

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.

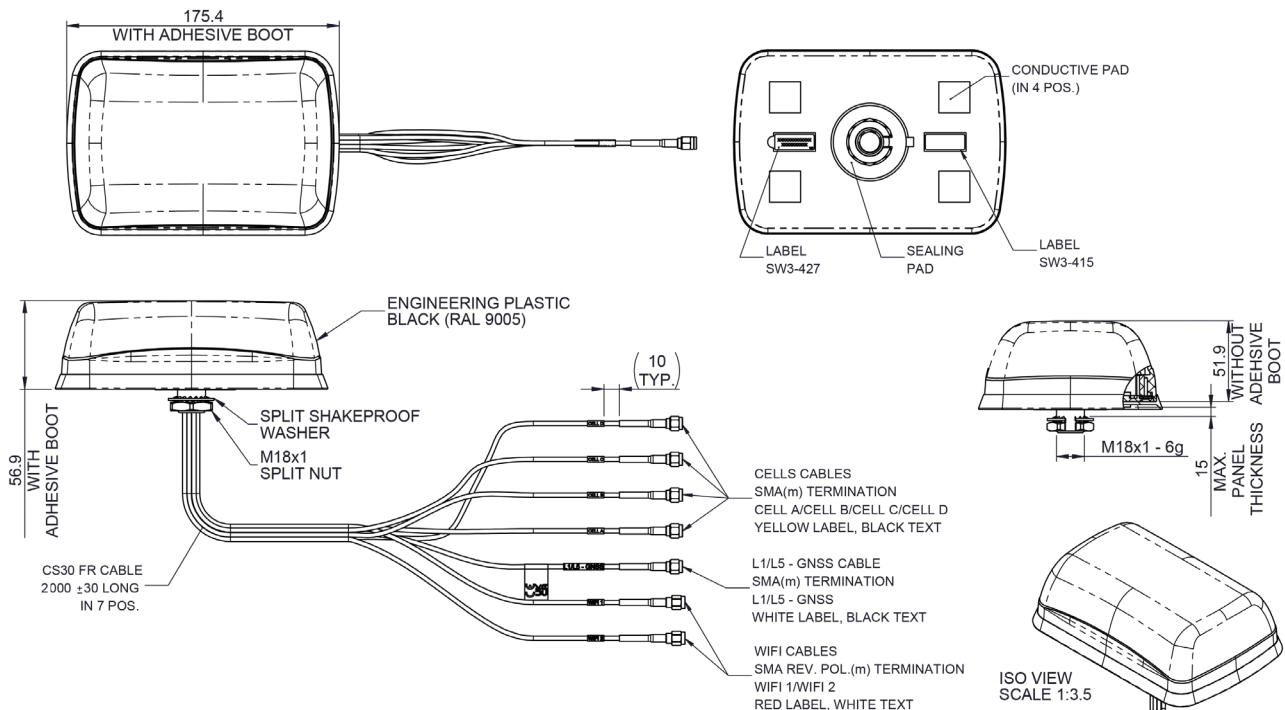
The housing is constructed from robust, flame retardant, impact resistant plastic. The subtle, curved design makes the product harder to vandalise and the IK10 rating ensures that the product is suitable for use in tough environments and devices located in public areas. The housing is UV stable and approved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



4X4 MiMo 4G/5G

IOT Antenna

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

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") | | |
| | Wid h | 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) | 2m (6.6') | | | |
| 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

4X4 MiMo 4G/5G

IOT Antenna

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

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 | | | | |
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| 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

Product Data

| 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") | | |
| | Wid h | 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) | 2m (6.6') | | | |
| 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

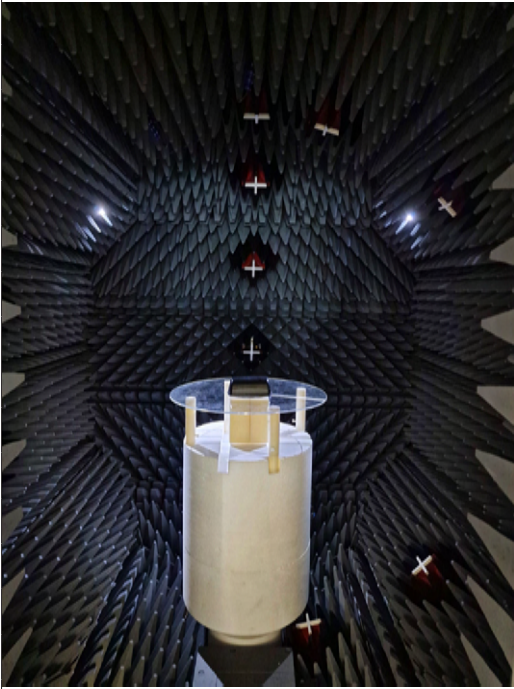
4X4 MiMo 4G/5G

IOT Antenna

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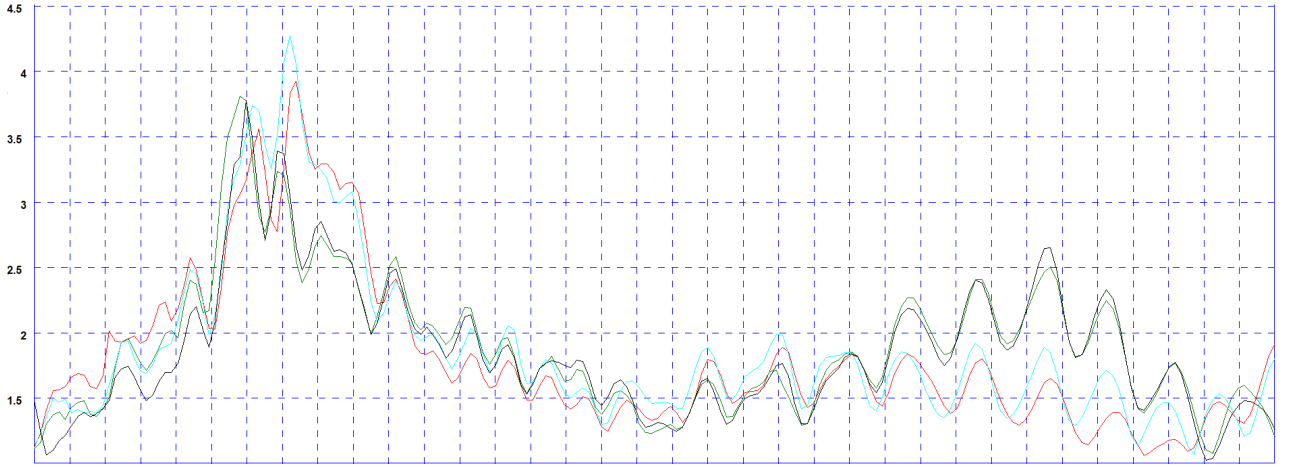
Electrical Data- Cell- Free space

| Measurement Conditions | 4G/5G Antennas | | | | |
|--|-----------------------|----------------------|-----------------|-----------------|----------------|
| LGADM4-7-42 measured in free space with 0.5m (1.6') CS30 Cable | 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 | Cell A | 6.3 | 65 | |
| | | Cell B | 4.5 | 47 | |
| | | Cell C | 4.9 | 62 | |
| | | Cell D | 4.4 | 47 | |

| Measurement Conditions | WiFi Antennas | | | | |
|--|-----------------------|------------|-----------------|-----------------|----------------|
| LGADM4-7-42 measured in free space with 0.5m (1.6') CS30 Cable | Frequency Range (MHz) | WiFi Bands | Antenna Element | Peak Gain (dBi) | Efficiency (%) |
|  | 2396-2485 | 2.4GHz | WiFi 1 | 3.6 | 60 |
| | | | WiFi 2 | 3.4 | 57 |
| | 5150-5250 | UNII-1 | WiFi 1 | 6.3 | 63 |
| | | | WiFi 2 | 6.6 | 61 |
| | 5250-5350 | UNII-2A | WiFi 1 | 6.1 | 60 |
| | | | WiFi 2 | 6.7 | 59 |
| | 5350-5470 | UNII-2B | WiFi 1 | 6.1 | 60 |
| | | | WiFi 2 | 6.4 | 56 |
| | 5470-5725 | UNII-2C | WiFi 1 | 6.1 | 61 |
| | | | WiFi 2 | 6.5 | 55 |
| | 5725-5850 | UNII-3 | WiFi 1 | 6.0 | 65 |
| | | | WiFi 2 | 6.2 | 56 |
| | 5850-5925 | UNII-4 | WiFi 1 | 5.3 | 64 |
| | | | WiFi 2 | 5.5 | 56 |
| | 5925-6425 | UNII-5 | WiFi 1 | 5.4 | 63 |
| | | | WiFi 2 | 5.3 | 57 |
| 6425-6525 | UNII-6 | WiFi 1 | 5.4 | 61 | |
| | | WiFi 2 | 5.5 | 60 | |
| 6525-6875 | 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 | |

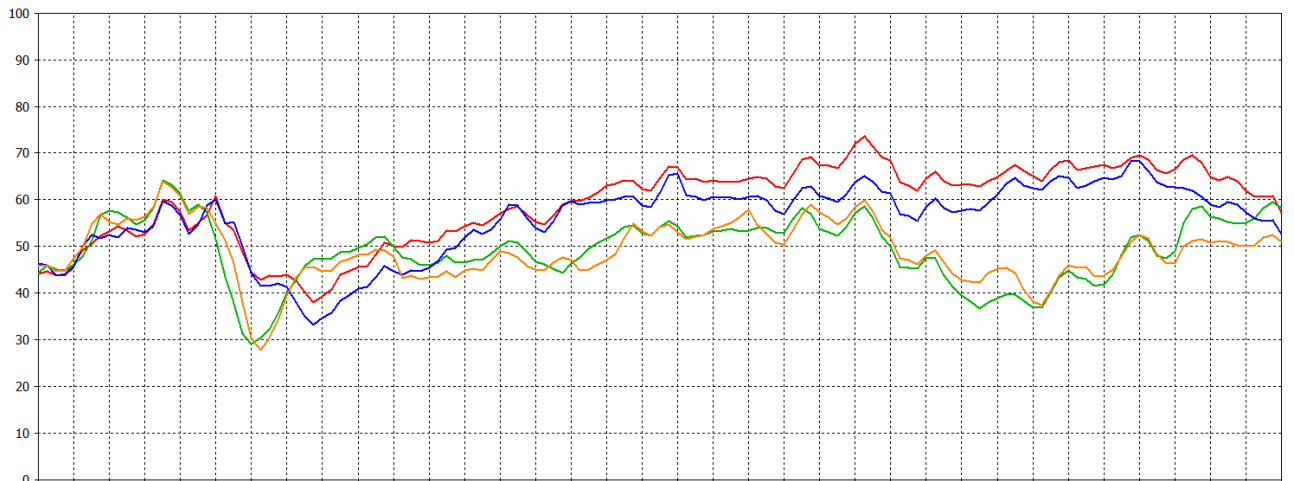
Electrical Data- Cell- Free space

Typical VSWR*



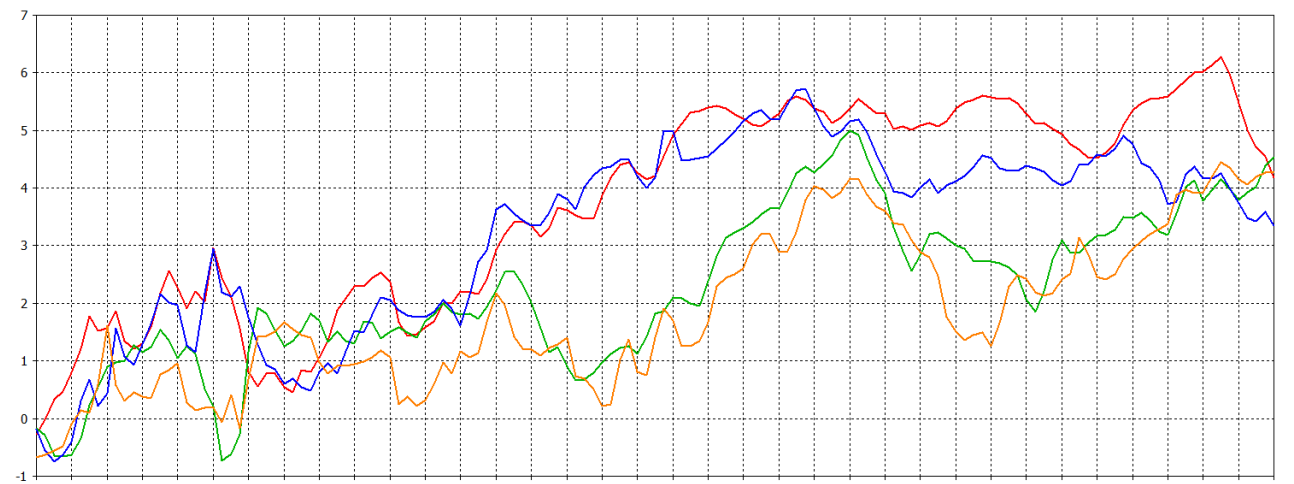
VSWR measured in free space with 0.5m (1.6') of CS30 cable

Typical Efficiency*



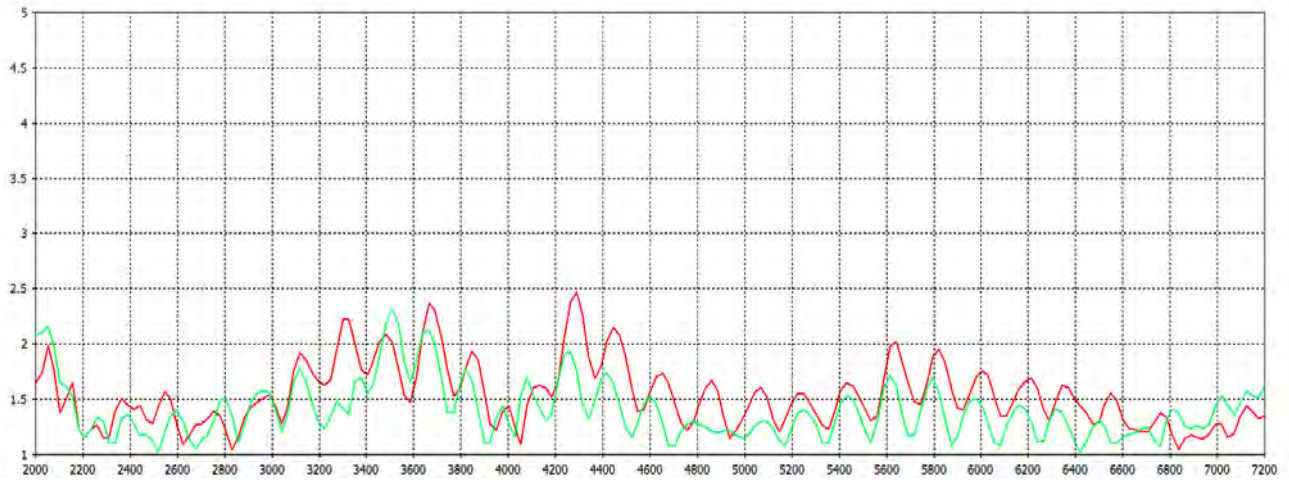
*Efficiency measured in free space with 0.5m (1.6') of CS30 cable

Typical Swept Peak Gain*



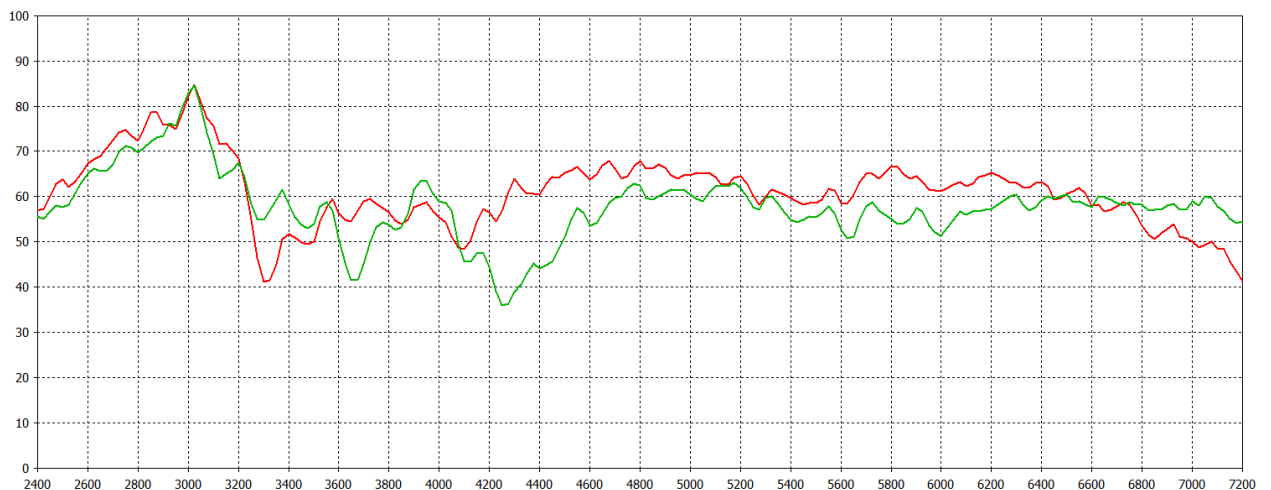
* Swept peak gain measured in free space with 0.5m (1.6') of CS30 cable

Typical VSWR*



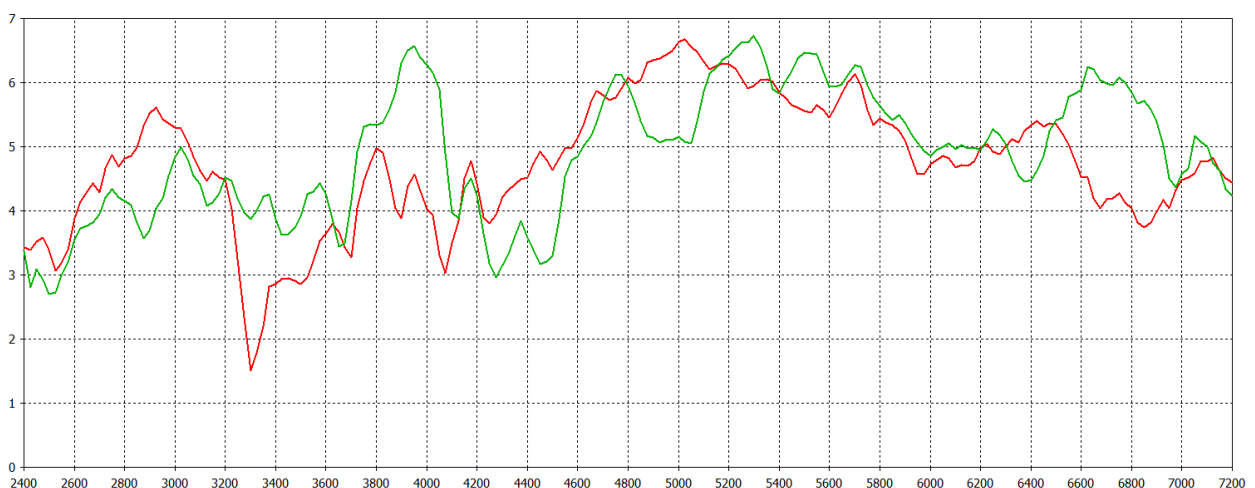
*VSWR measured in free space with 0.5m (1.6') of CS30 cable

Typical Efficiency*



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

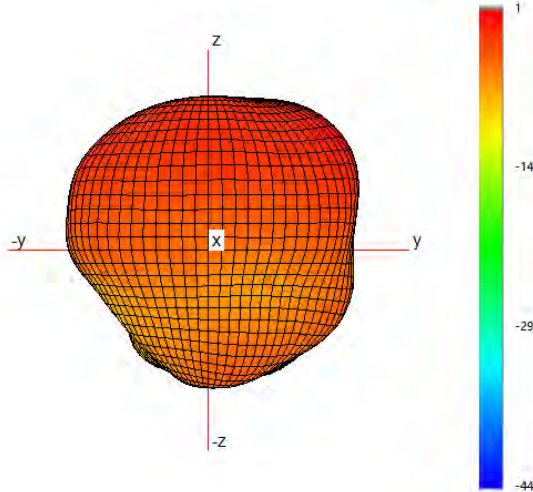
Typical Swept Peak Gain*



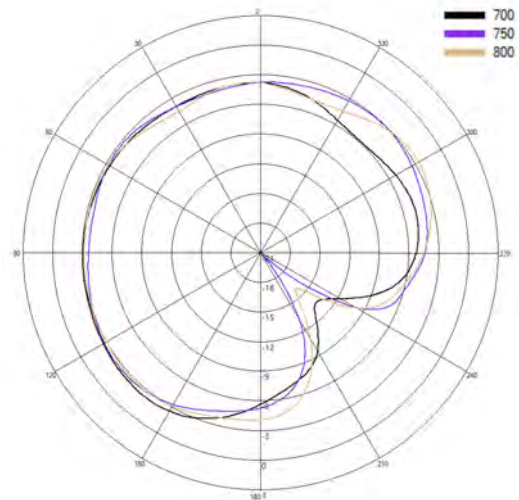
* Swept peak gain measured in free space with 0.5m (1.6') of CS30 cable

