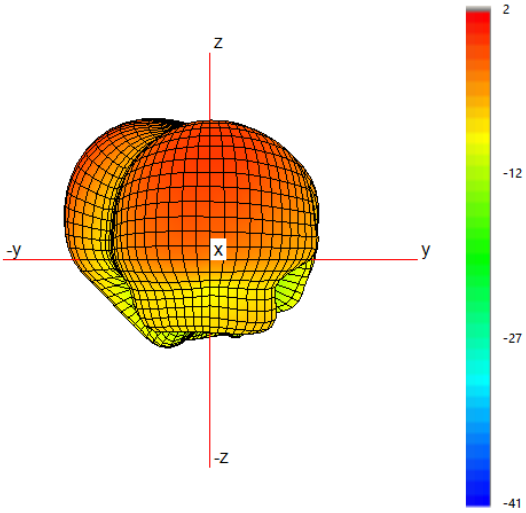
Typical 3D Pattern- Cell C - 750 MHz



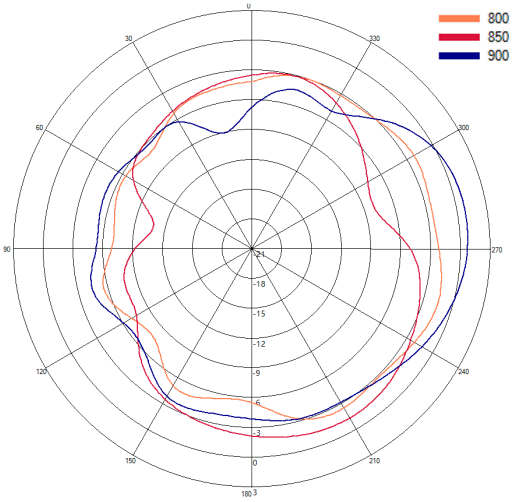
Typical H Plane- Cell C - Patterns- 700-800MHz



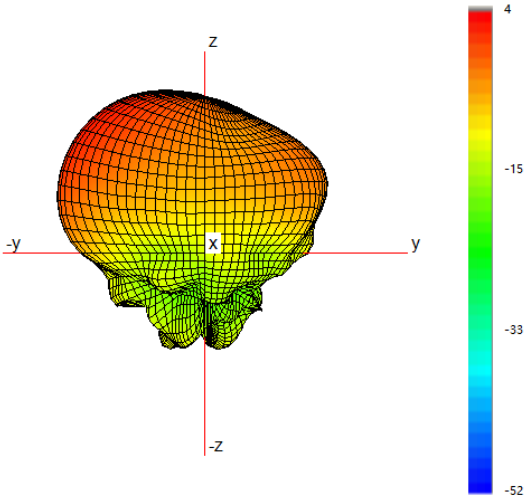
Typical 3D Pattern- Cell C - 850 MHz



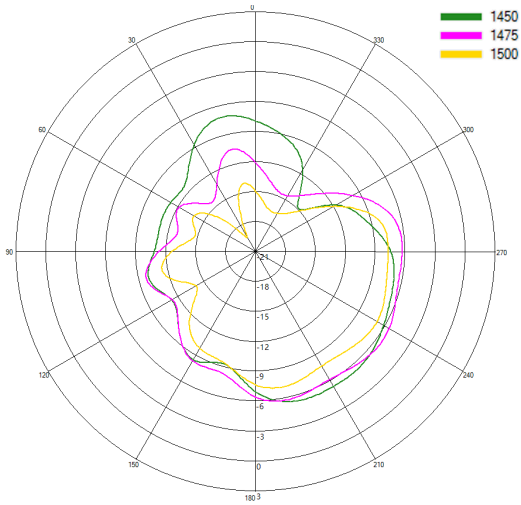
Typical H Plane- Cell C - Patterns- 800-900MHz



Typical 3D Pattern- Cell C - 1475 MHz



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



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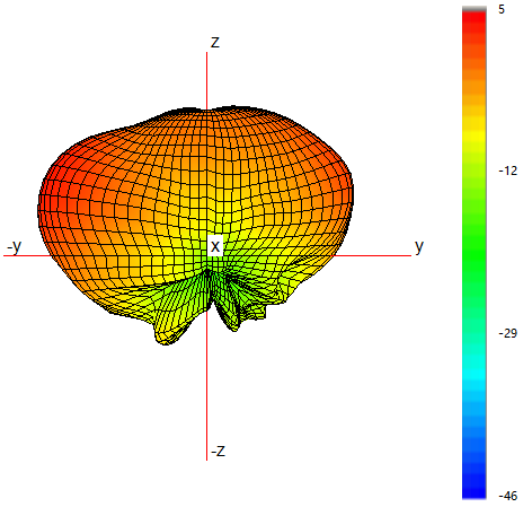
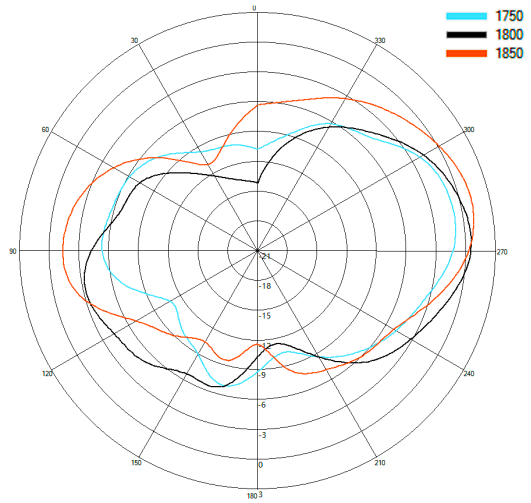
3D Pattern Data on Ground Plane Cell C