3D Pattern Data in Free Space Cell A

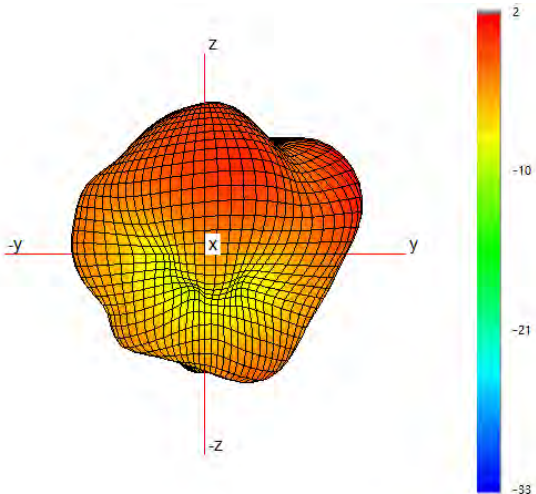
Typical 3D Pattern- Cell A - 750 MHz



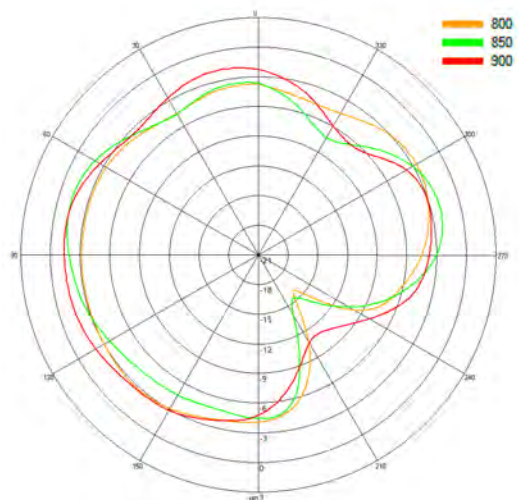
Typical H Plane- Cell A - Patterns- 700-800MHz



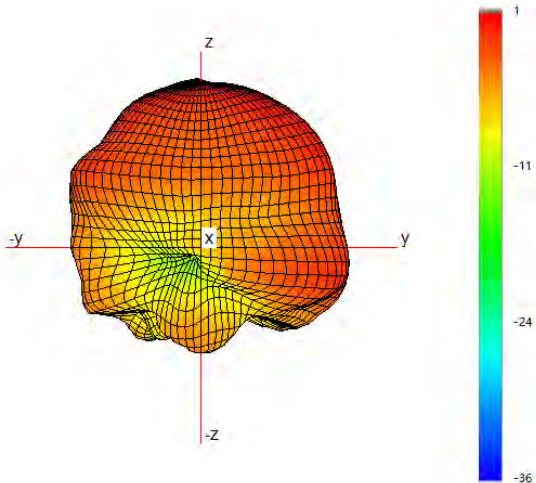
Typical 3D Pattern- Cell A - 850 MHz



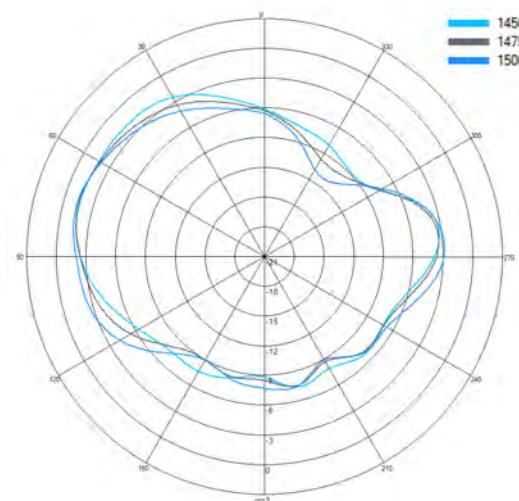
Typical H Plane- Cell A - Patterns- 800-900MHz



Typical 3D Pattern- Cell A - 1475 MHz

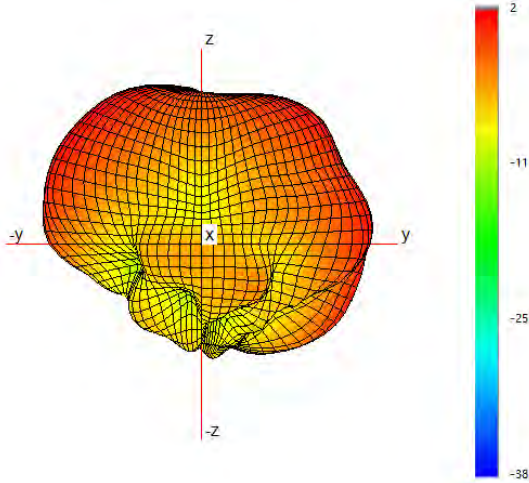


Typical H Plane- Cell A- Patterns- 1450-1500 MHz

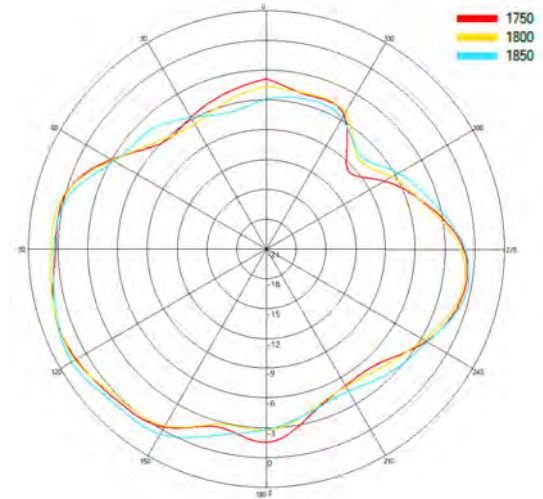


3D Pattern Data in Free Space Cell A

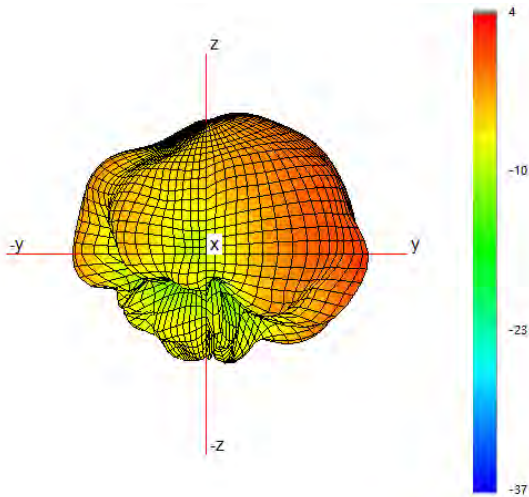
Typical 3D Pattern- Cell A - 1800 MHz



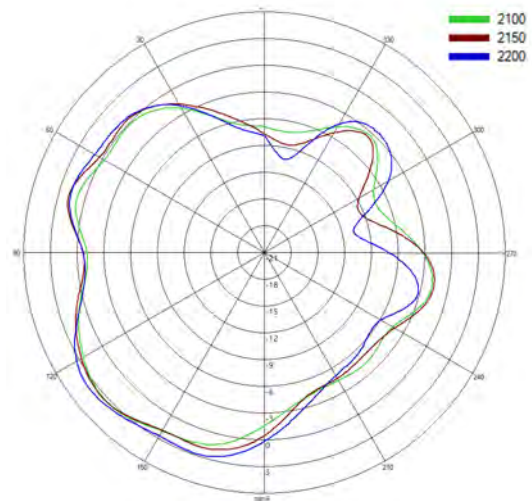
Typical H Plane- Cell A- Patterns- 1750-1850 MHz



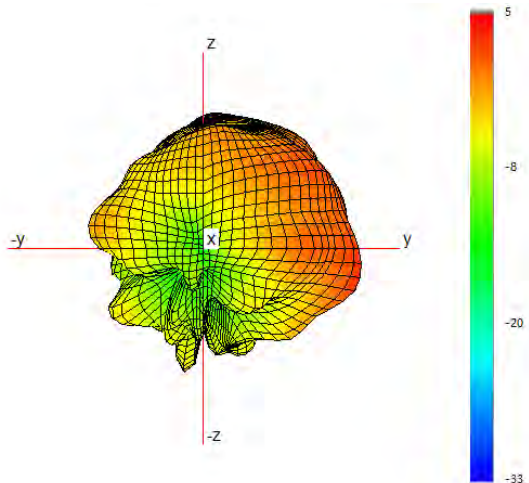
Typical 3D Pattern- Cell A - 2150 MHz



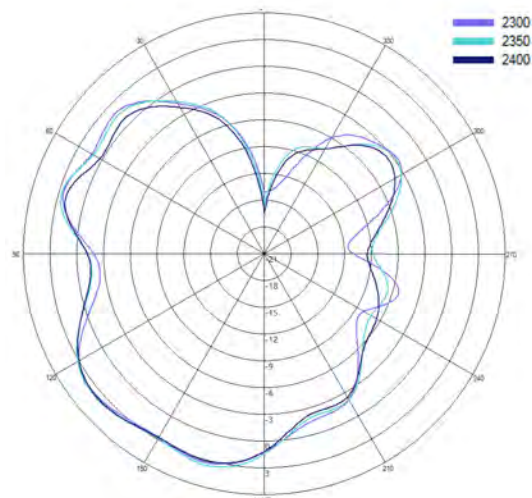
Typical H Plane- Cell A- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell A - 2350 MHz

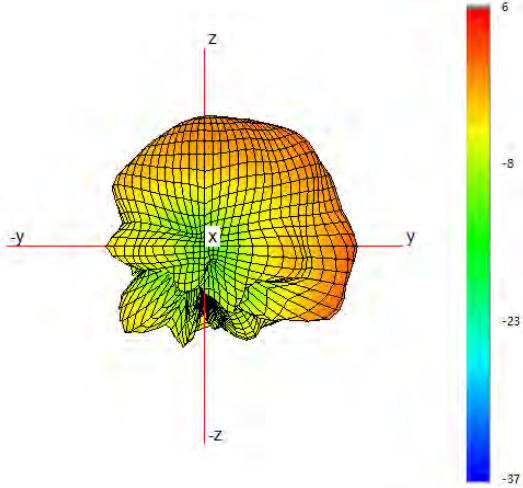


Typical H Plane- Cell A - Patterns- 2300-2400 MHz

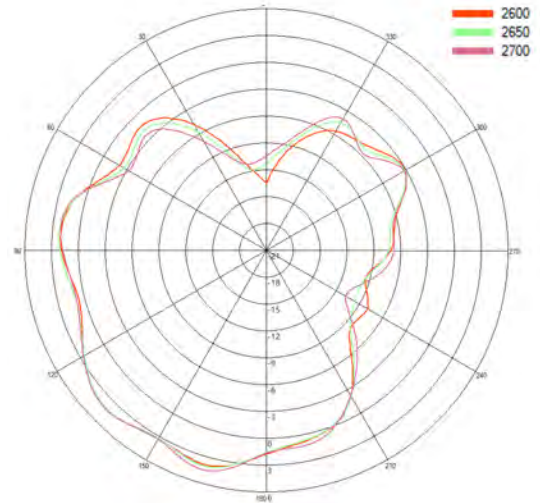


3D Pattern Data in
Free Space Cell A

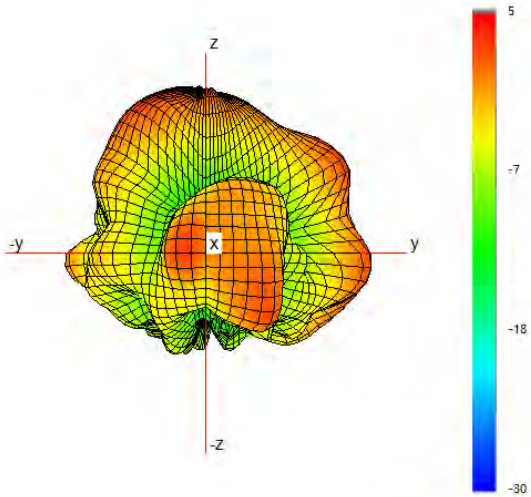
Typical 3D Pattern- Cell A - 2650 MHz



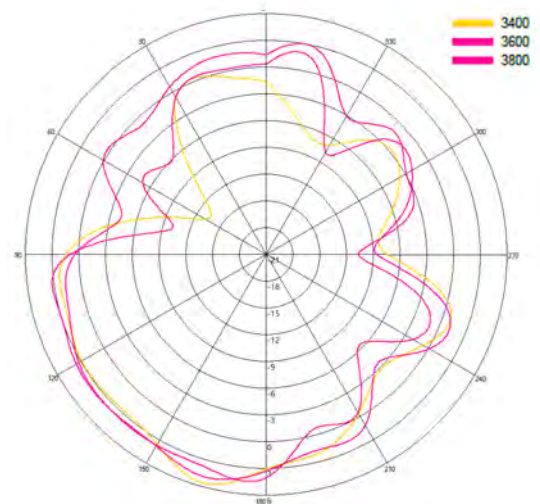
Typical H Plane- Cell A - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell A - 3600 MHz

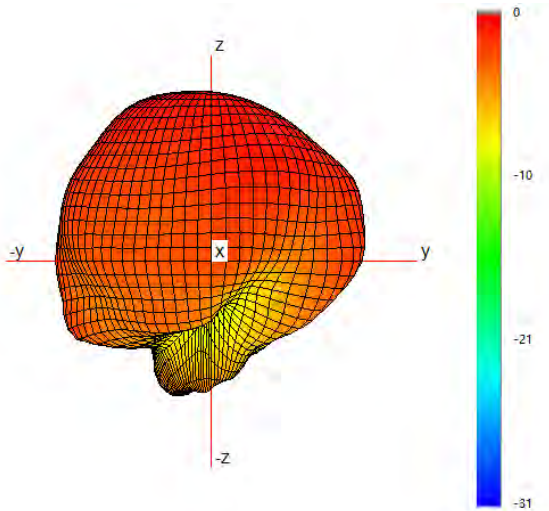


Typical H Plane- Cell A - Patterns- 3400-3800 MHz

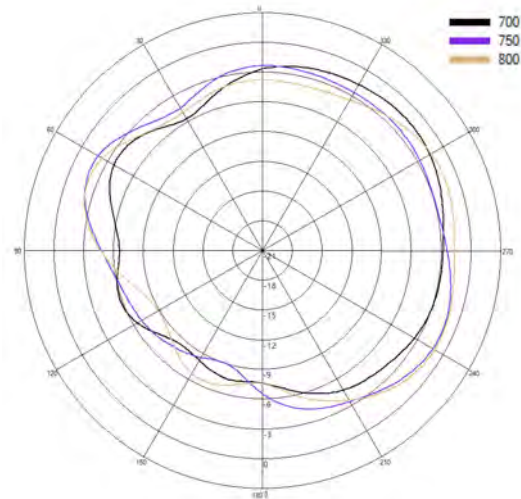


3D Pattern Data in Free Space Cell B

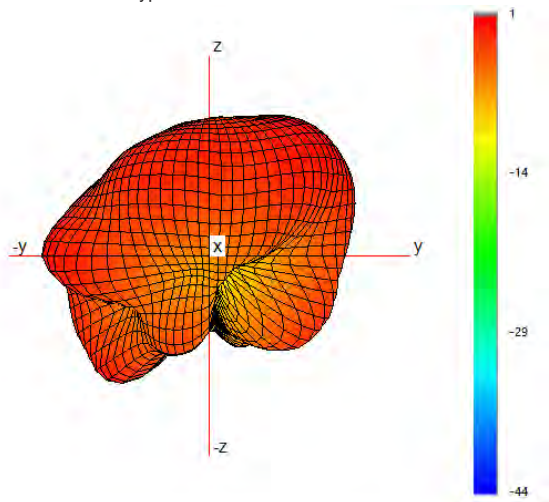
Typical 3D Pattern- Cell B - 750 MHz



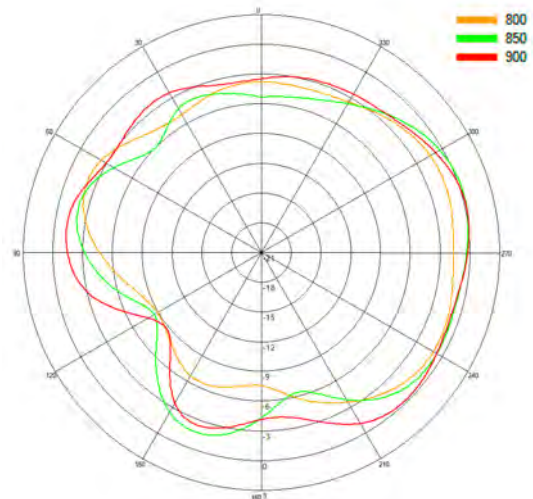
Typical H Plane- Cell B - Patterns- 700-800MHz



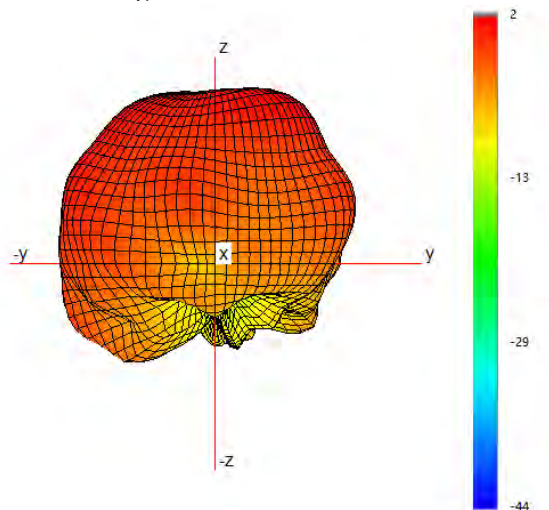
Typical 3D Pattern- Cell B - 850 MHz



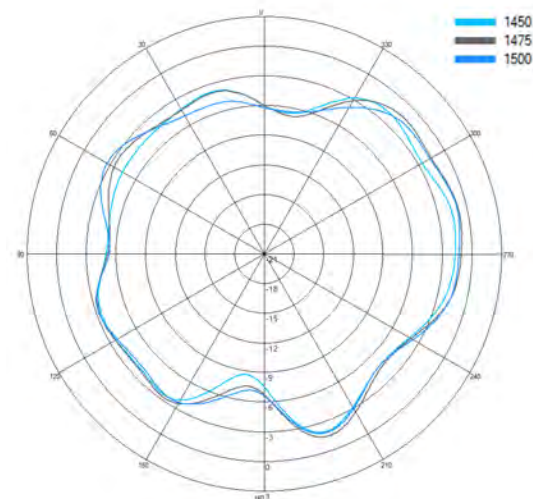
Typical H Plane- Cell B - Patterns- 800-900MHz



Typical 3D Pattern- Cell B - 1475 MHz

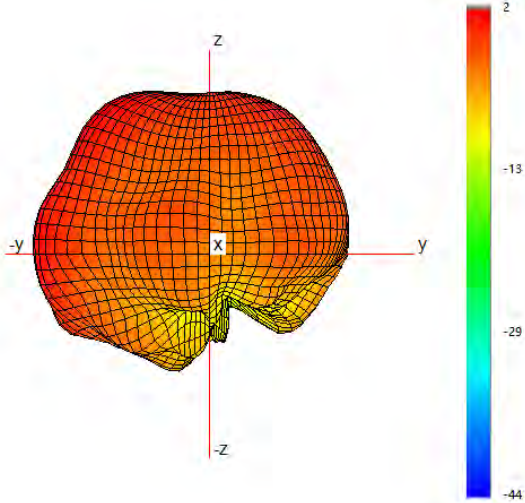


Typical H Plane- Cell B - Patterns- 1450-1500 MHz

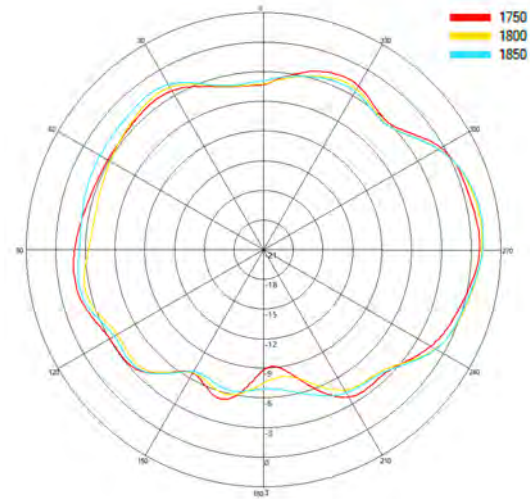


3D Pattern Data in Free Space Cell B

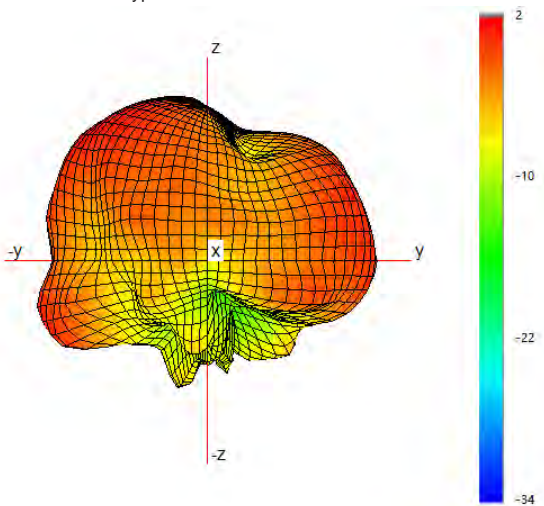
Typical 3D Pattern- Cell B - 1800 MHz



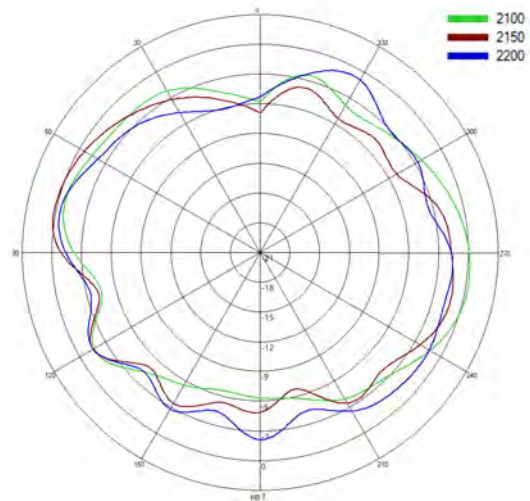
Typical H Plane- Cell B- Patterns- 1750-1850 MHz