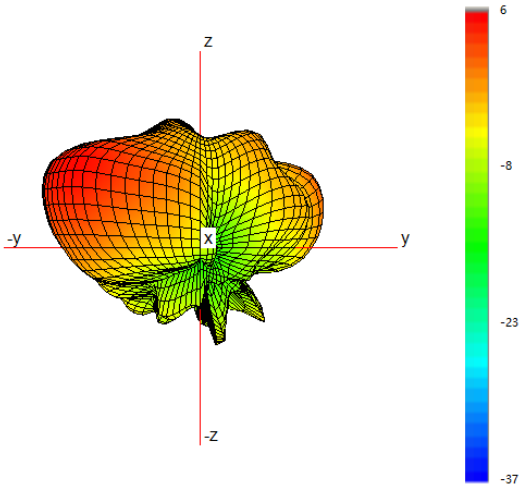
Typical 3D Pattern- Cell C - 1800 MHz



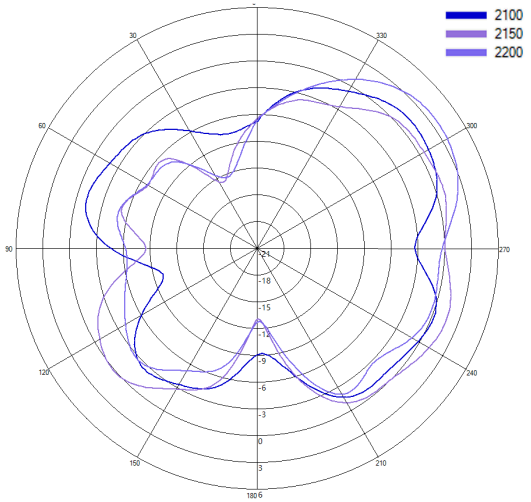
Typical H Plane- Cell C- Patterns- 1750-1850 MHz



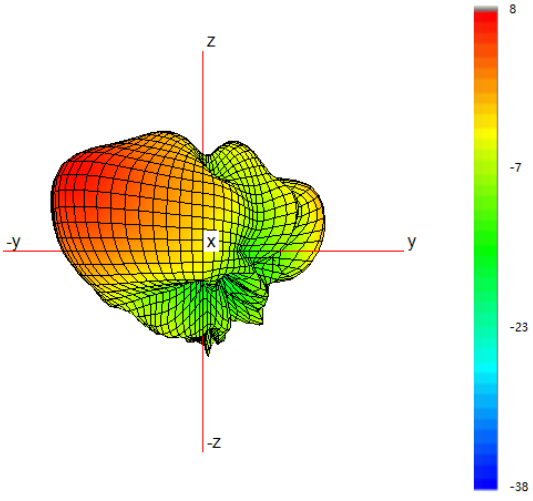
Typical 3D Pattern- Cell C - 2150 MHz



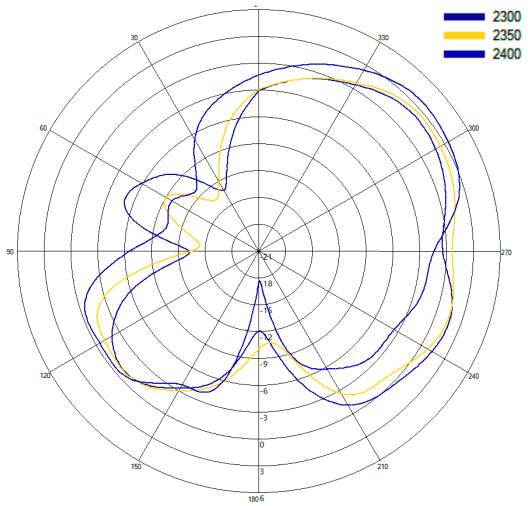
Typical H Plane- Cell C- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell C - 2350 MHz



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



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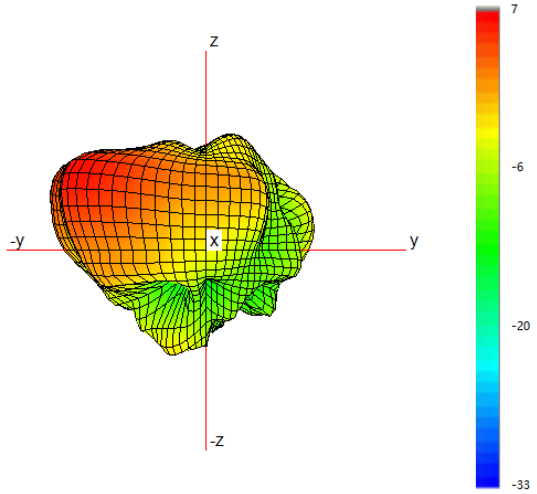
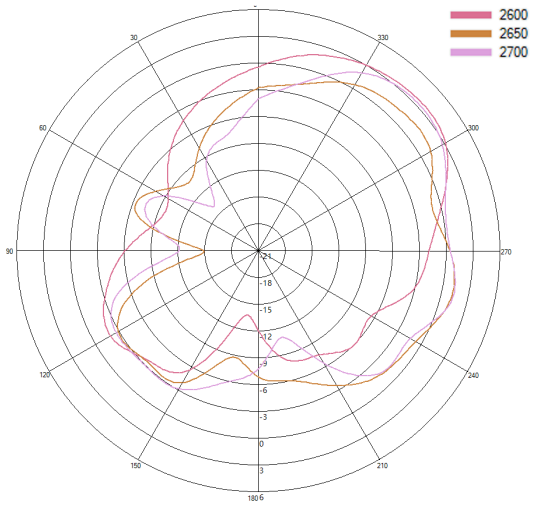
3D Pattern Data on Ground Plane Cell C

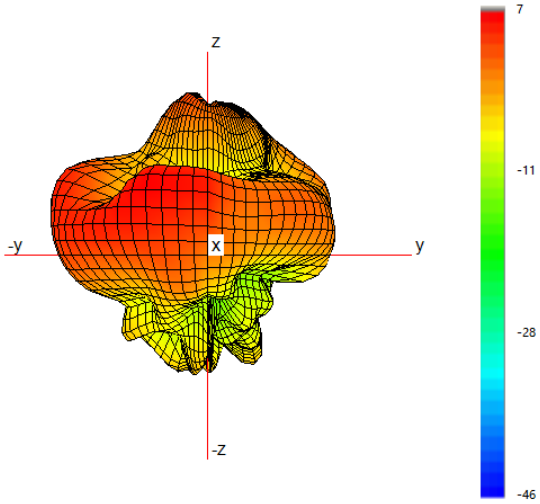
Typical 3D Pattern- Cell C - 2650 MHz



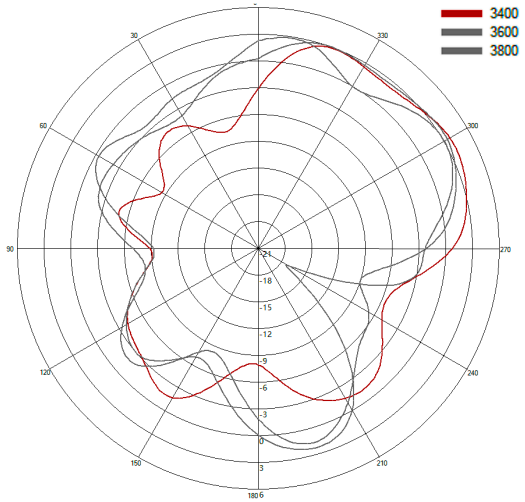
Typical H Plane- Cell C - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell C - 3600 MHz



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



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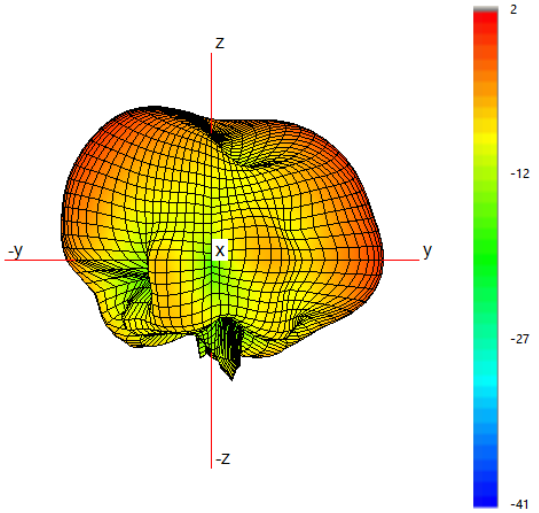
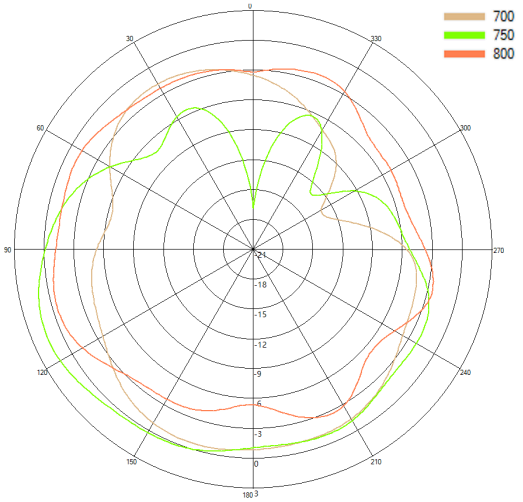
3D Pattern Data on Ground Plane Cell D

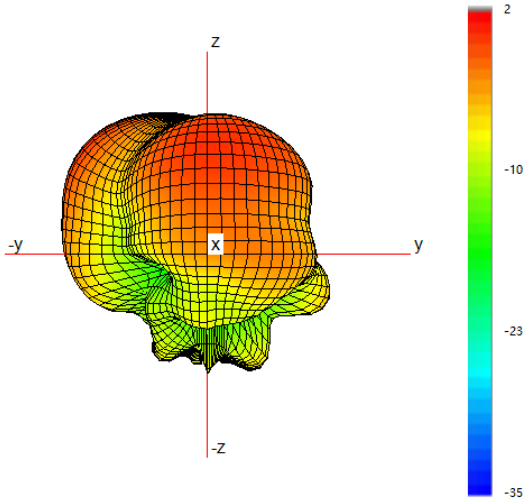
Typical 3D Pattern- Cell D - 750 MHz



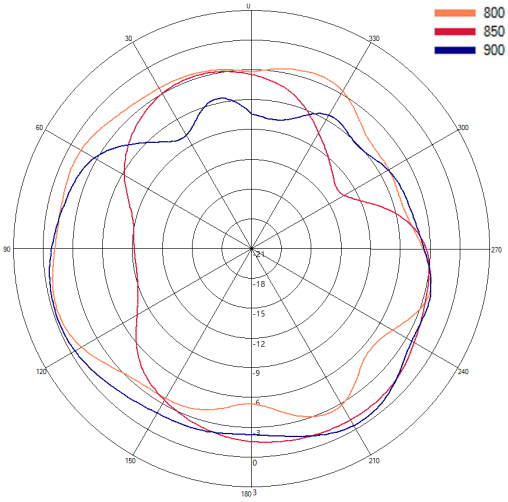
Typical H Plane- Cell D - Patterns- 700-800MHz



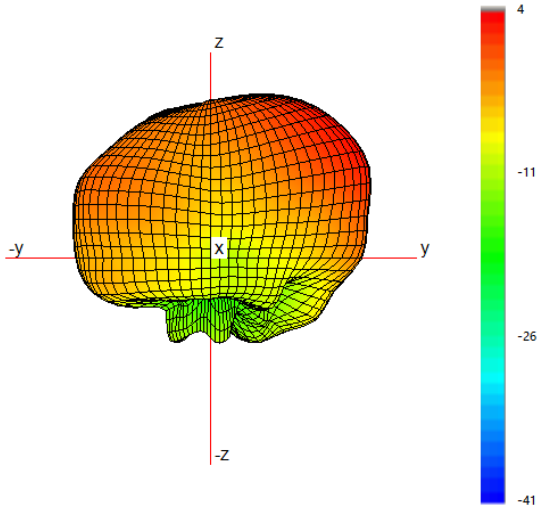
Typical 3D Pattern- Cell D - 850 MHz



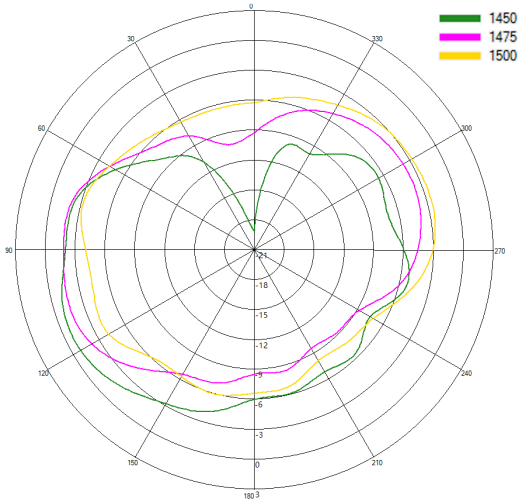
Typical H Plane- Cell D - Patterns- 800-900MHz