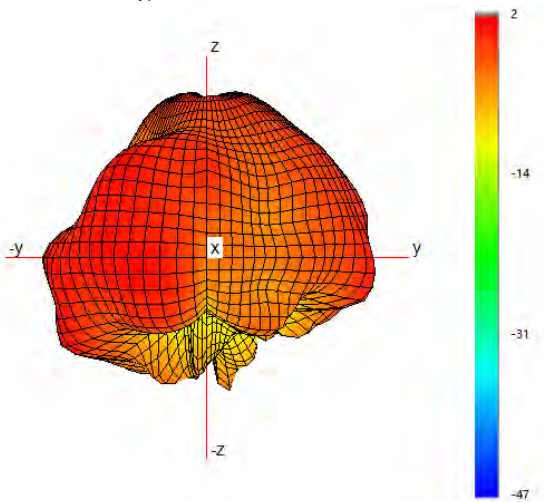
Typical 3D Pattern- Cell B - 2150 MHz



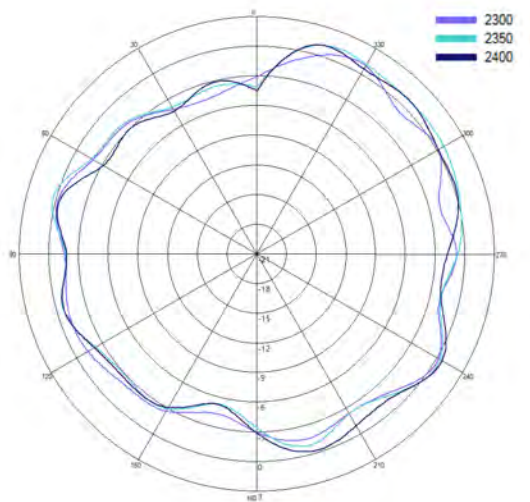
Typical H Plane- Cell B- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell B - 2350 MHz

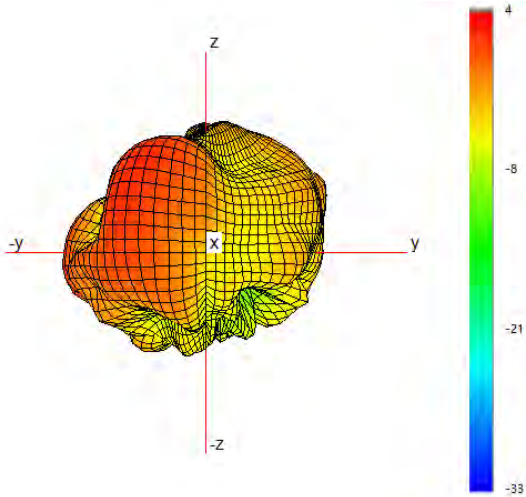


Typical H Plane- Cell B - Patterns- 2300-2400 MHz

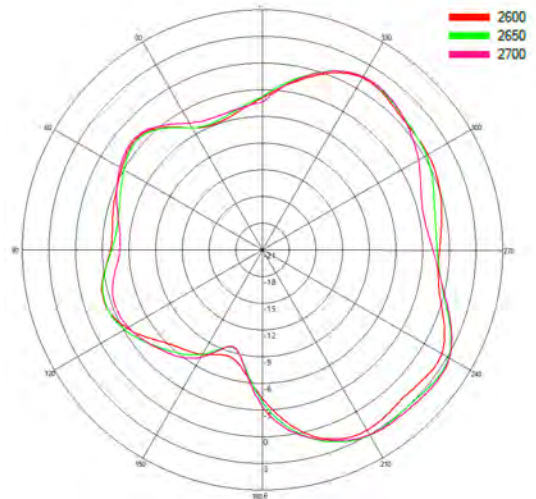


3D Pattern Data in Free Space Cell B

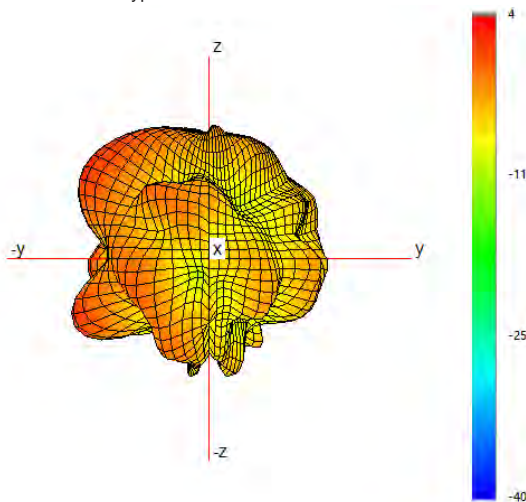
Typical 3D Pattern- Cell B - 2650 MHz



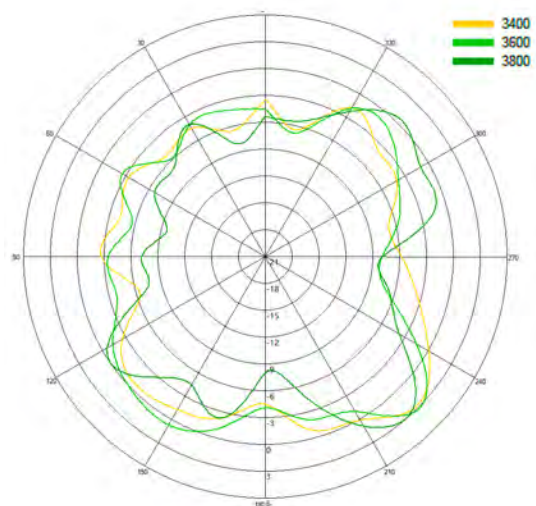
Typical H Plane- Cell B - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell B - 3600 MHz

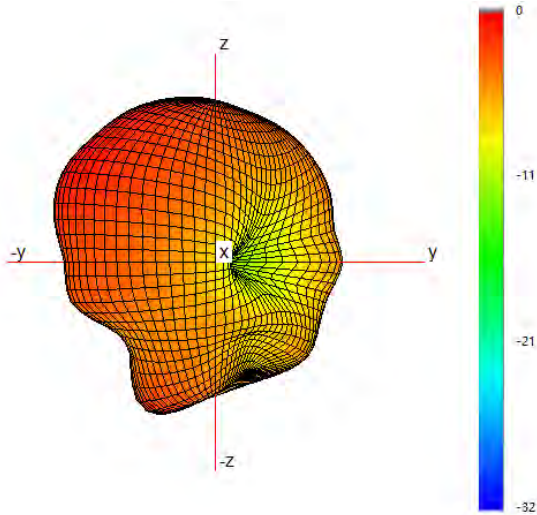


Typical H Plane- Cell B - Patterns- 3400-3800 MHz

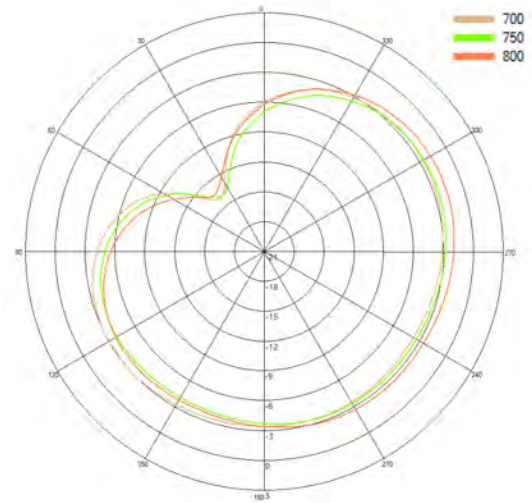


3D Pattern Data in Free Space Cell C

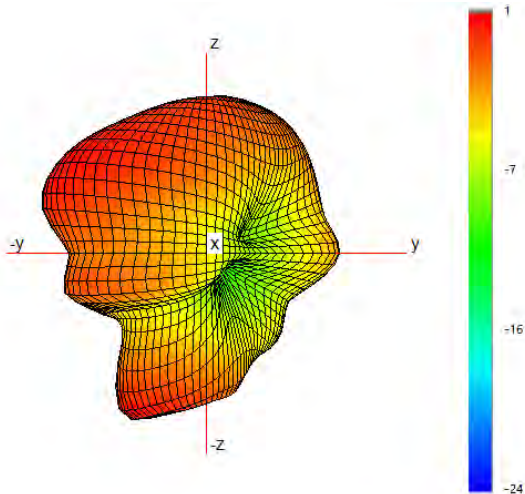
Typical 3D Pattern- Cell C - 750 MHz



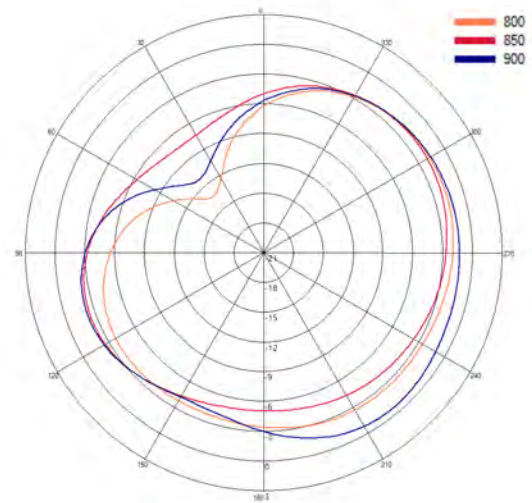
Typical H Plane- Cell C - Patterns- 700-800MHz



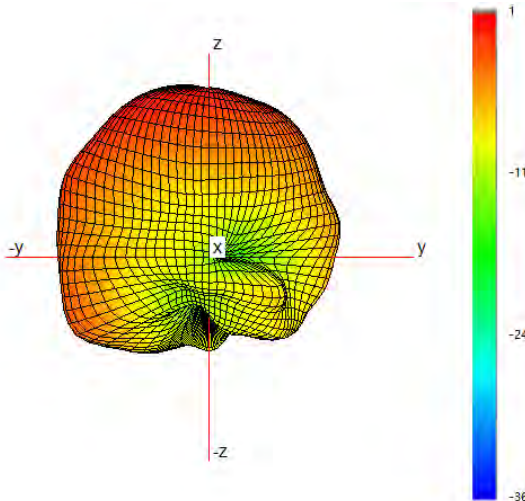
Typical 3D Pattern- Cell C - 850 MHz



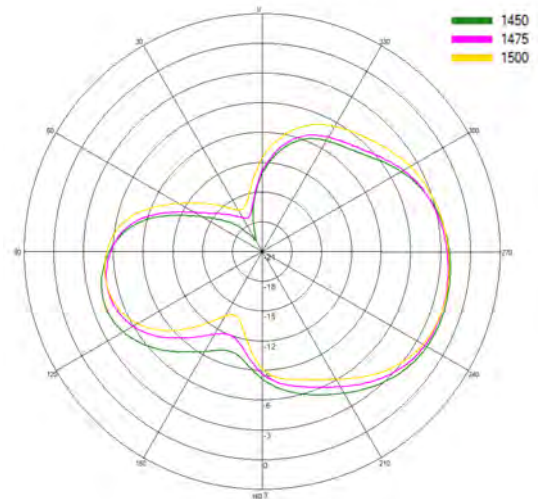
Typical H Plane- Cell C - Patterns- 800-900MHz



Typical 3D Pattern- Cell C - 1475 MHz

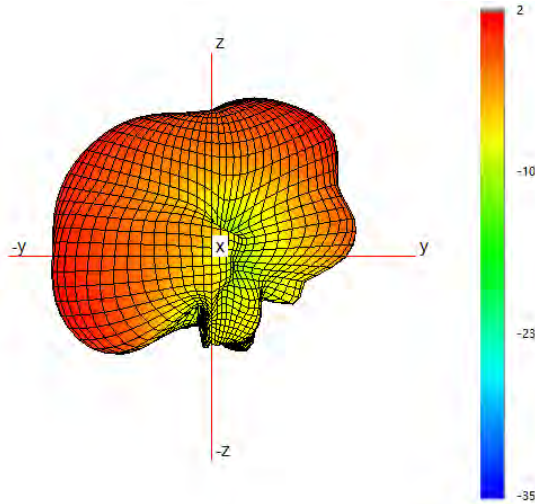


Typical H Plane- Cell C- Patterns- 1450-1500 MHz

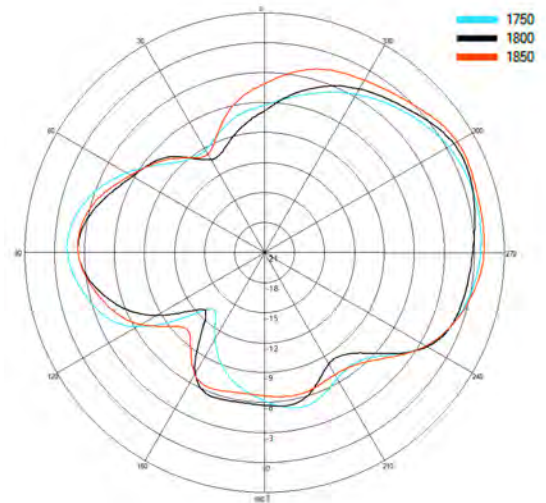


3D Pattern Data in Free Space Cell C

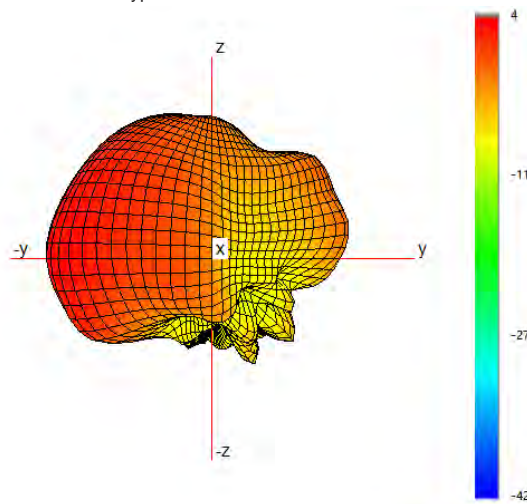
Typical 3D Pattern- Cell C - 1800 MHz



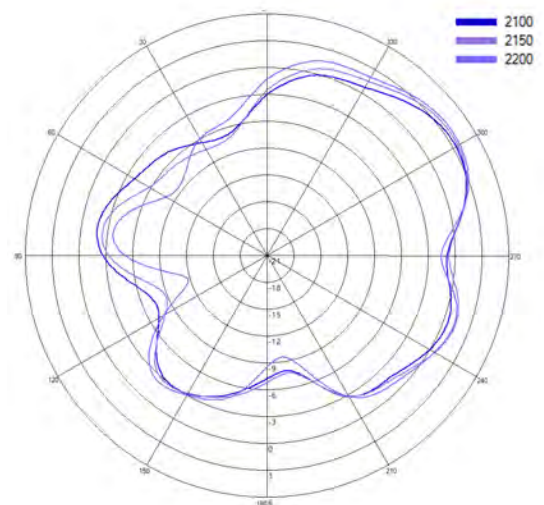
Typical H Plane- Cell C- Patterns- 1750-1850 MHz



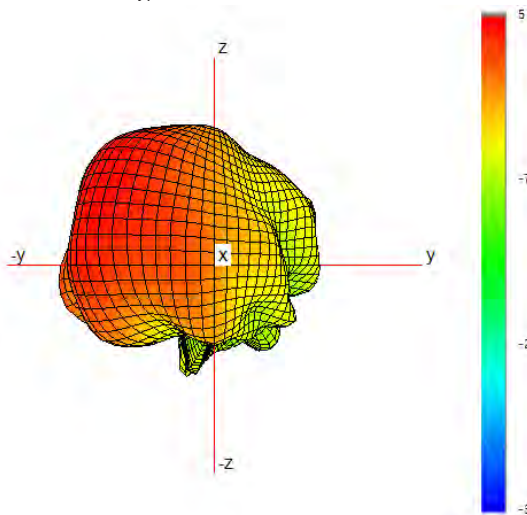
Typical 3D Pattern- Cell C - 2150 MHz



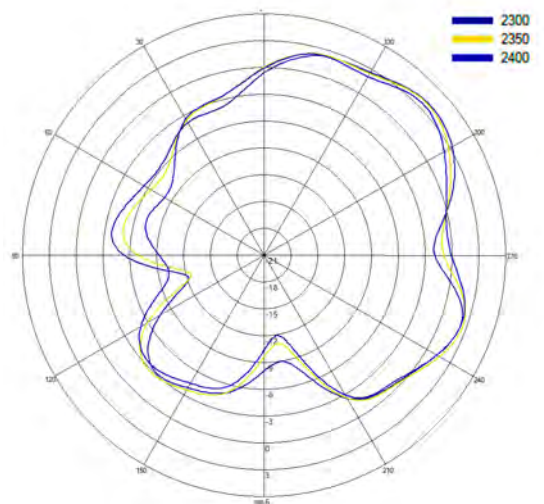
Typical H Plane- Cell C- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell C - 2350 MHz

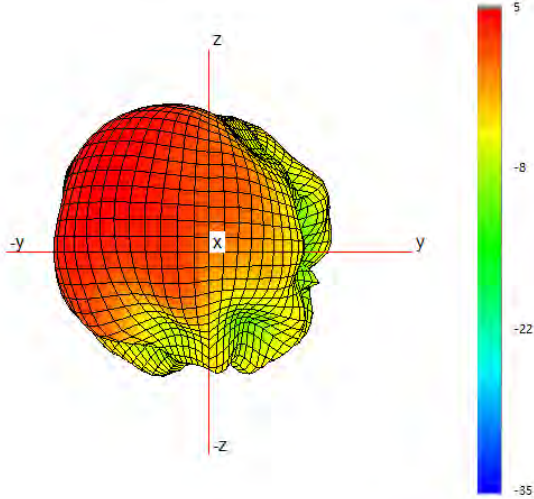


Typical H Plane- Cell C - Patterns- 2300-2400 MHz

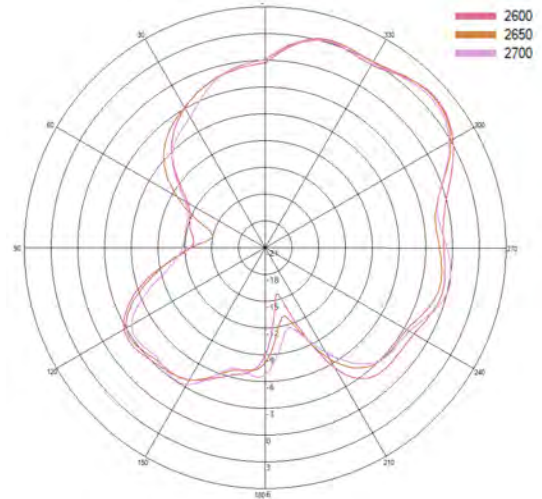


3D Pattern Data in
Free Space Cell C

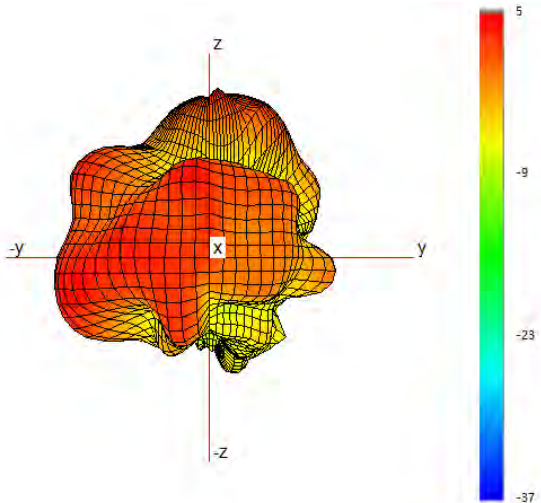
Typical 3D Pattern- Cell C - 2650 MHz



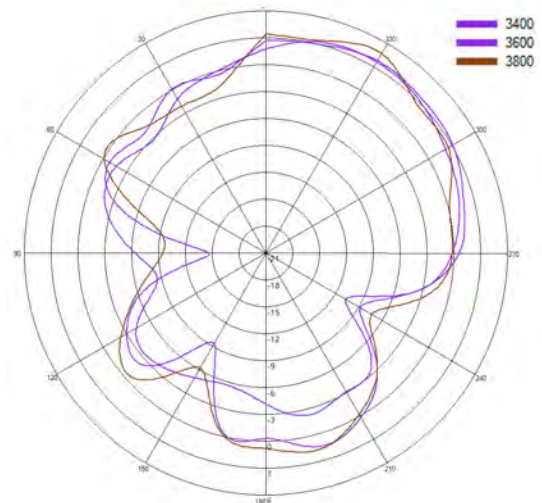
Typical H Plane- Cell C - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell C - 3600 MHz