Typical 3D Pattern- Cell D - 1475 MHz



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



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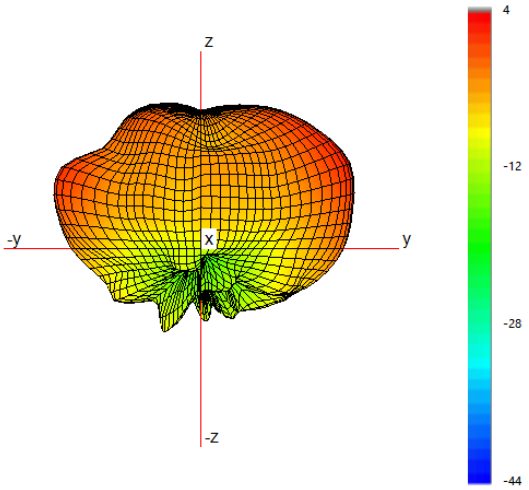
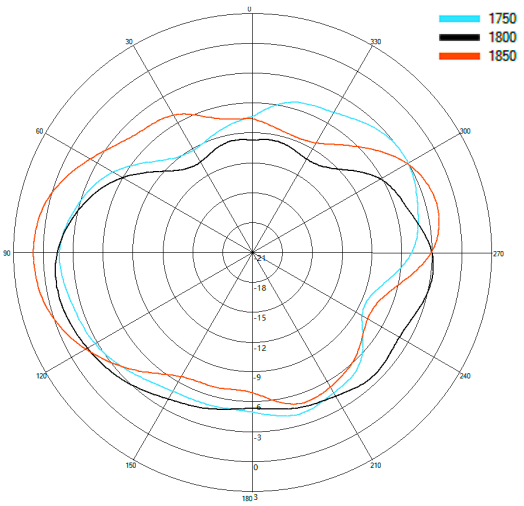
3D Pattern Data on Ground Plane Cell D

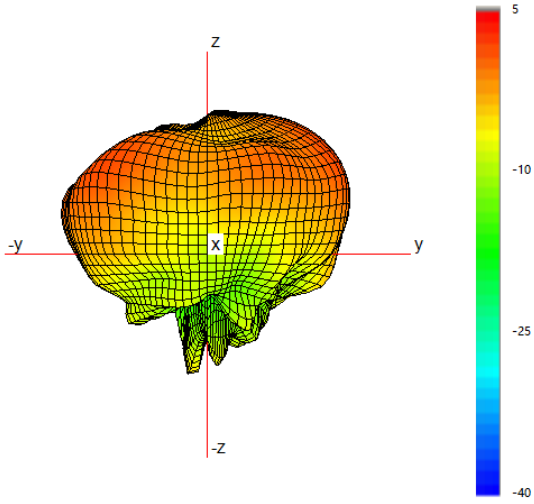
Typical 3D Pattern- Cell D - 1800 MHz



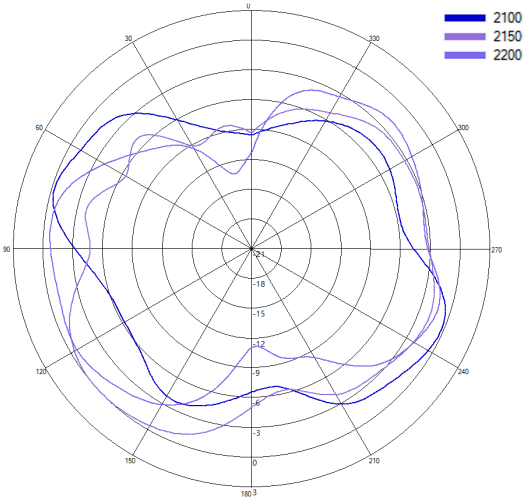
Typical H Plane- Cell D- Patterns- 1750-1850 MHz



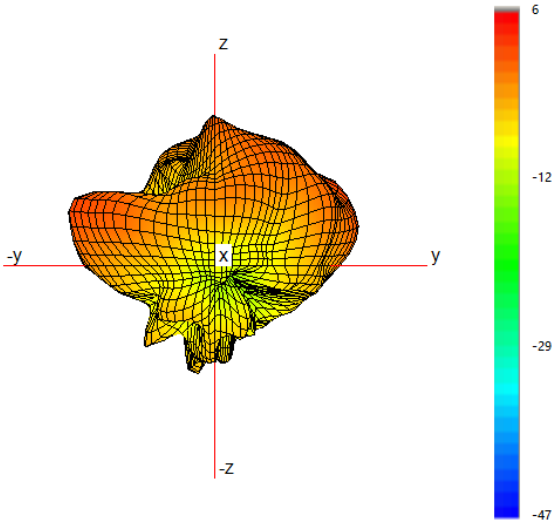
Typical 3D Pattern- Cell D - 2150 MHz



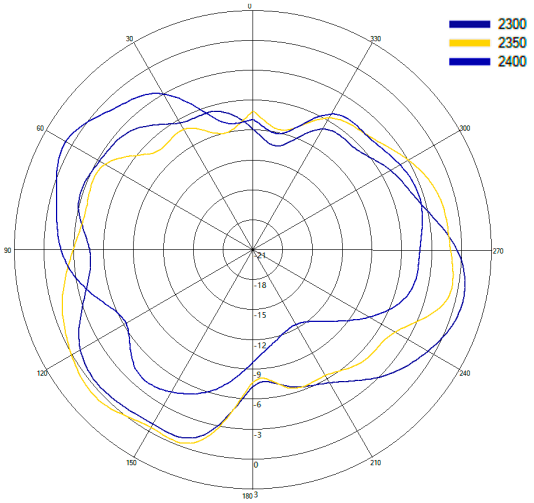
Typical H Plane- Cell D- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell D - 2350 MHz