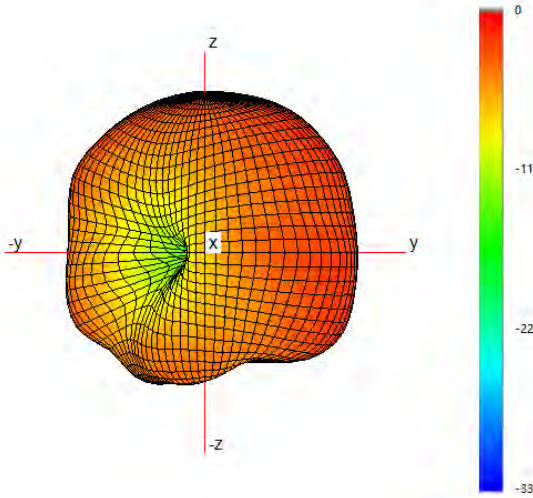


Typical H Plane- Cell C - Patterns- 3400-3800 MHz

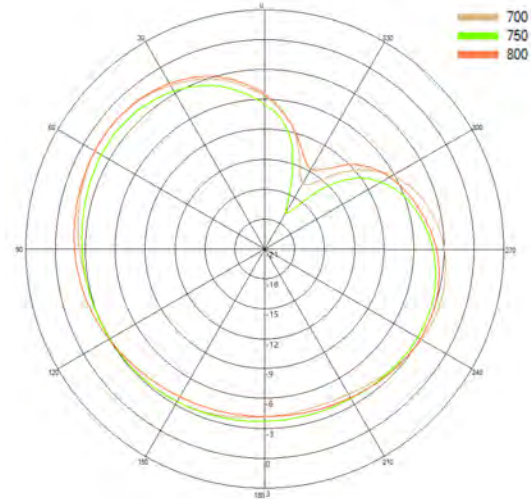


3D Pattern Data in Free Space Cell D

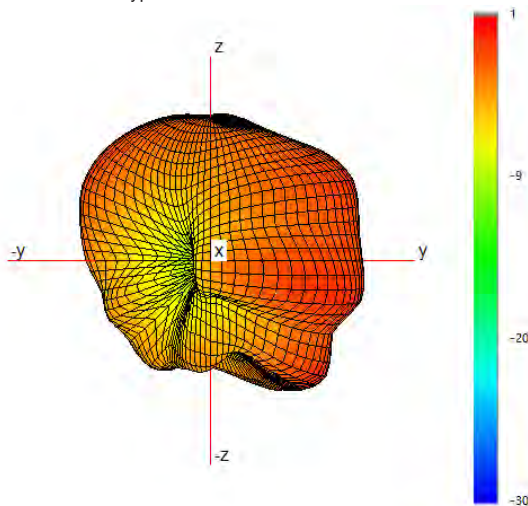
Typical 3D Pattern- Cell D - 750 MHz



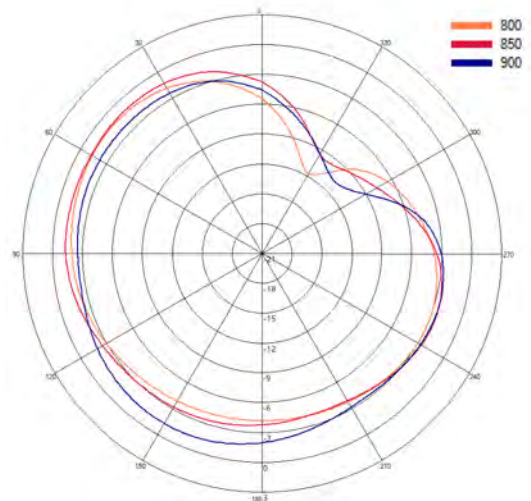
Typical H Plane- Cell D - Patterns- 700-800MHz



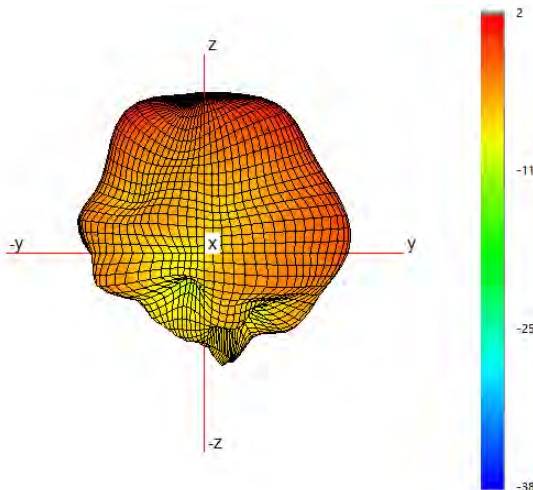
Typical 3D Pattern- Cell D - 850 MHz



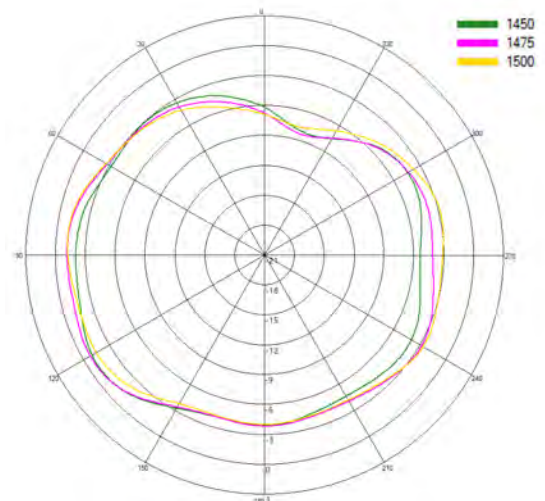
Typical H Plane- Cell D - Patterns- 800-900MHz



Typical 3D Pattern- Cell D - 1475 MHz

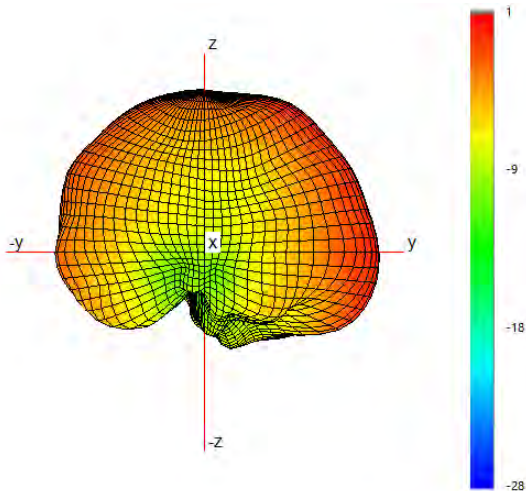


Typical H Plane- Cell D - Patterns- 1450-1500 MHz

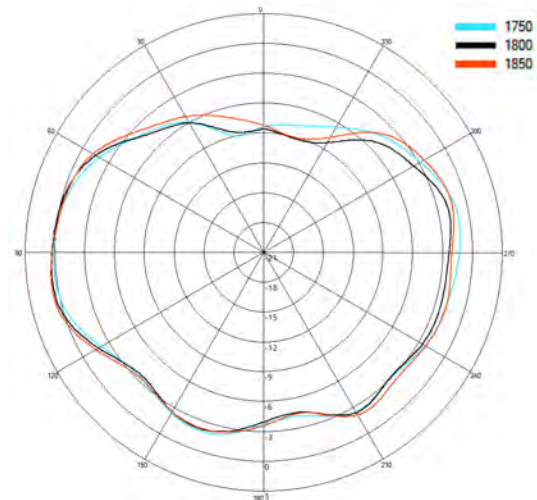


3D Pattern Data in Free Space Cell D

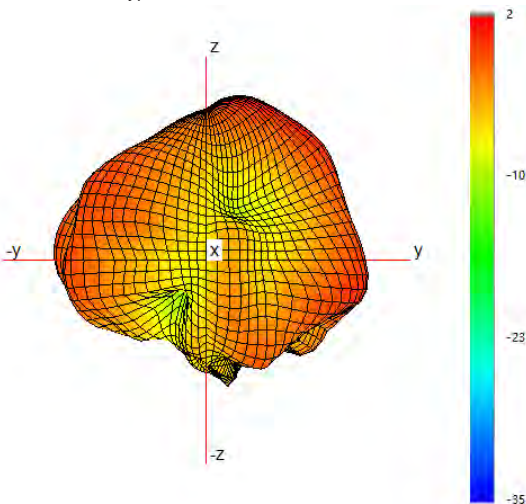
Typical 3D Pattern- Cell D - 1800 MHz



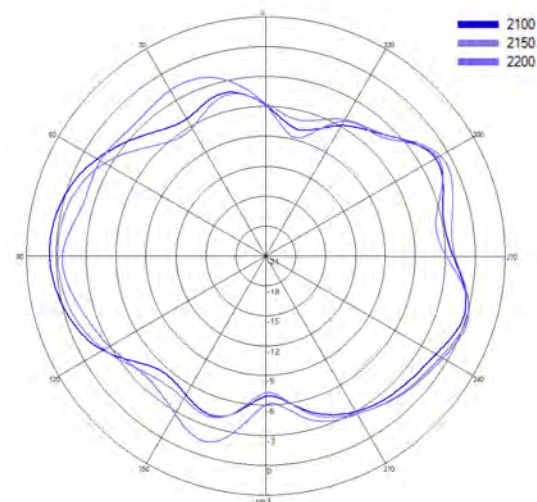
Typical H Plane- Cell D- Patterns- 1750-1850 MHz



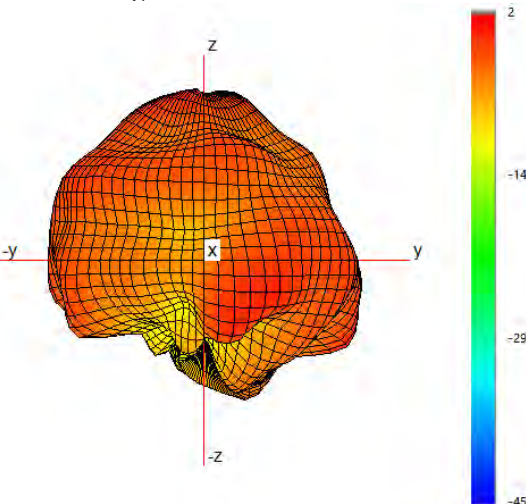
Typical 3D Pattern- Cell D - 2150 MHz



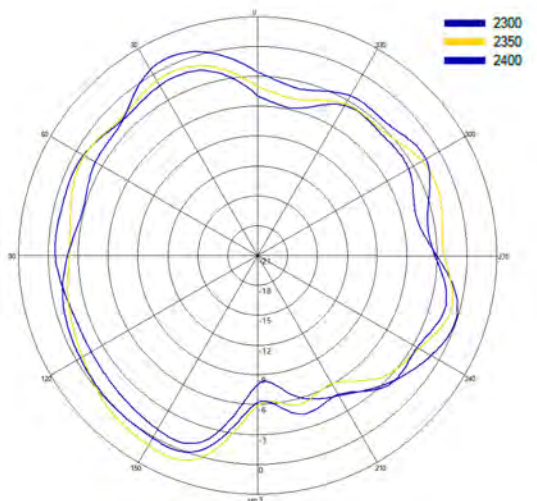
Typical H Plane- Cell D- Patterns- 2100-2200 MHz



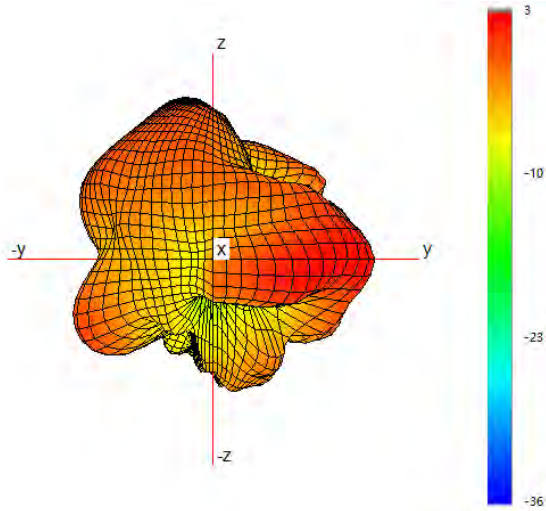
Typical 3D Pattern- Cell D - 2350 MHz



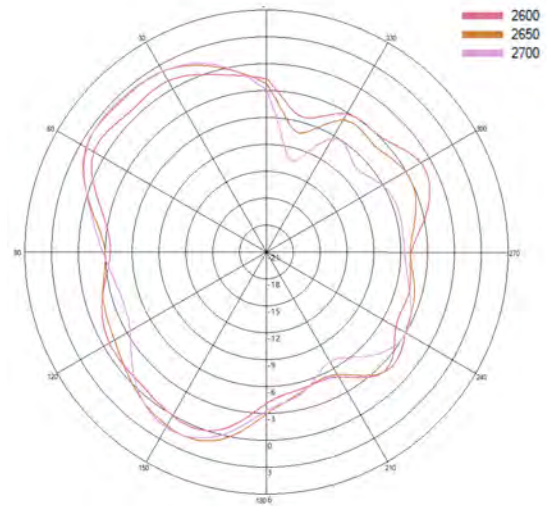
Typical H Plane- Cell D - Patterns- 2300-2400 MHz



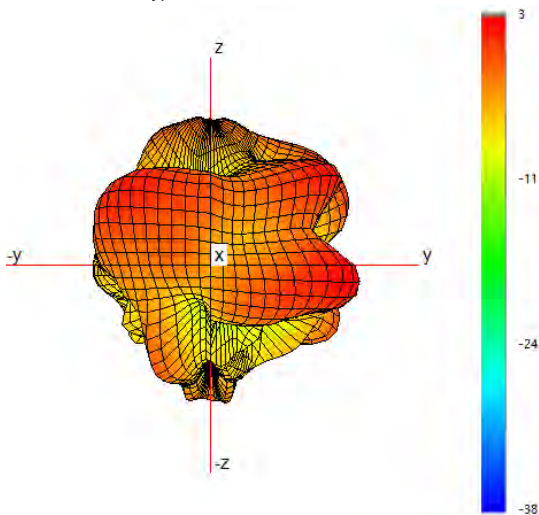
Typical 3D Pattern- Cell D - 2650 MHz



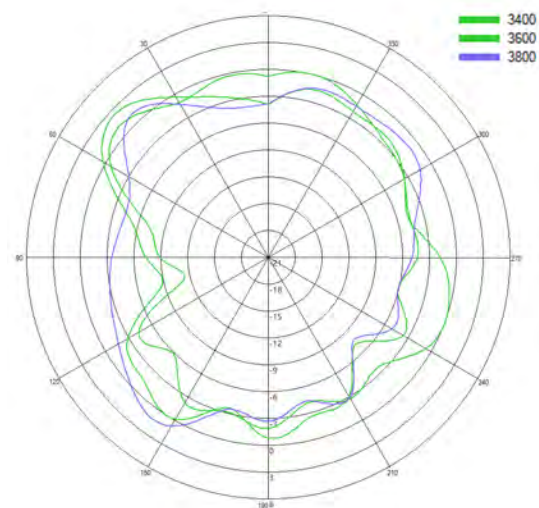
Typical H Plane- Cell D - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell D - 3600 MHz

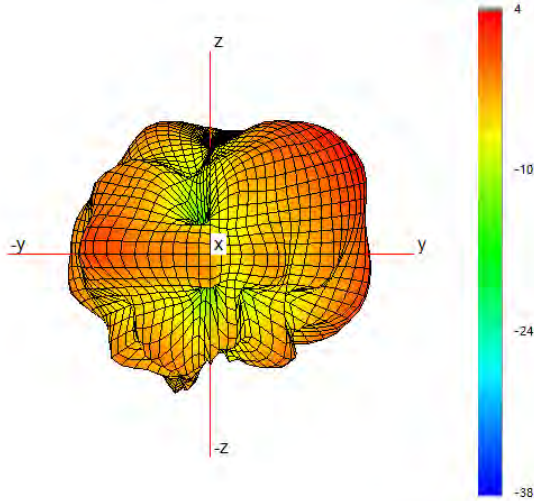


Typical H Plane- Cell D - Patterns- 3400-3800 MHz

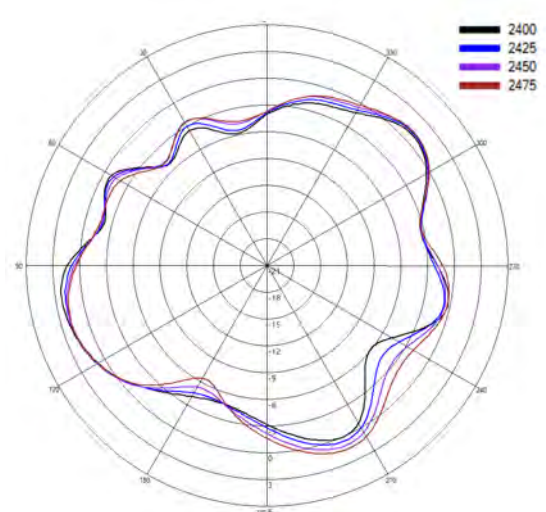


WiFi Pattern-Data in Free Space -WiFi -1

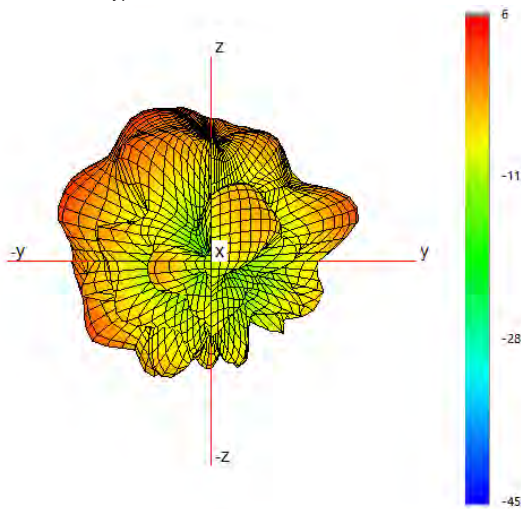
Typical 3D Pattern- WiFi - 1 - 2450 MHz



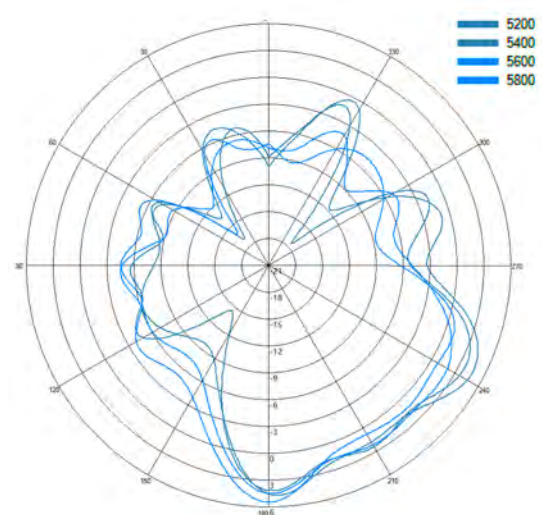
Typical H Plane- WiFi - 1 - Patterns- 2400-2475MHz