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



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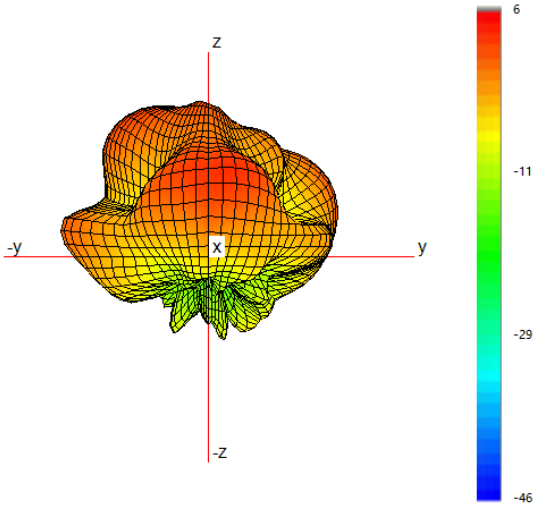
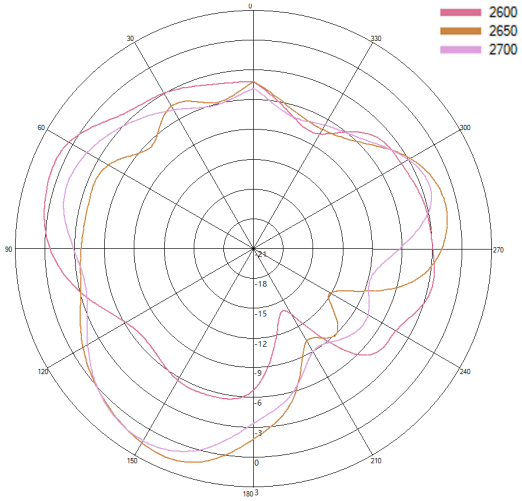
3D Pattern Data on Ground Plane Cell D

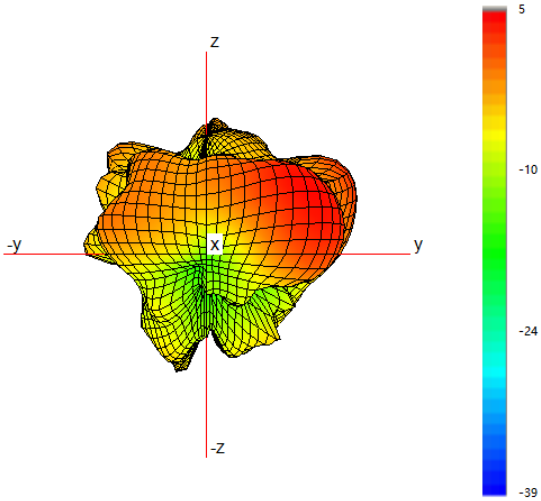
Typical 3D Pattern- Cell D - 2650 MHz



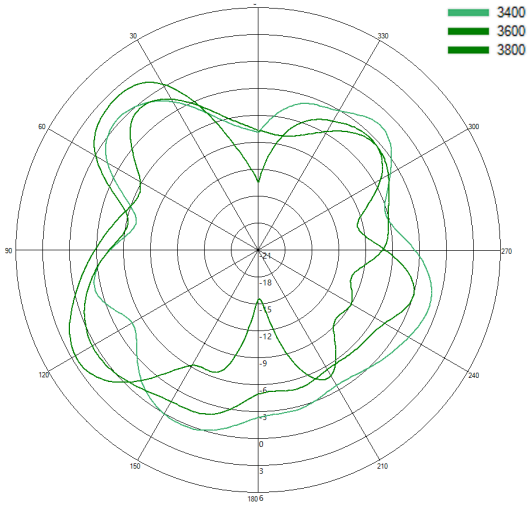
Typical H Plane- Cell D - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell D - 3600 MHz



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



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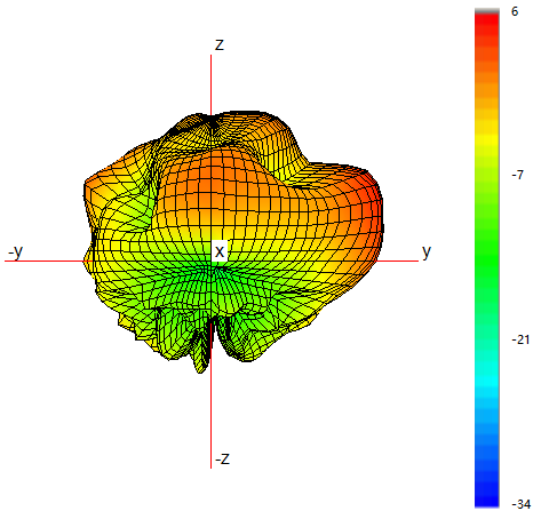
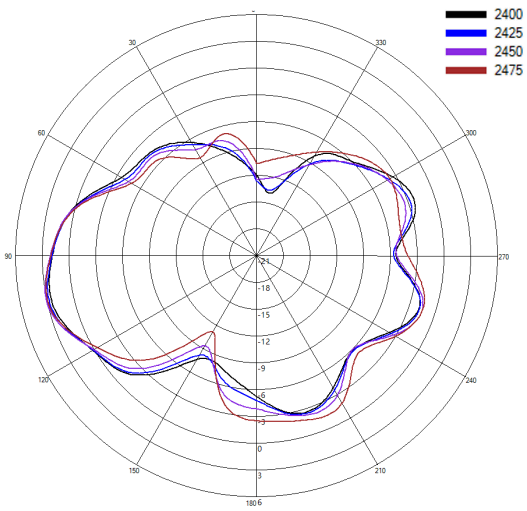
WiFi Pattern-Data on Ground Plane -WiFi -1