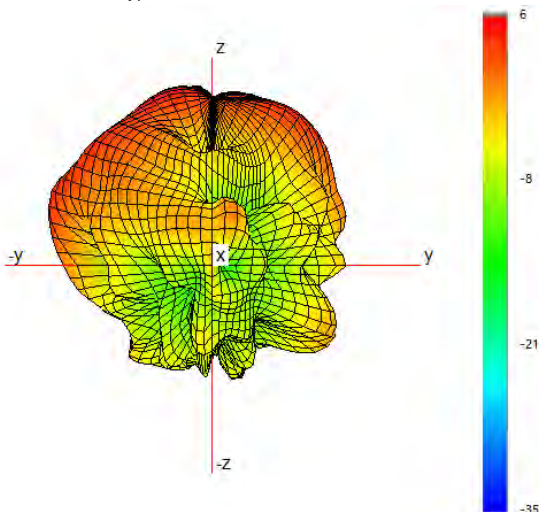
Typical 3D Pattern- WiFi - 1 - 5500 MHz



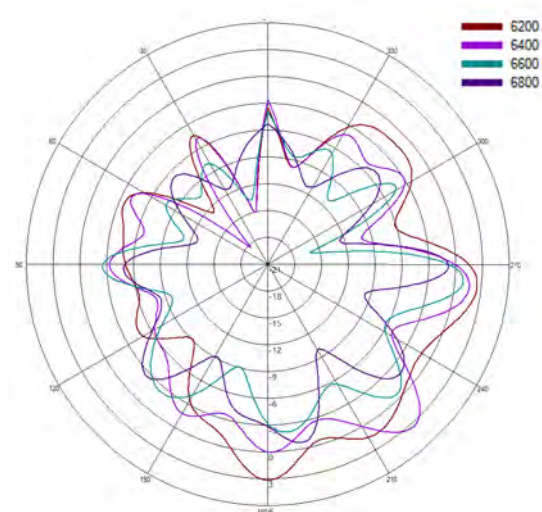
Typical H Plane- WiFi - 1 - Patterns- 5200-5800MHz



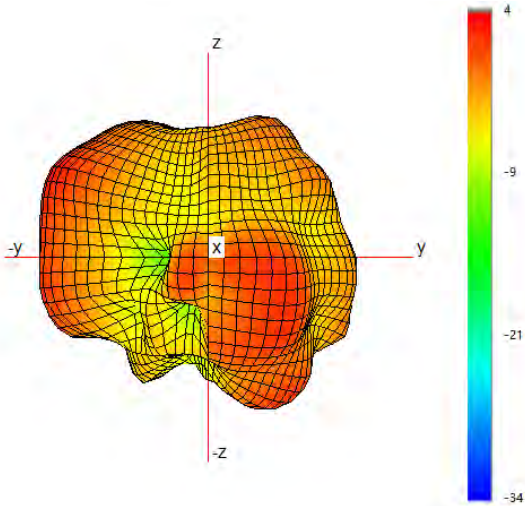
Typical 3D Pattern- WiFi - 1 - 6500 MHz



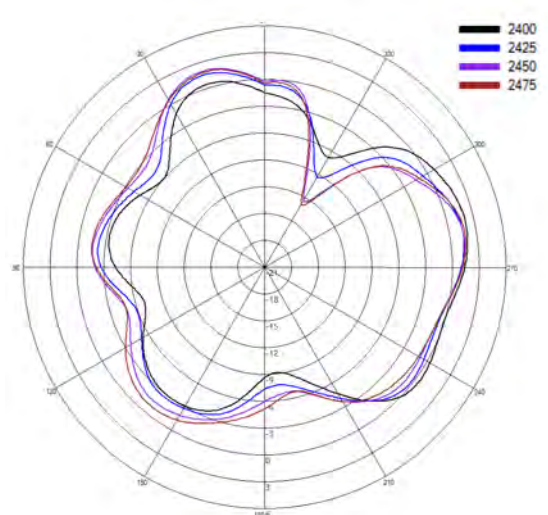
Typical H Plane- WiFi - 1 - Patterns- 6200-6800MHz



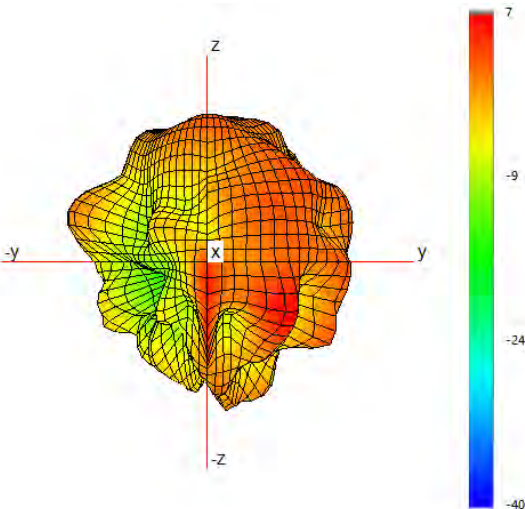
Typical 3D Pattern- WiFi - 2 - 2450 MHz



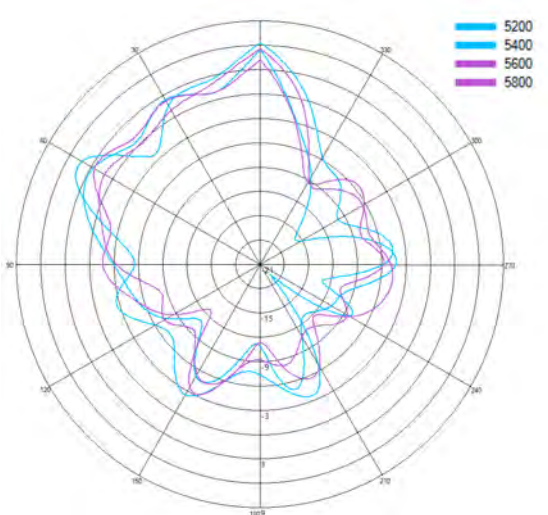
Typical H Plane- WiFi - 2 - Patterns- 2400-2475MHz



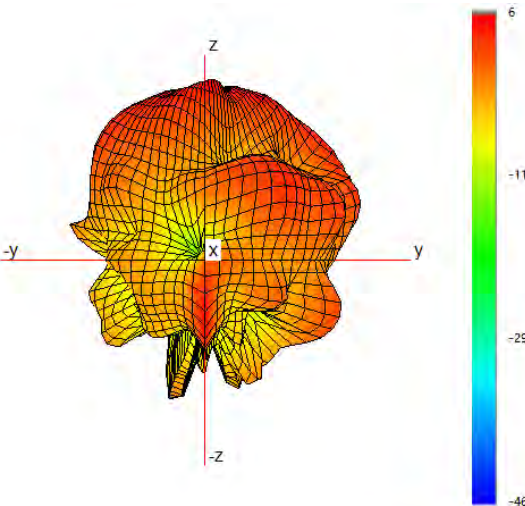
Typical 3D Pattern- WiFi - 2 - 5500 MHz



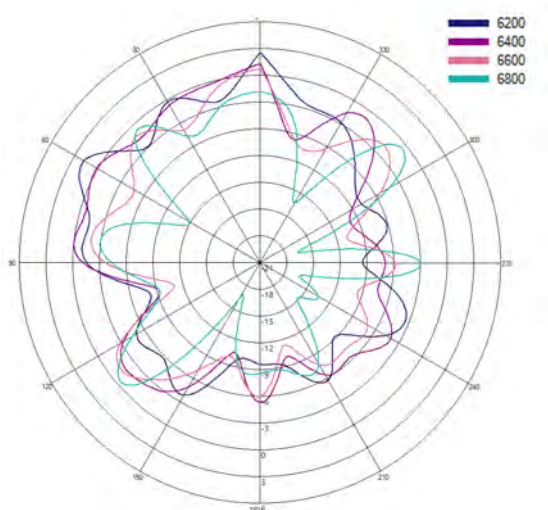
Typical H Plane- WiFi - 2 - Patterns- 5200-5800MHz



Typical 3D Pattern- WiFi - 2 - 6500 MHz



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



4X4 MiMo 4G/5G

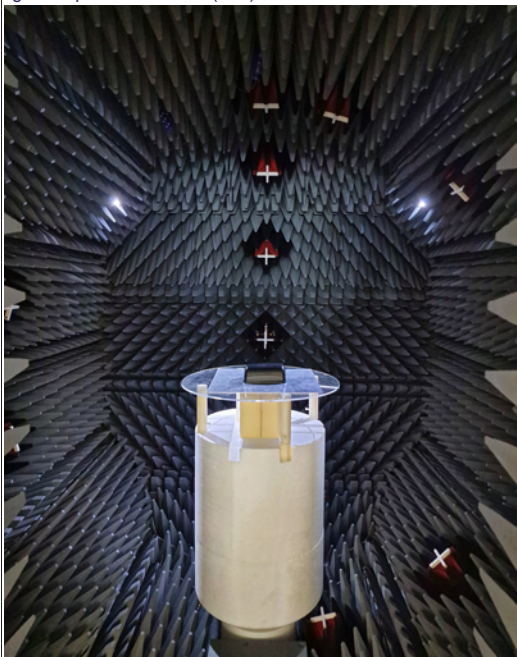
IOT Antenna

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

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



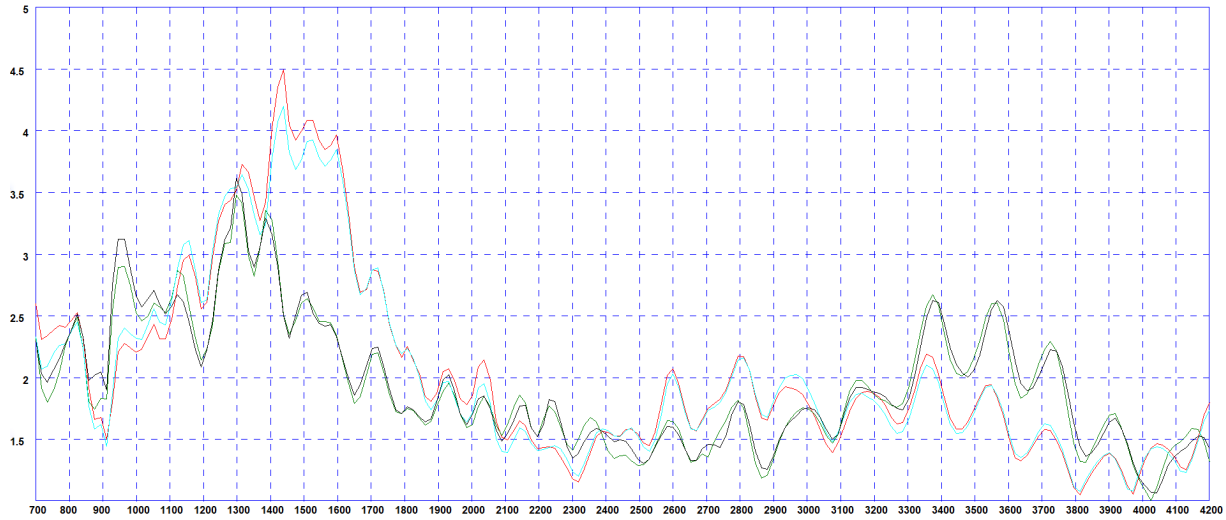
4G/5G Antennas

| 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 | Cell A | 6.9 | 61 |
| | | Cell B | 6.8 | 49 |
| | | Cell C | 7.1 | 61 |
| | | Cell D | 6.6 | 49 |

| Measurement Conditions | WiFi Antennas | | | | |
|--|-----------------------|------------|-----------------|-----------------|----------------|
| LGADM4-7-42 measured on 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') CS30 Cable | Frequency Range (MHz) | WiFi Bands | Antenna Element | Peak Gain (dBi) | Efficiency (%) |
|  | 2396-2485 | 2.4GHz | WiFi 1 | 5.7 | 55 |
| | | | WiFi 2 | 5.6 | 47 |
| | 5150-5250 | UNII-1 | WiFi 1 | 8.0 | 57 |
| | | | WiFi 2 | 8.6 | 60 |
| | 5250-5350 | UNII-2A | WiFi 1 | 7.8 | 57 |
| | | | WiFi 2 | 8.5 | 58 |
| | 5350-5470 | UNII-2B | WiFi 1 | 7.8 | 57 |
| | | | WiFi 2 | 8.2 | 56 |
| | 5470-5725 | UNII-2C | WiFi 1 | 6.7 | 55 |
| | | | WiFi 2 | 8.2 | 56 |
| | 5725-5850 | UNII-3 | WiFi 1 | 6.7 | 55 |
| | | | WiFi 2 | 7.0 | 52 |
| | 5850-5925 | UNII-4 | WiFi 1 | 5.8 | 59 |
| | | | WiFi 2 | 6.6 | 54 |
| | 5925-6425 | UNII-5 | WiFi 1 | 5.9 | 60 |
| | | | WiFi 2 | 6.7 | 55 |
| 6425-6525 | UNII-6 | WiFi 1 | 7.8 | 60 | |
| | | WiFi 2 | 6.8 | 57 | |
| 6525-6875 | UNII-7 | WiFi 1 | 7.3 | 60 | |
| | | WiFi 2 | 6.4 | 58 | |
| 6875-7125 | UNII-8 | WiFi 1 | 5.9 | 62 | |
| | | WiFi 2 | 5.8 | 58 | |
| | | WiFi 1 | 5.7 | 59 | |
| | | WiFi 2 | 5.5 | 56 | |

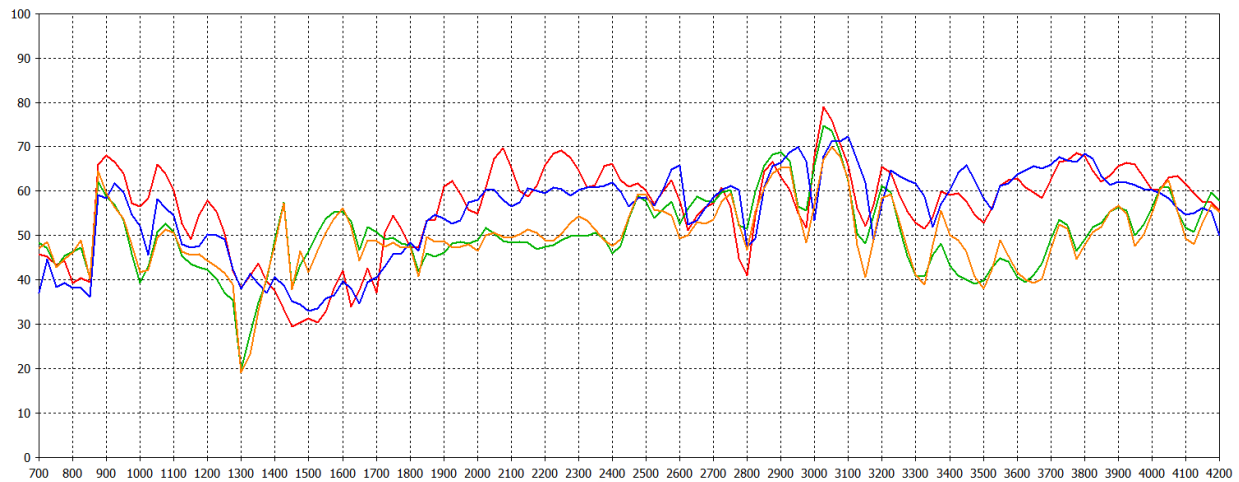
Electrical Data Cell on Ground Plane

Typical VSWR*



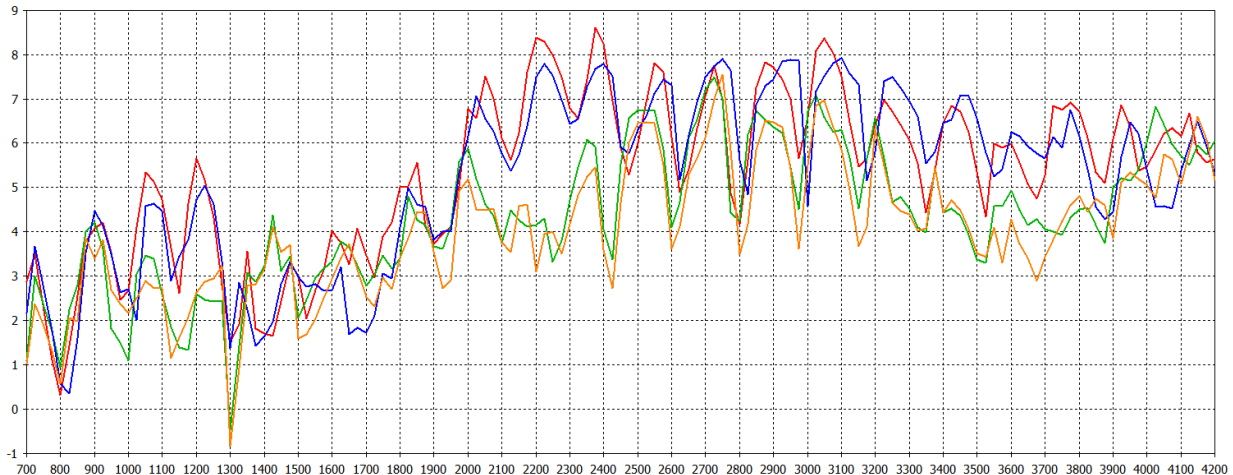
*VSWR measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

Typical Efficiency*



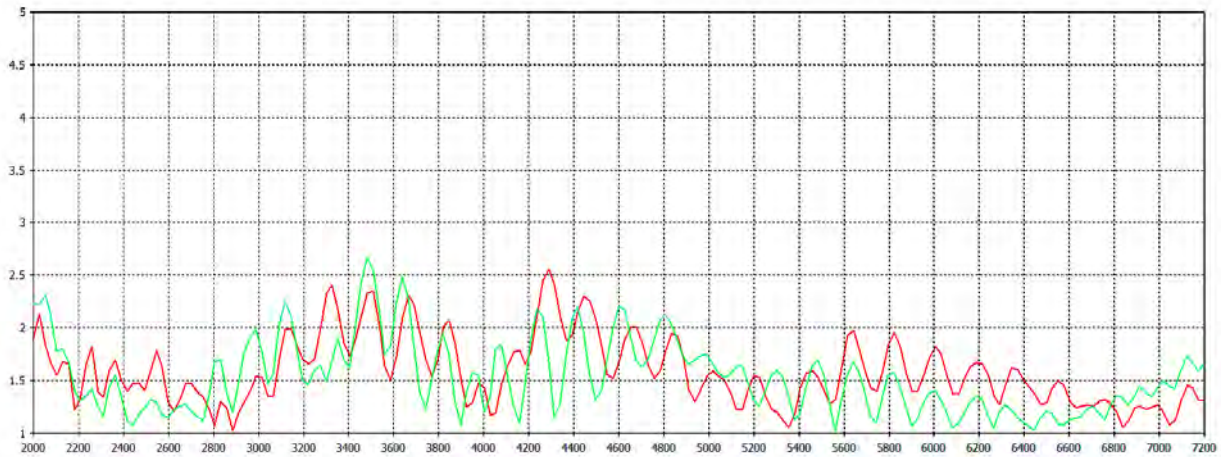
*Efficiency measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

Typical Swept Peak Gain*



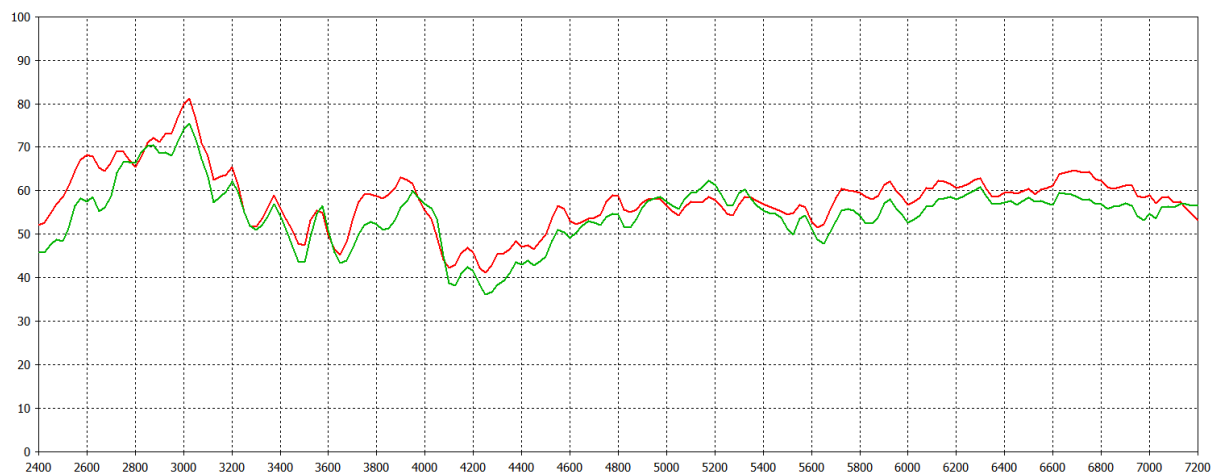
* Swept peak gain measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