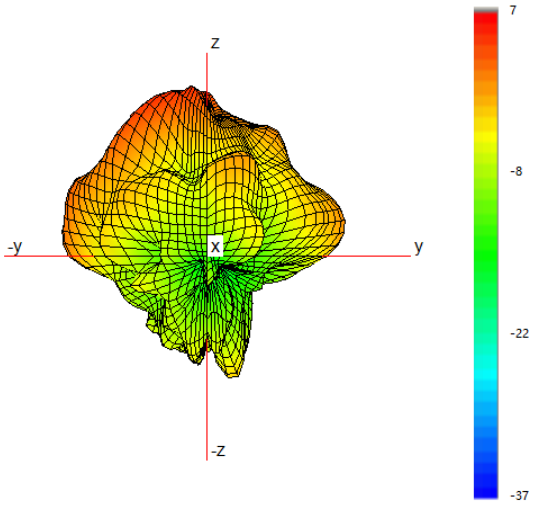
Typical 3D Pattern- WiFi - 1 - 2450 MHz



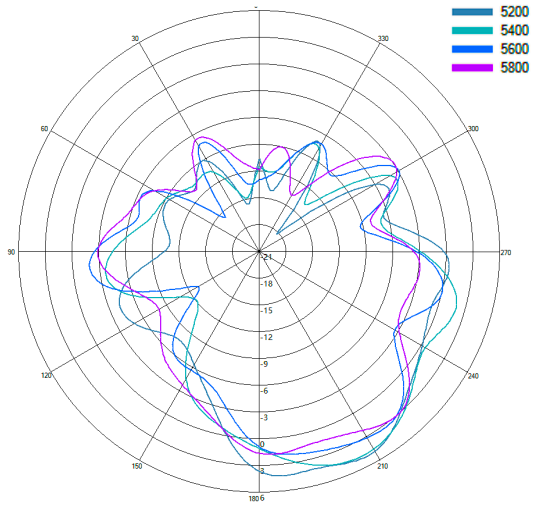
Typical H Plane- WiFi - 1 - Patterns- 2400-2475MHz



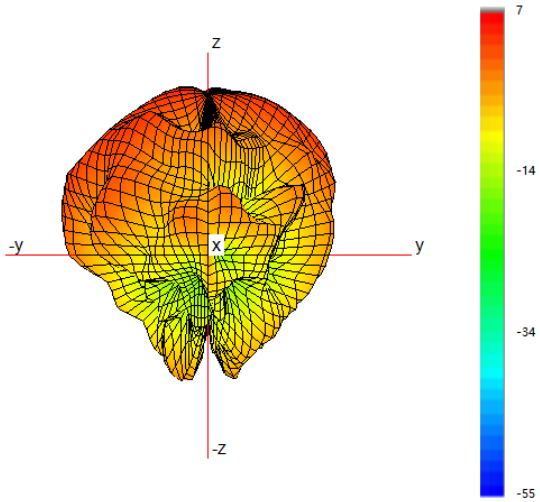
Typical 3D Pattern- WiFi - 1 - 5500 MHz



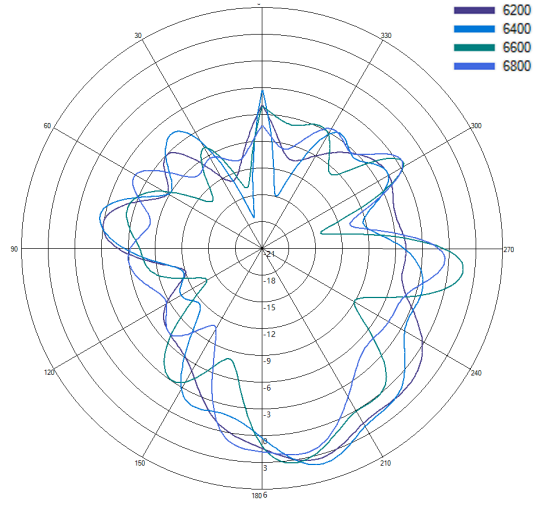
Typical H Plane- WiFi - 1 - Patterns- 5200-5800MHz



Typical 3D Pattern- WiFi - 1 - 6500 MHz



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



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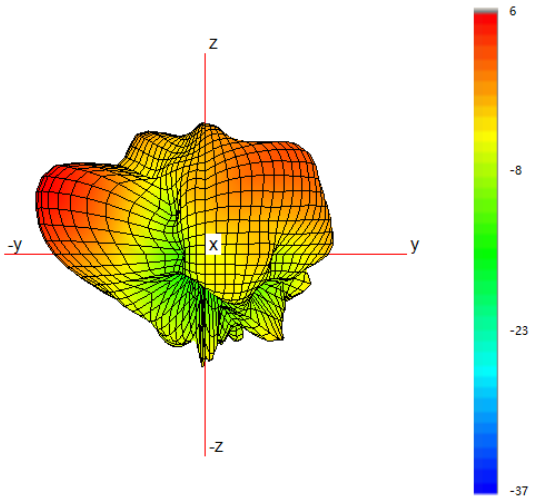
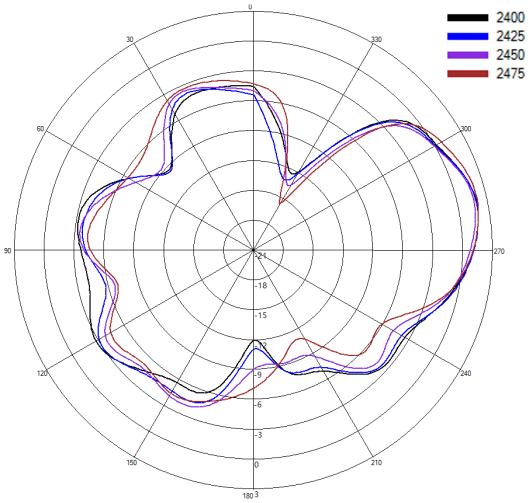
WiFi Pattern-Data on Ground Plane -WiFi -2