Typical VSWR*



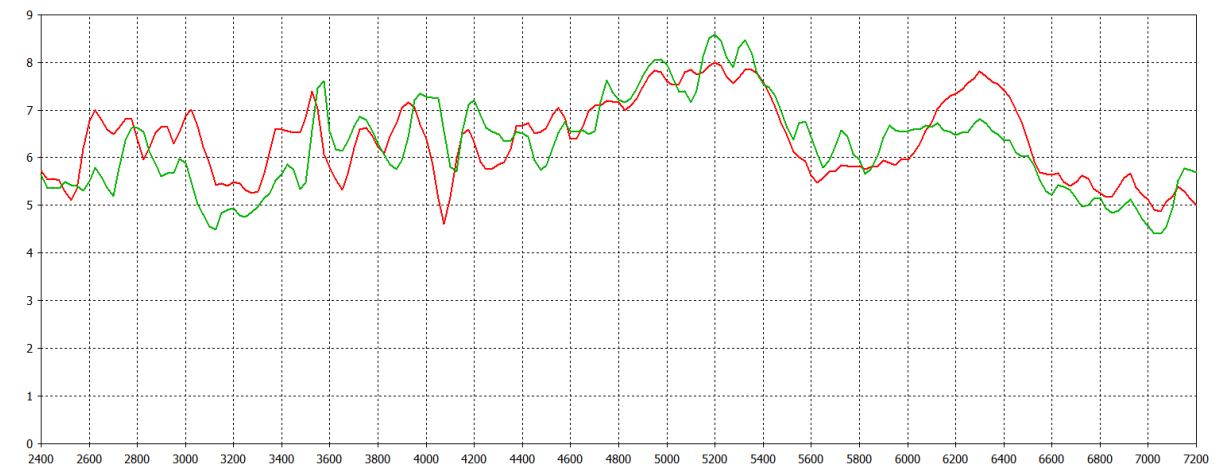
*VSWR measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

Typical Efficiency*



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

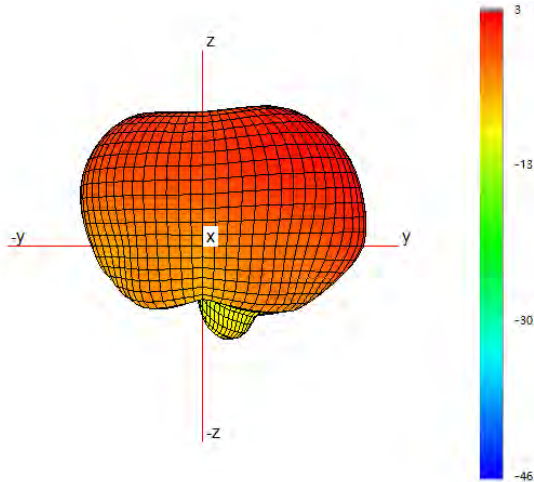
Typical Swept Peak Gain*



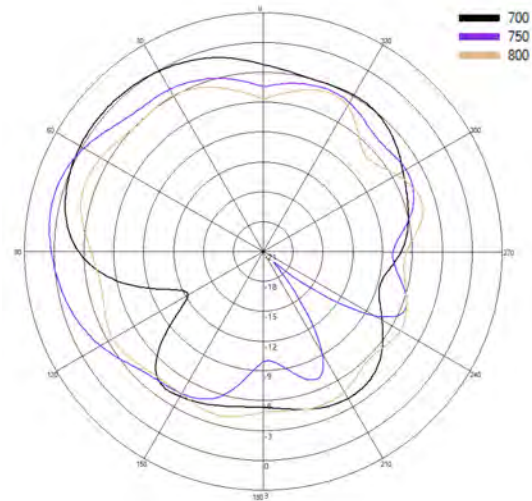
* Swept peak gain measured on a 400x400mm (1.3'x1.3') ground plane with 0.5m (1.6') of CS30 cable

3D Pattern Data on Ground Plane Cell A

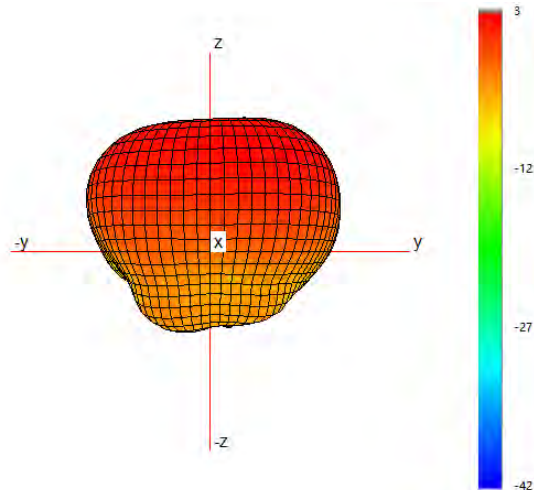
Typical 3D Pattern- Cell A - 750 MHz



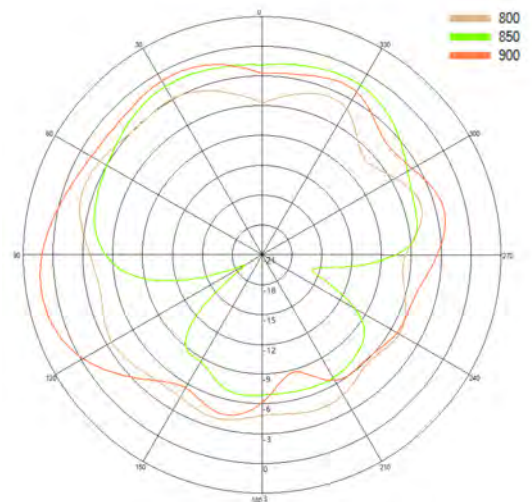
Typical H Plane- Cell A - Patterns- 700-800MHz



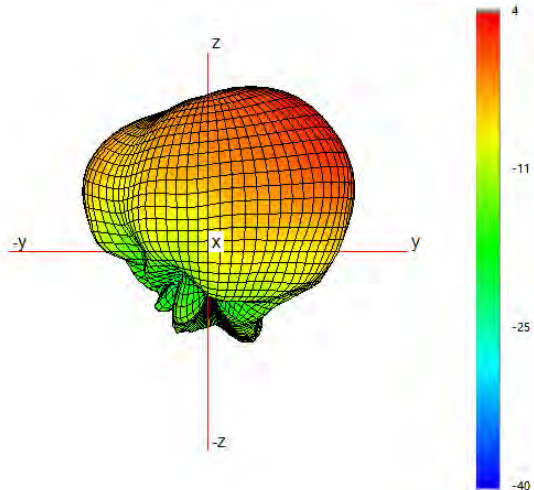
Typical 3D Pattern- Cell A - 850 MHz



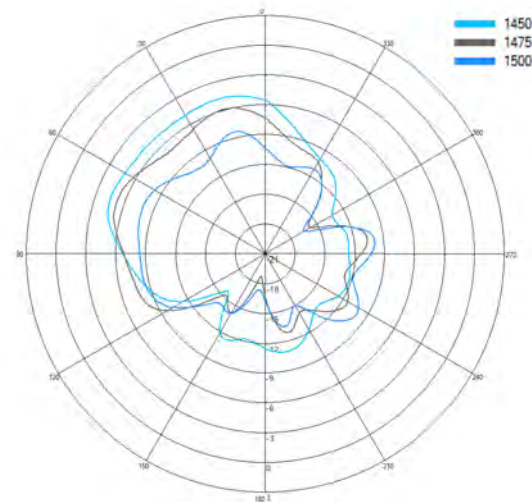
Typical H Plane- Cell A - Patterns- 800-900MHz



Typical 3D Pattern- Cell A - 1475 MHz

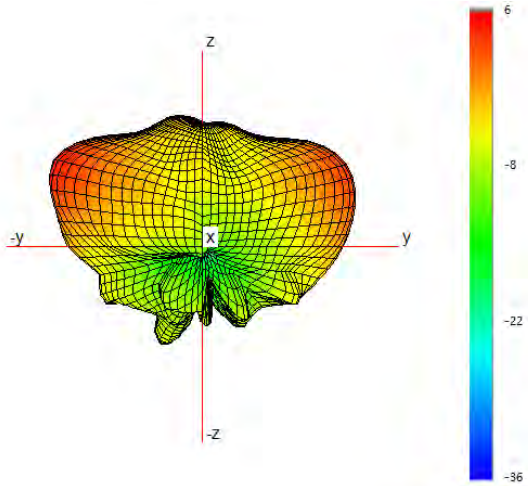


Typical H Plane- Cell A - Patterns- 1450-1500 MHz

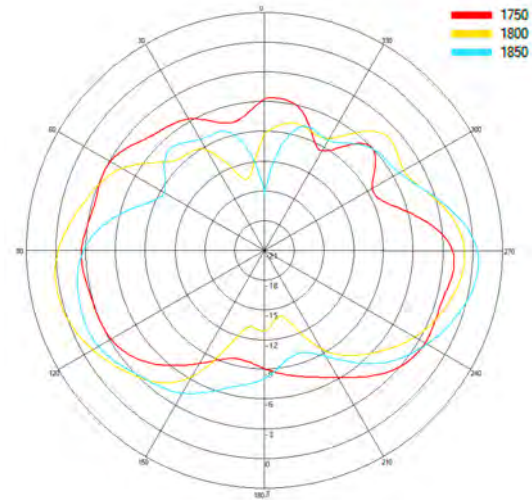


3D Pattern Data on Ground Plane Cell A

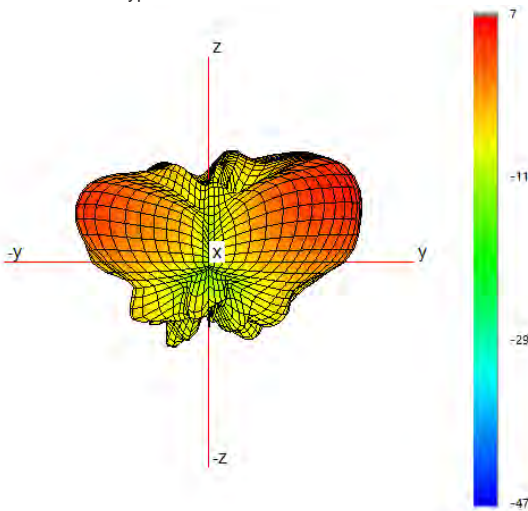
Typical 3D Pattern- Cell A - 1800 MHz



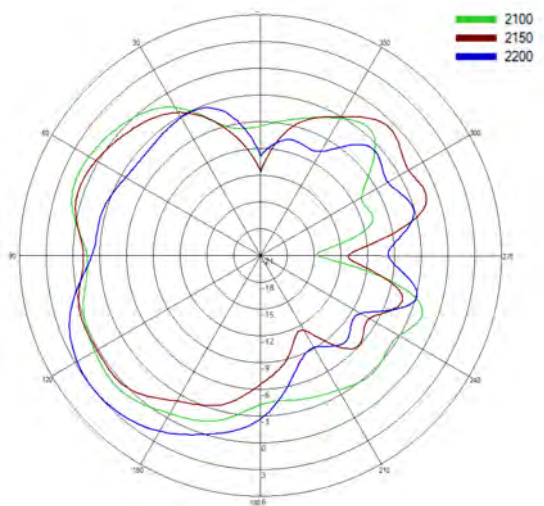
Typical H Plane- Cell A- Patterns- 1750-1850 MHz



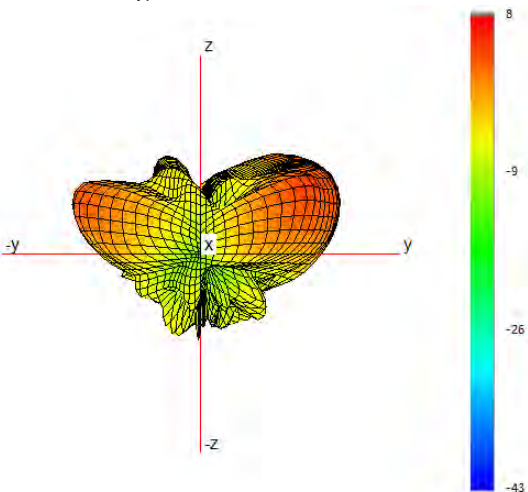
Typical 3D Pattern- Cell A - 2150 MHz



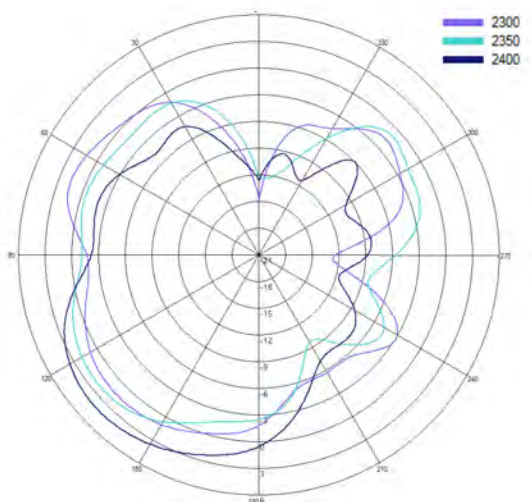
Typical H Plane- Cell A- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell A - 2350 MHz

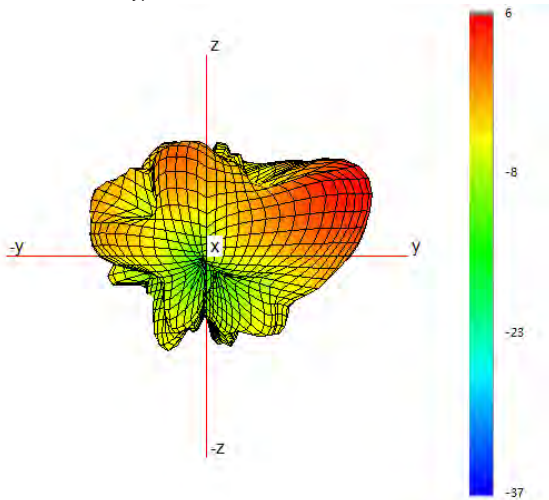


Typical H Plane- Cell A- Patterns- 2300-2400 MHz

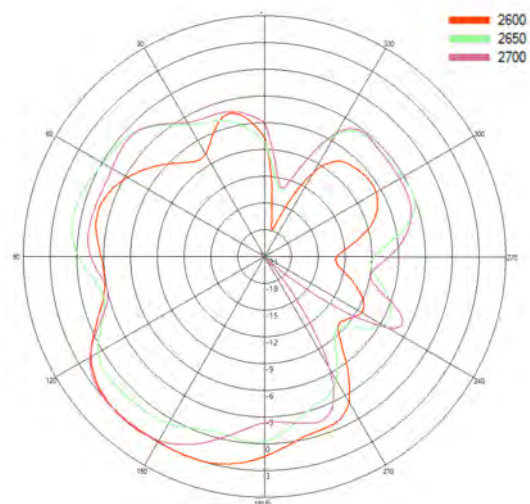


3D Pattern Data on Ground Plane Cell A

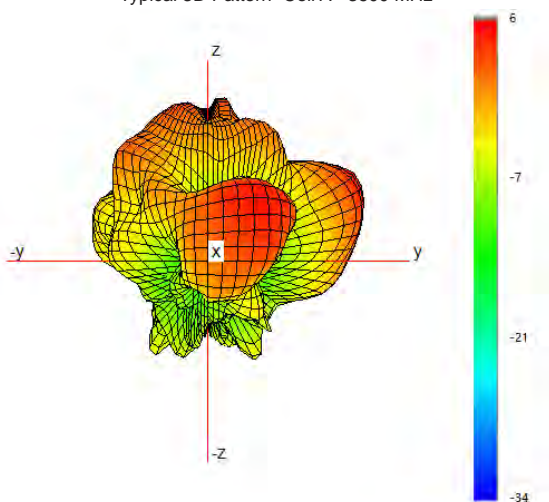
Typical 3D Pattern- Cell A - 2650 MHz



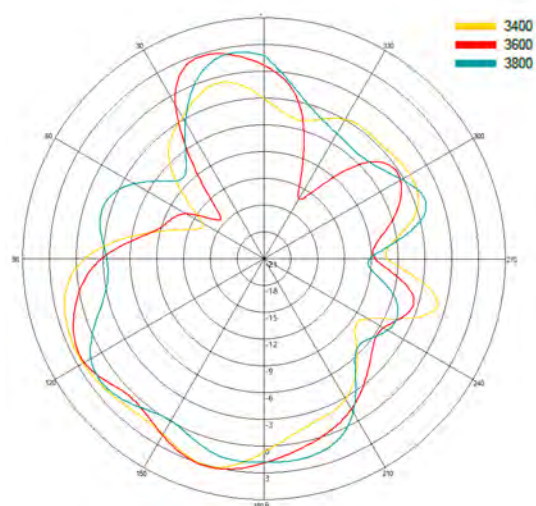
Typical H Plane- Cell A - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell A - 3600 MHz

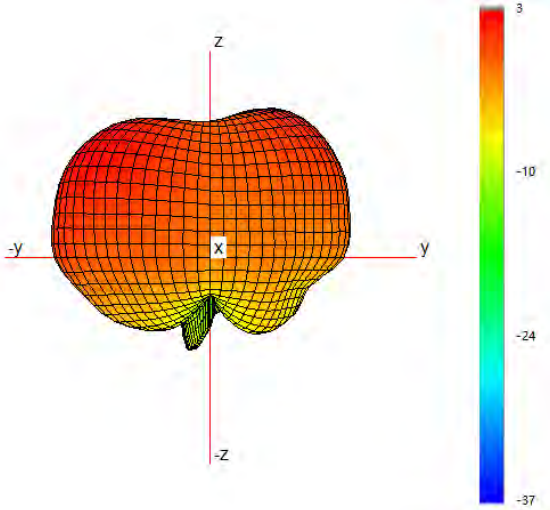


Typical H Plane- Cell A - Patterns- 3400-3800 MHz

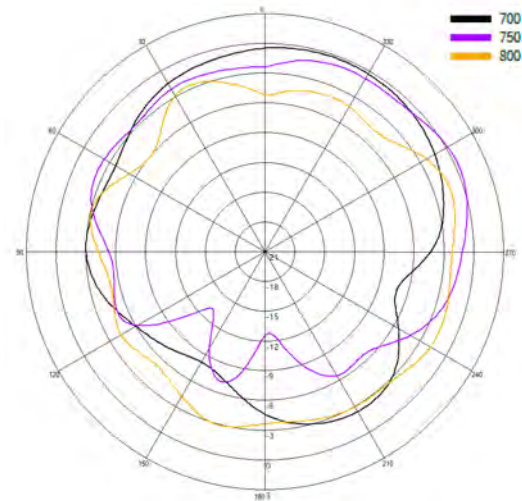


3D Pattern Data on Ground Plane Cell B

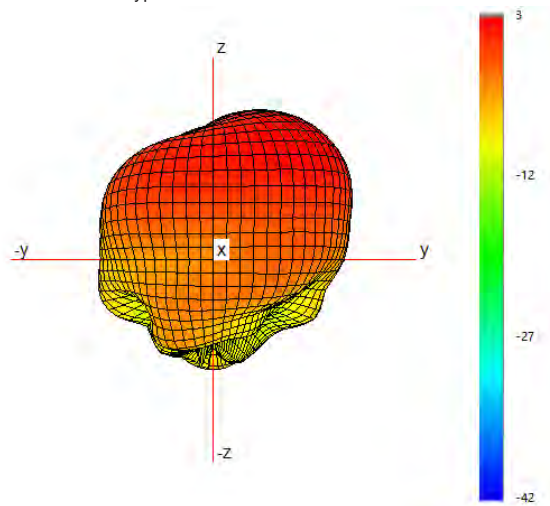
Typical 3D Pattern- Cell B - 750 MHz



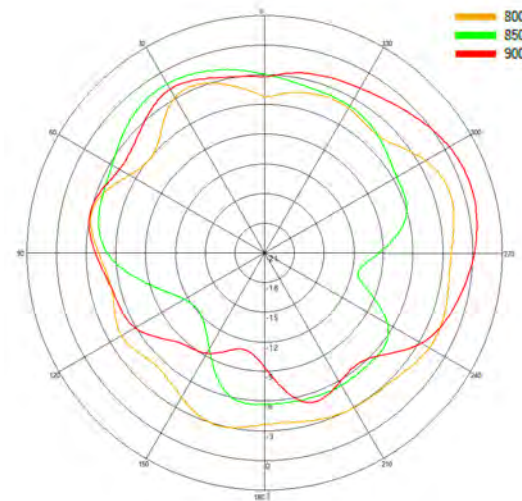
Typical H Plane- Cell B - Patterns- 700-800MHz



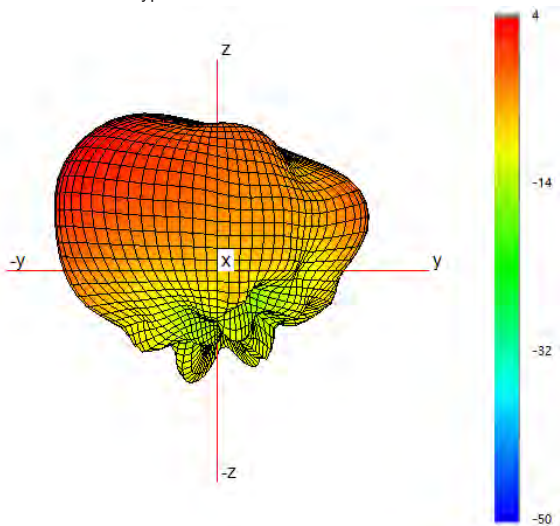
Typical 3D Pattern- Cell B - 850 MHz



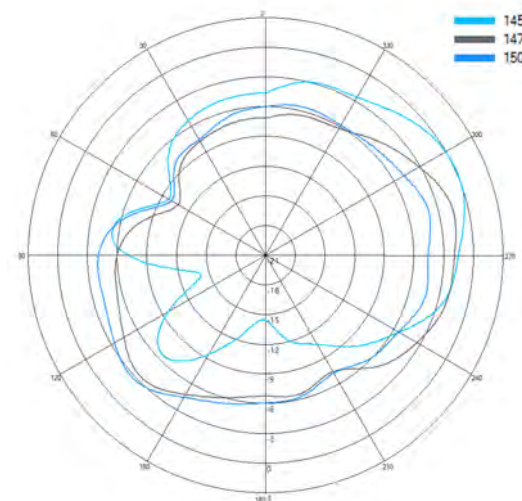
Typical H Plane- Cell B - Patterns- 800-900MHz