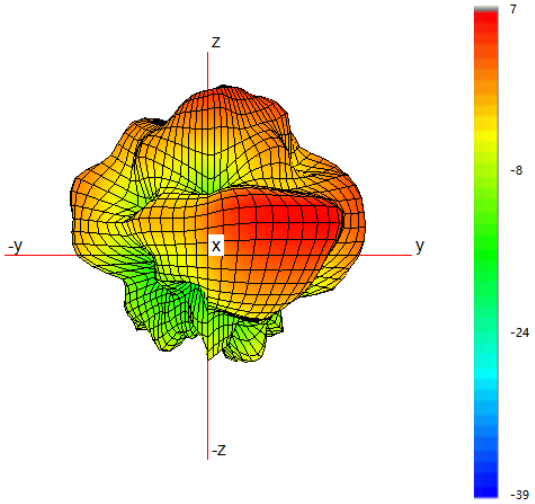
Typical 3D Pattern- WiFi - 2 - 2450 MHz



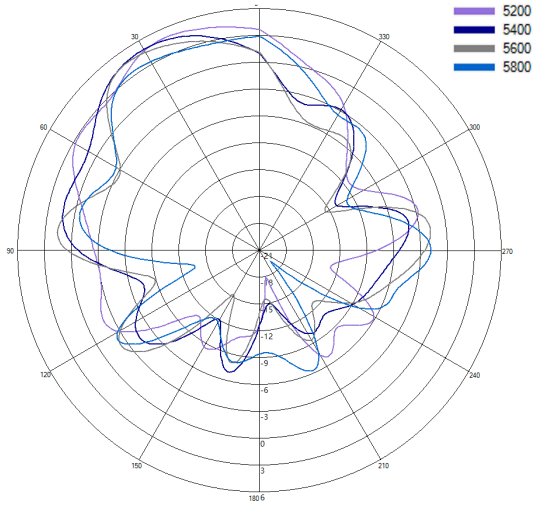
Typical H Plane- WiFi - 2 - Patterns- 2400-2475MHz



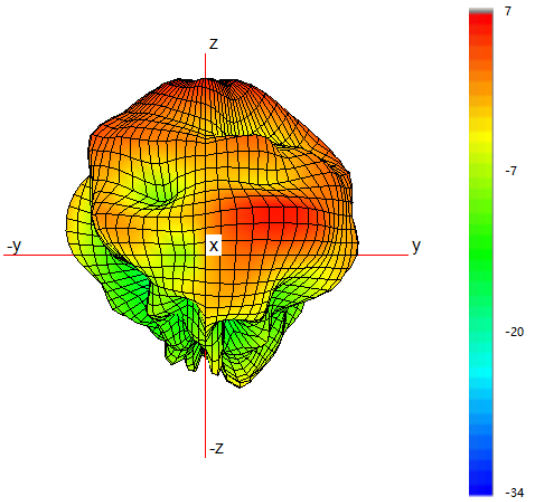
Typical 3D Pattern- WiFi - 2 - 5500 MHz



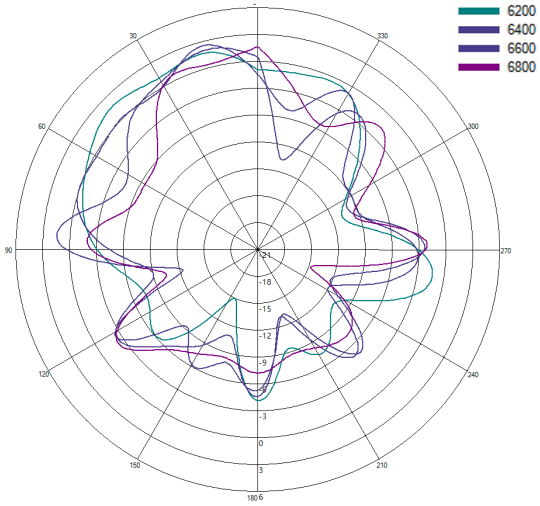
Typical H Plane- WiFi - 2 - Patterns- 5200-5800MHz



Typical 3D Pattern- WiFi - 2 - 6500 MHz



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



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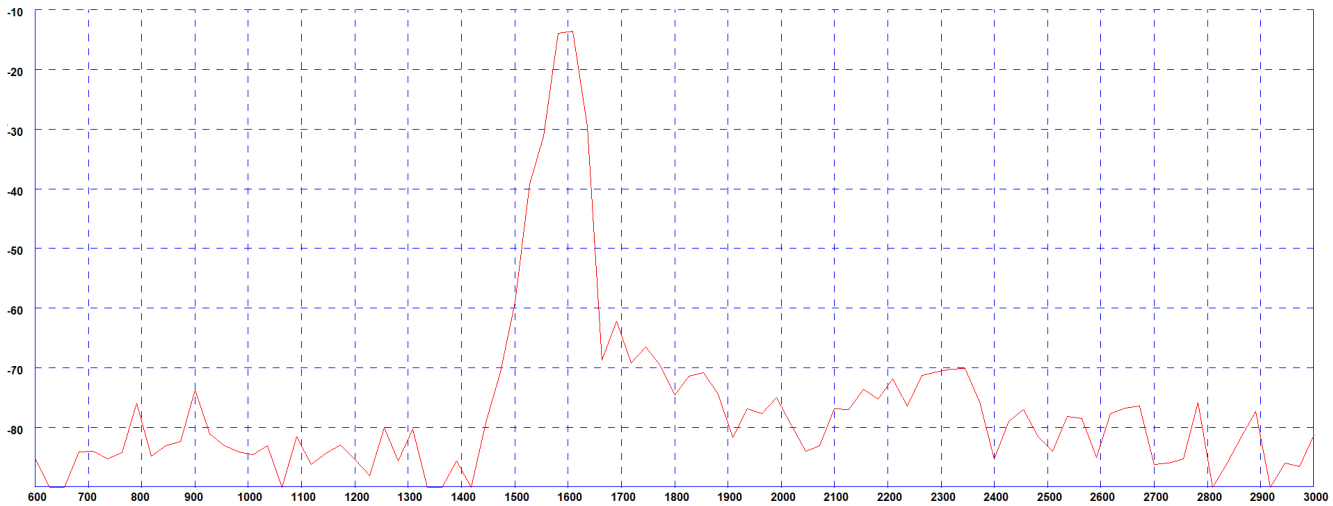
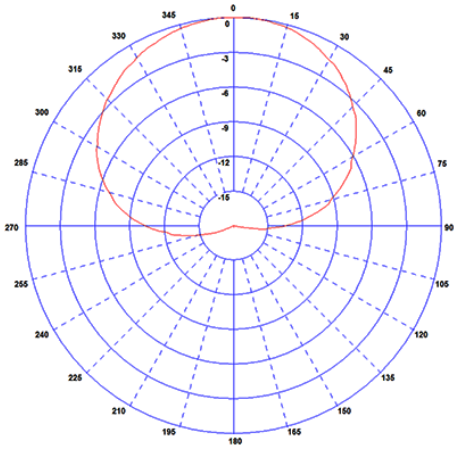
Electrical Data- L1 GPS/GNSS

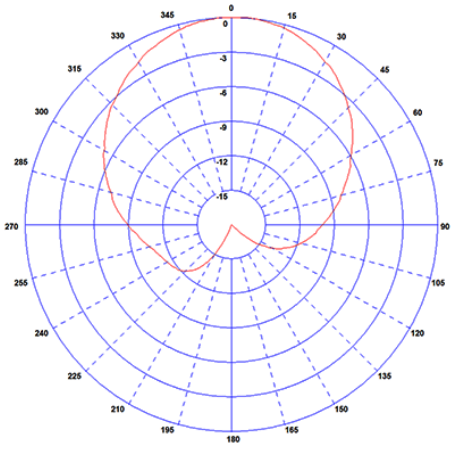
Swept Gain GPS/GNSS



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

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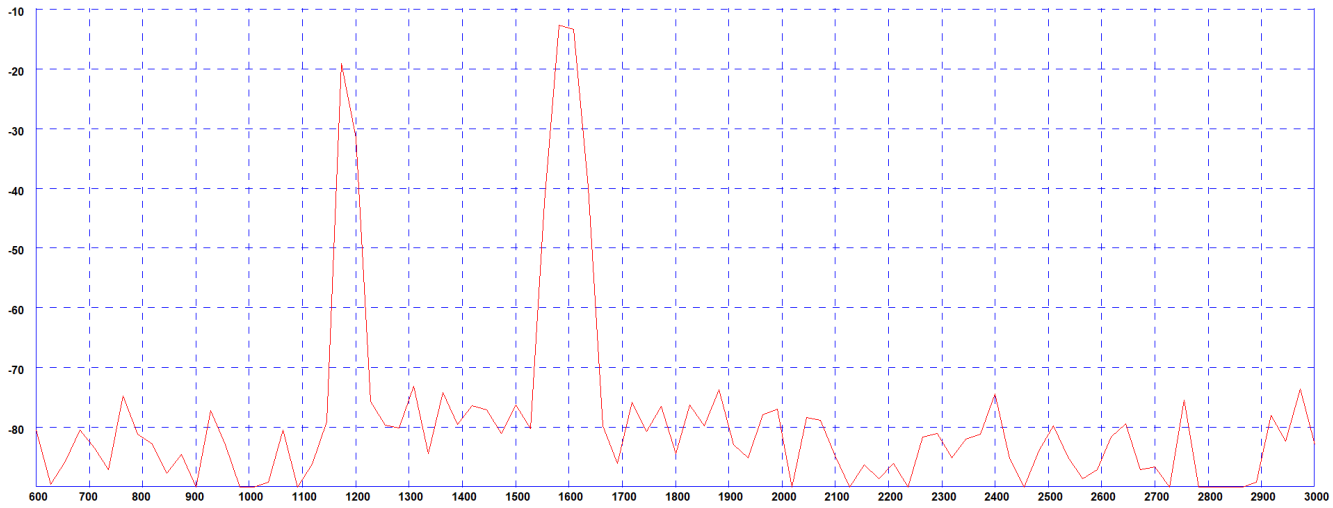
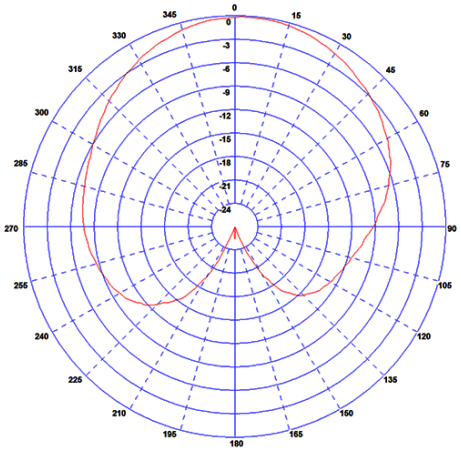
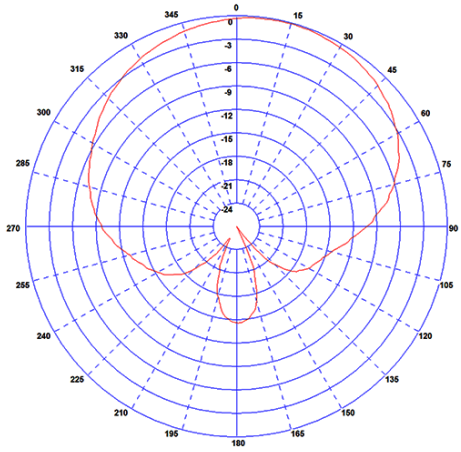
Swept Gain GPS/GNSS



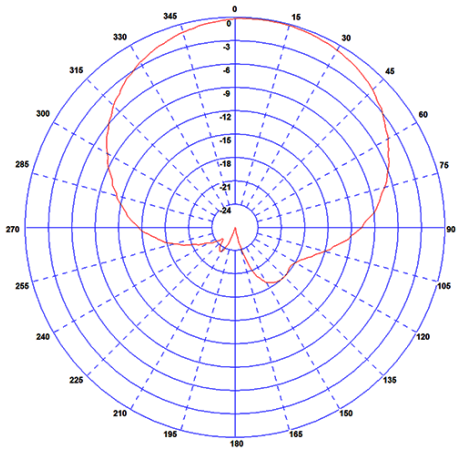
Typical E Plane Pattern - GPS/GNSS 1575 MHz



Typical E Plane Pattern - GPS/GNSS 1602 MHz



Typical E Plane Pattern - GPS/GNSS 1176 MHz



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

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