Typical 3D Pattern- Cell B - 1475 MHz

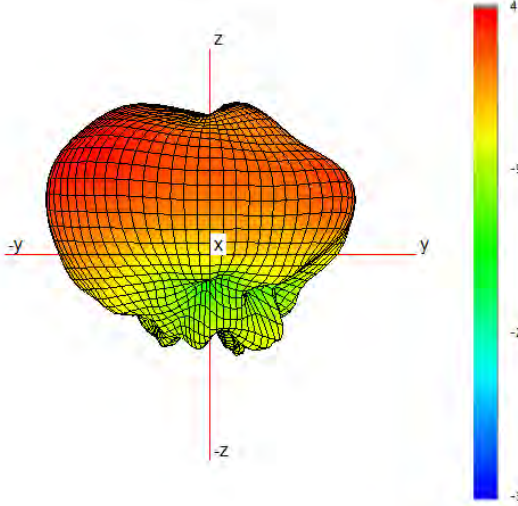


Typical H Plane- Cell B- Patterns- 1450-1500 MHz

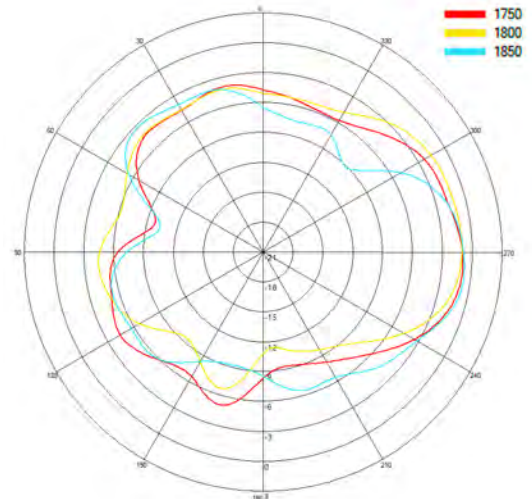


3D Pattern Data on Ground Plane Cell B

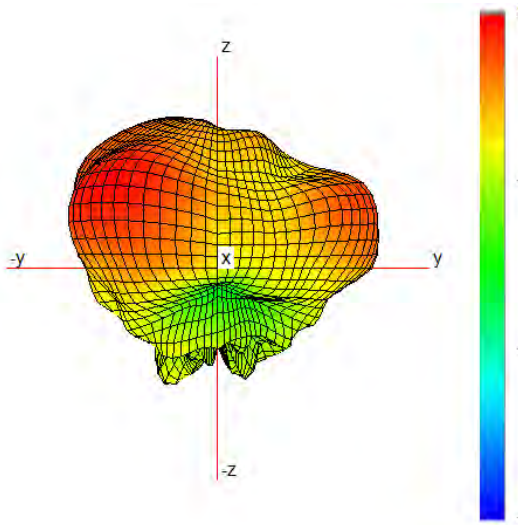
Typical 3D Pattern- Cell B - 1800 MHz



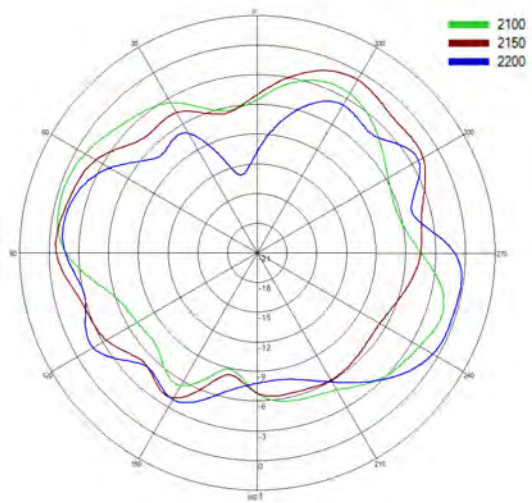
Typical H Plane- Cell B- Patterns- 1750-1850 MHz



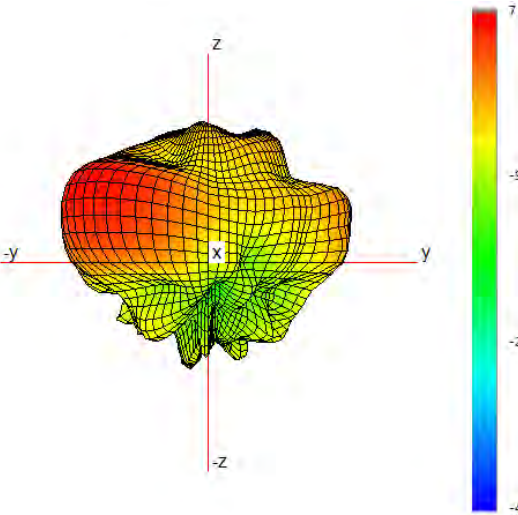
Typical 3D Pattern- Cell B - 2150 MHz



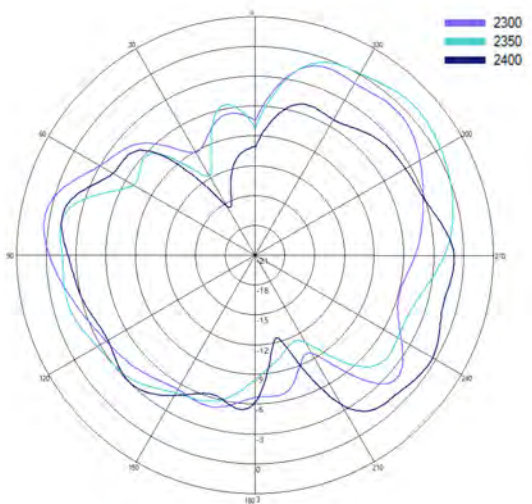
Typical H Plane- Cell B- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell B - 2350 MHz

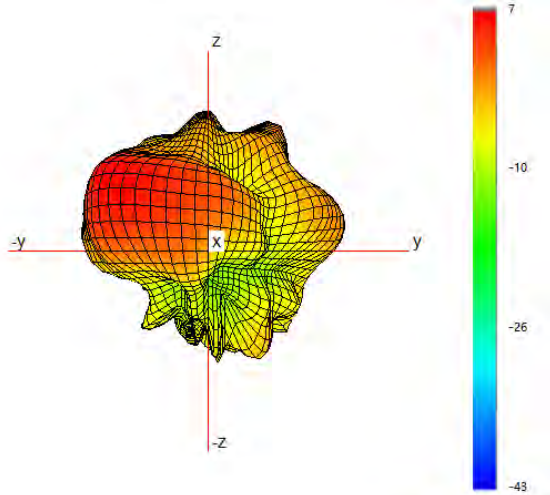


Typical H Plane- Cell B - Patterns- 2300-2400 MHz

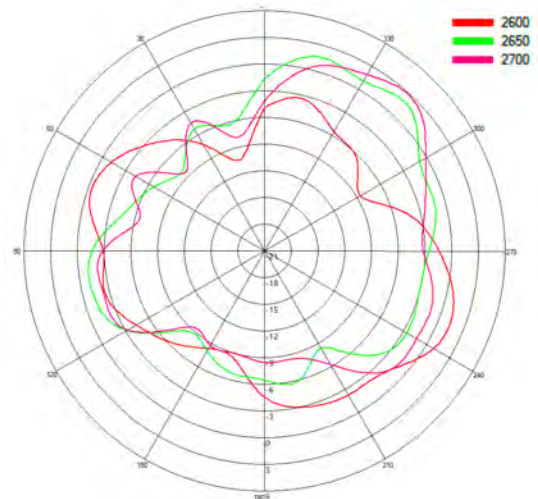


3D Pattern Data on Ground Plane Cell B

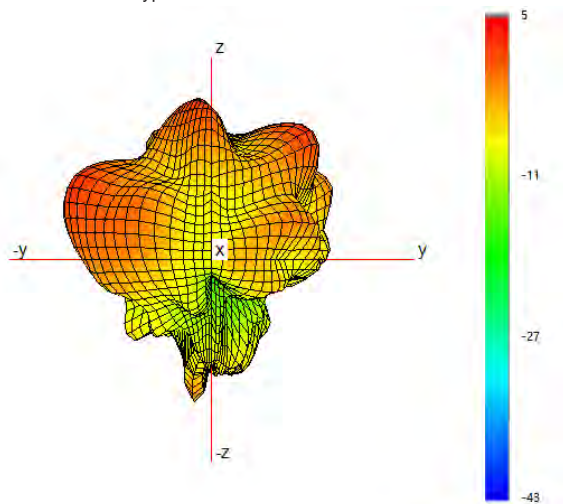
Typical 3D Pattern- Cell B - 2650 MHz



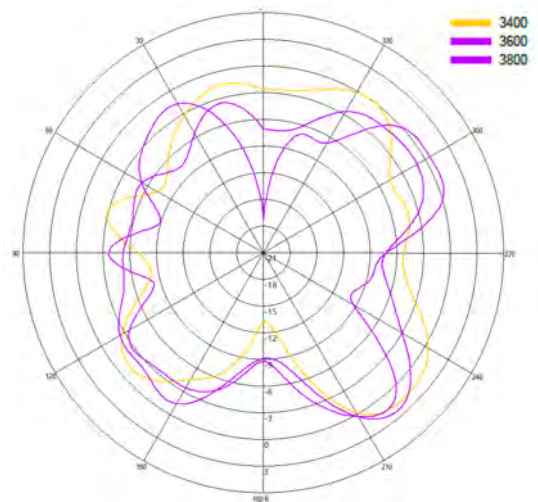
Typical H Plane- Cell B - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell B - 3600 MHz

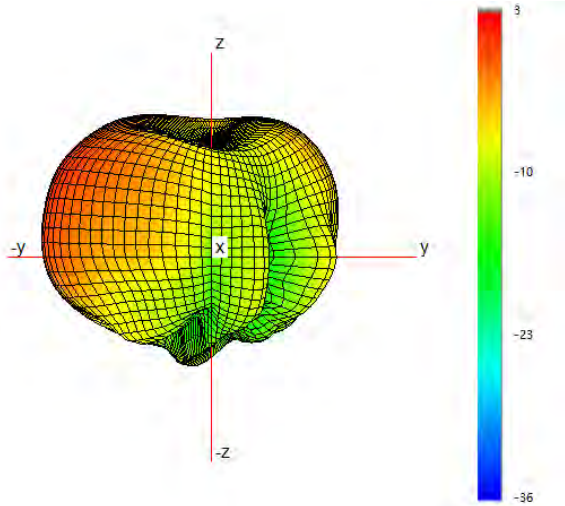


Typical H Plane- Cell B - Patterns- 3400-3800 MHz

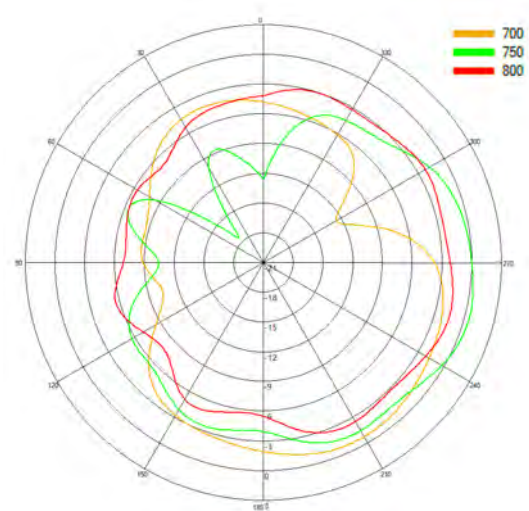


3D Pattern Data on Ground Plane Cell C

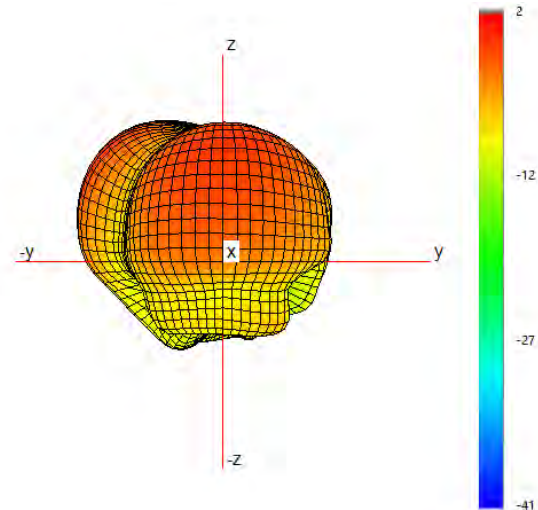
Typical 3D Pattern- Cell C - 750 MHz



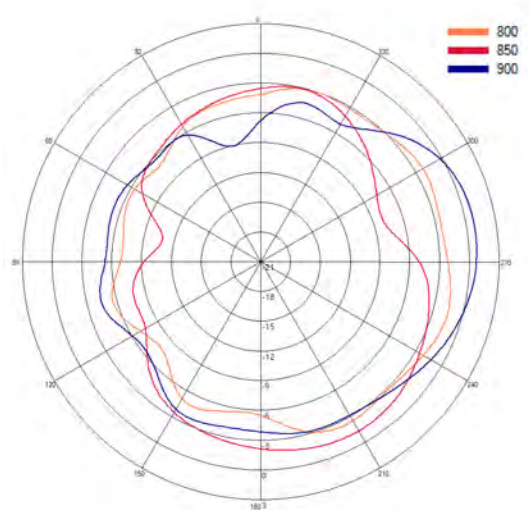
Typical H Plane- Cell C - Patterns- 700-800MHz



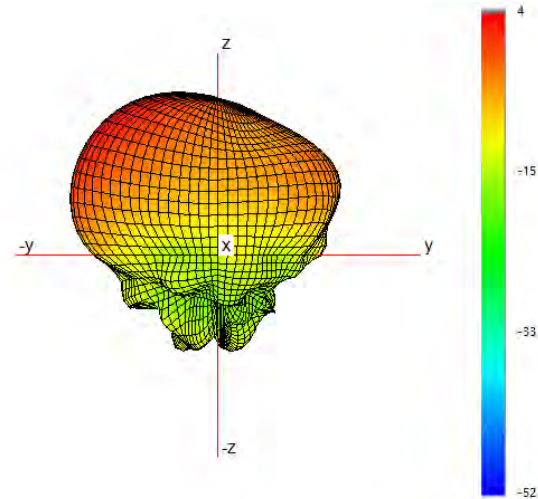
Typical 3D Pattern- Cell C - 850 MHz



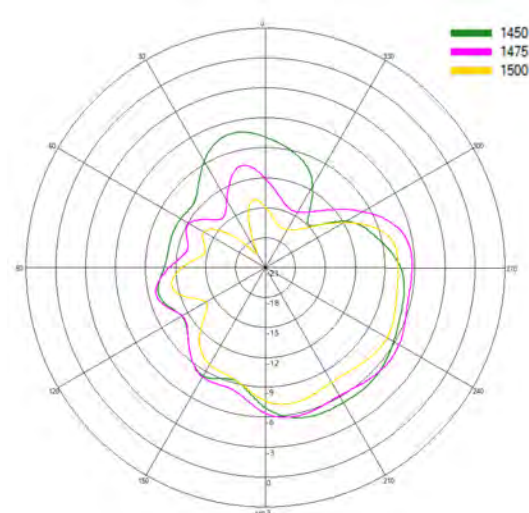
Typical H Plane- Cell C - Patterns- 800-900MHz



Typical 3D Pattern- Cell C - 1475 MHz

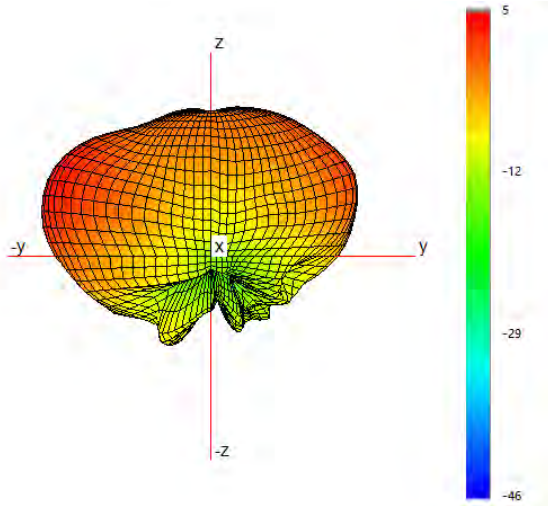


Typical H Plane- Cell C- Patterns- 1450-1500 MHz

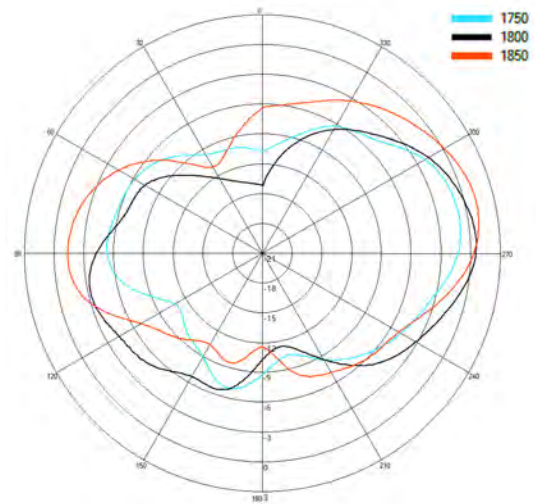


3D Pattern Data on Ground Plane Cell C

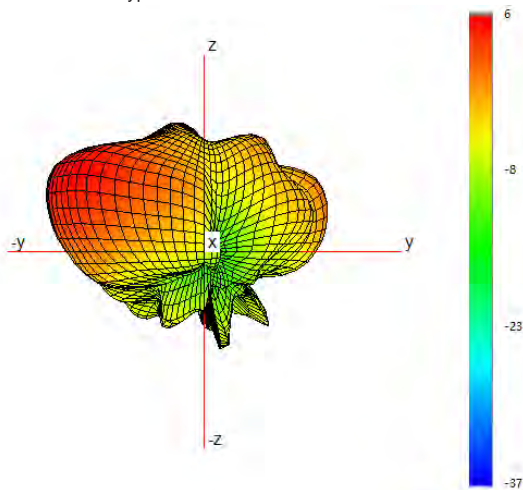
Typical 3D Pattern- Cell C - 1800 MHz



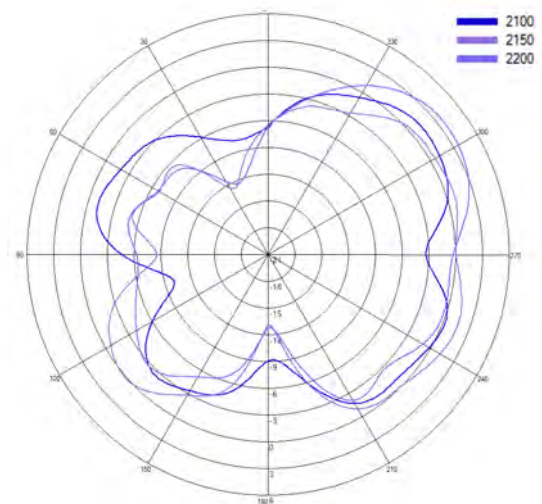
Typical H Plane- Cell C- Patterns- 1750-1850 MHz



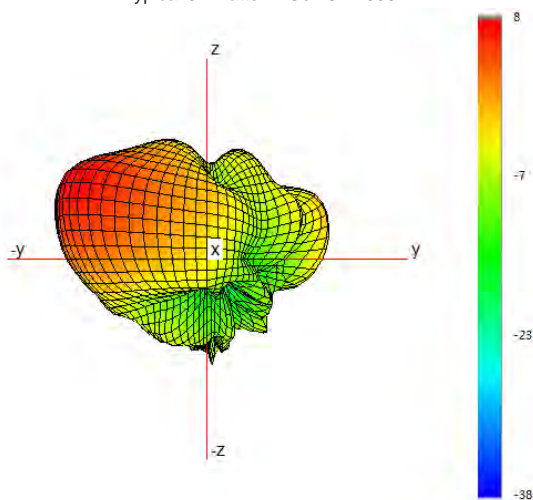
Typical 3D Pattern- Cell C - 2150 MHz



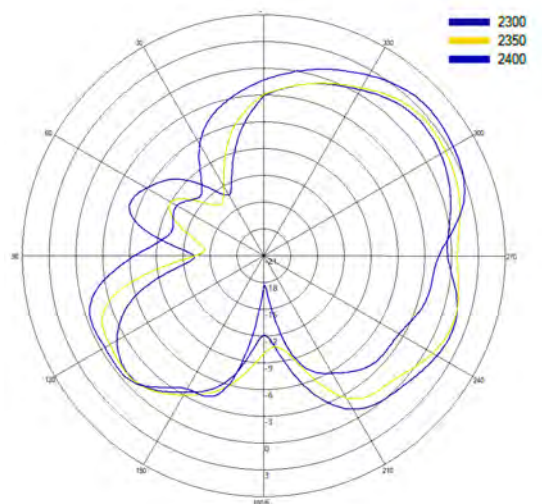
Typical H Plane- Cell C- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell C - 2350 MHz

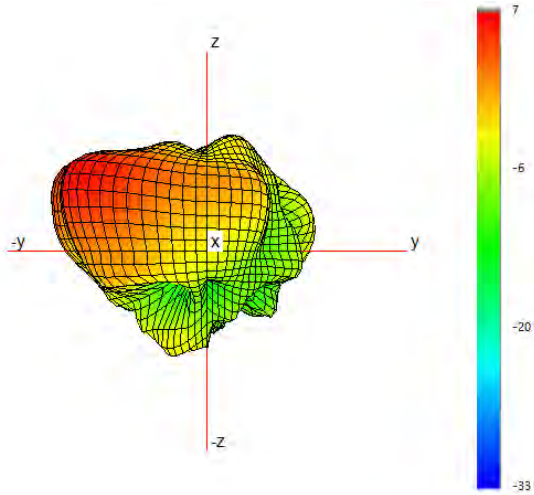


Typical H Plane- Cell C - Patterns- 2300-2400 MHz

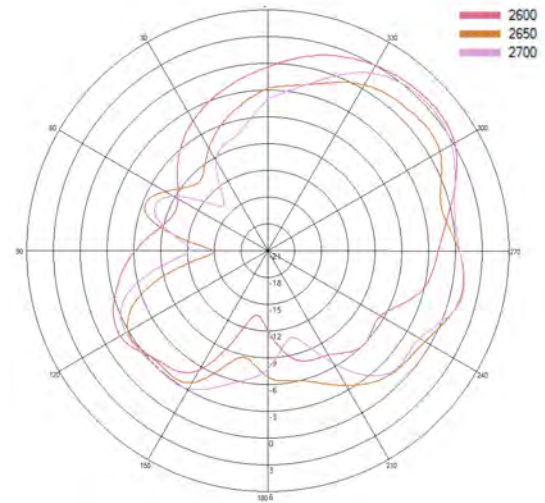


3D Pattern Data on Ground Plane Cell C

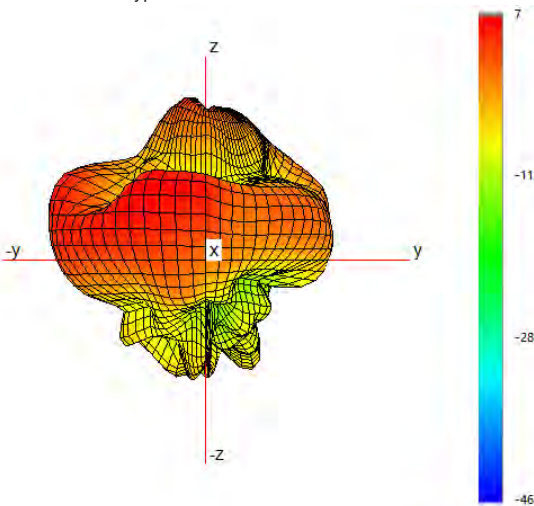
Typical 3D Pattern- Cell C - 2650 MHz



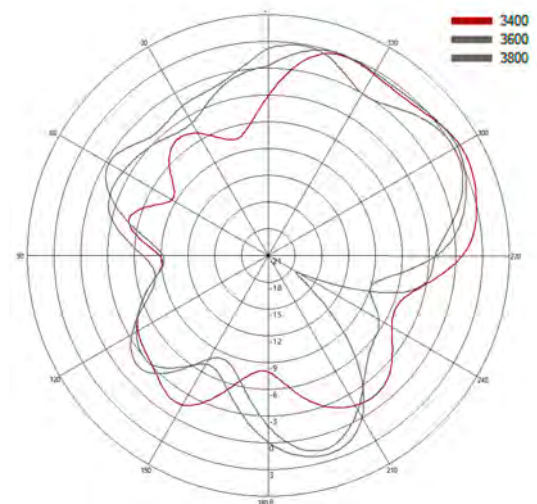
Typical H Plane- Cell C - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell C - 3600 MHz

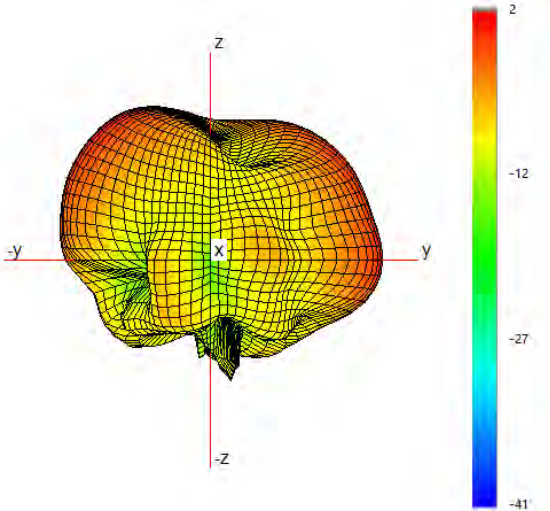


Typical H Plane- Cell C - Patterns- 3400-3800 MHz

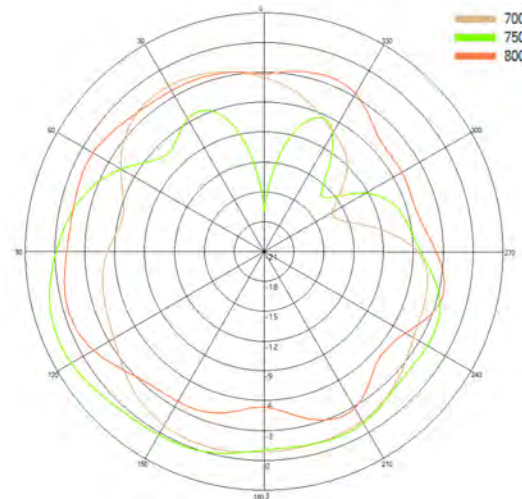


3D Pattern Data on Ground Plane Cell D

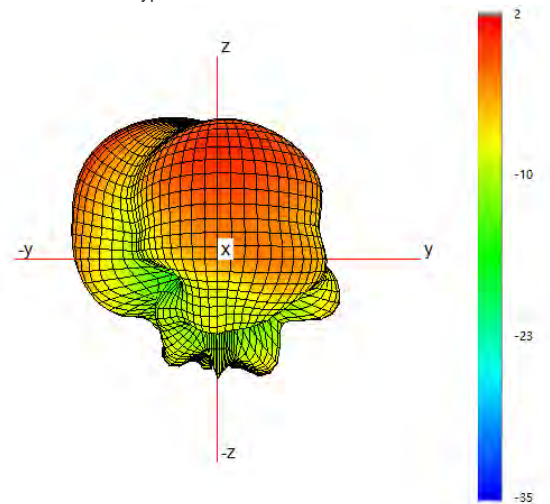
Typical 3D Pattern- Cell D - 750 MHz



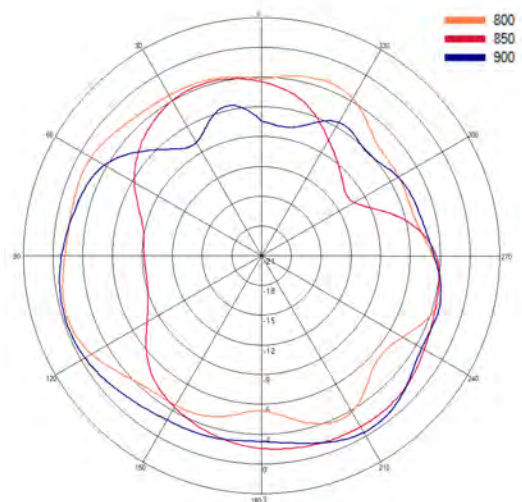
Typical H Plane- Cell D - Patterns- 700-800MHz



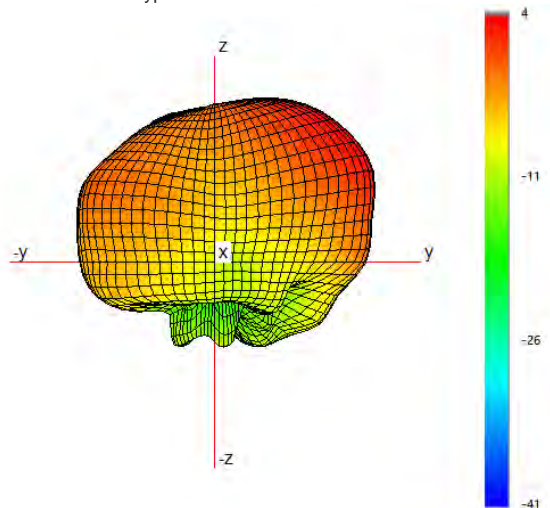
Typical 3D Pattern- Cell D - 850 MHz



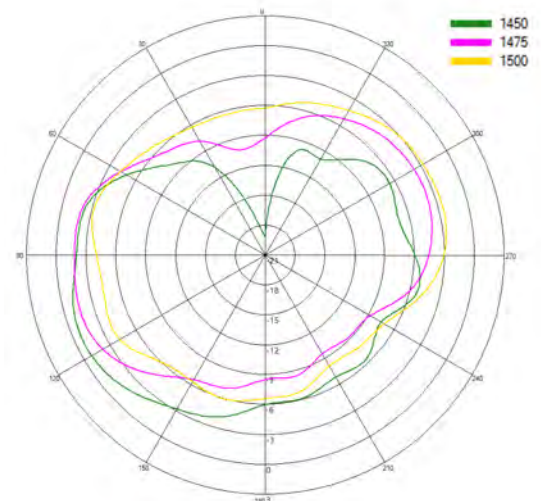
Typical H Plane- Cell D - Patterns- 800-900MHz



Typical 3D Pattern- Cell D - 1475 MHz

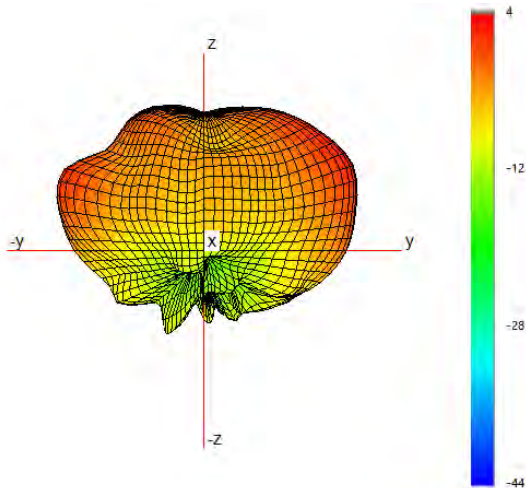


Typical H Plane- Cell D- Patterns- 1450-1500 MHz

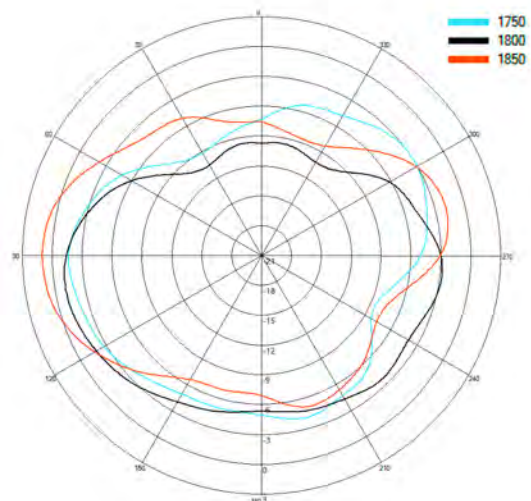


3D Pattern Data on
Ground Plane Cell D

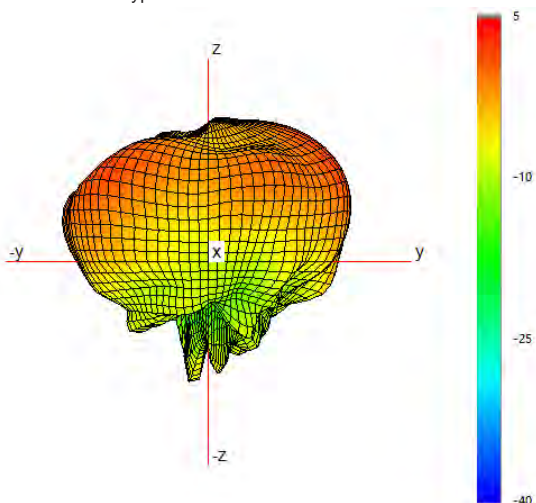
Typical 3D Pattern- Cell D - 1800 MHz



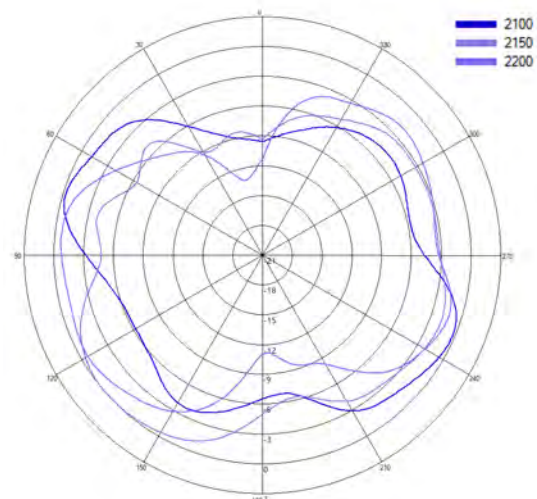
Typical H Plane- Cell D- Patterns- 1750-1850 MHz



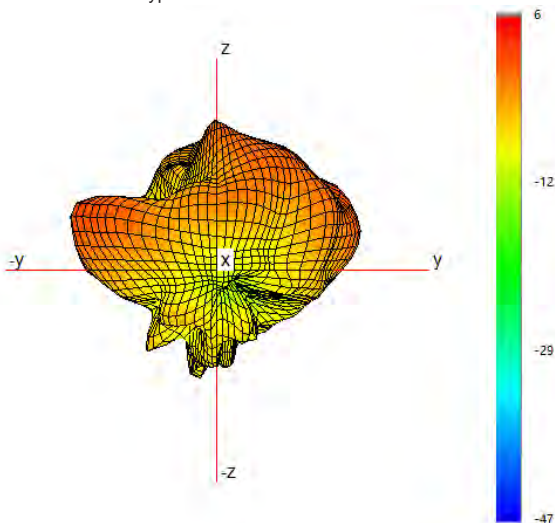
Typical 3D Pattern- Cell D - 2150 MHz



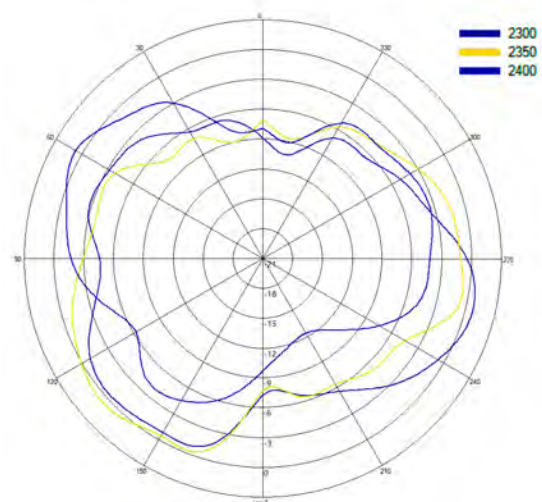
Typical H Plane- Cell D- Patterns- 2100-2200 MHz



Typical 3D Pattern- Cell D - 2350 MHz

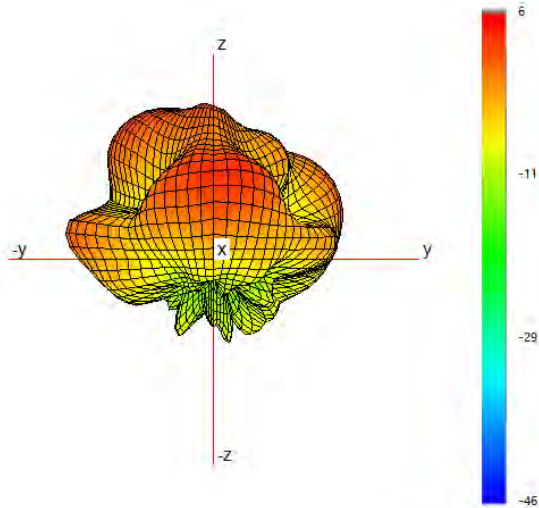


Typical H Plane- Cell D- Patterns- 2300-2400 MHz

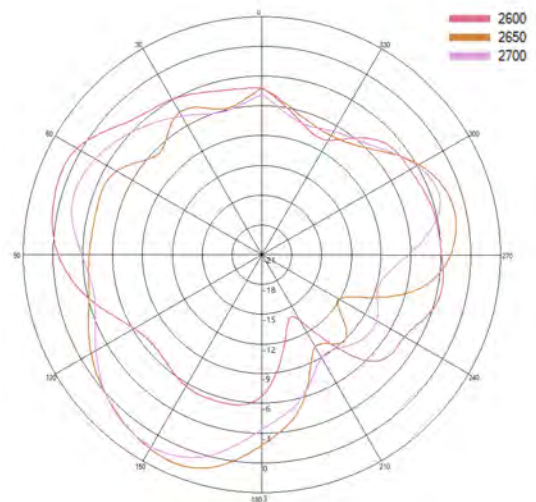


3D Pattern Data on Ground Plane Cell D

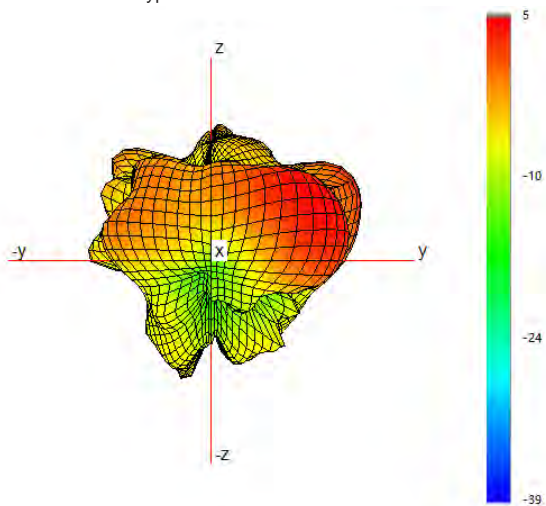
Typical 3D Pattern- Cell D - 2650 MHz



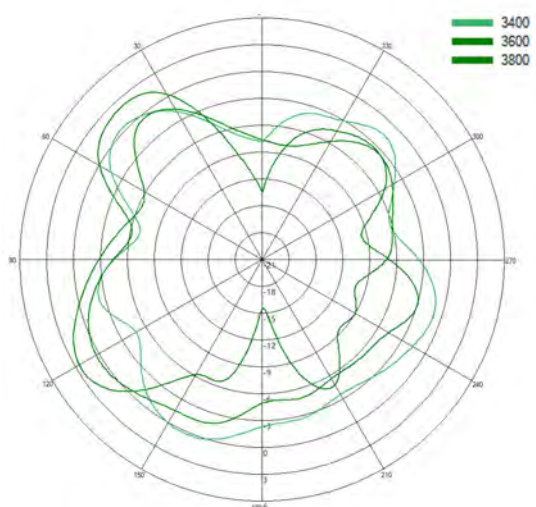
Typical H Plane- Cell D - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell D - 3600 MHz

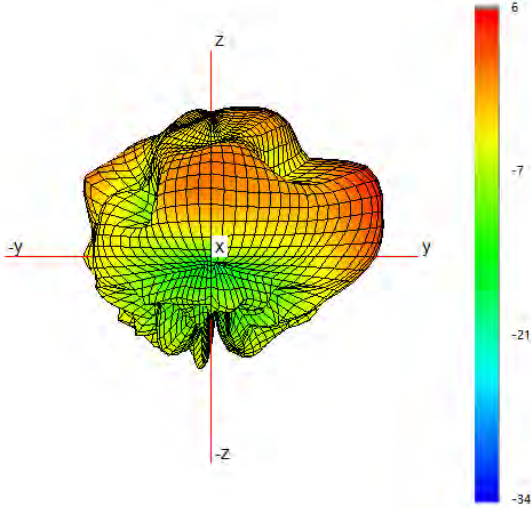


Typical H Plane- Cell D - Patterns- 3400-3800 MHz

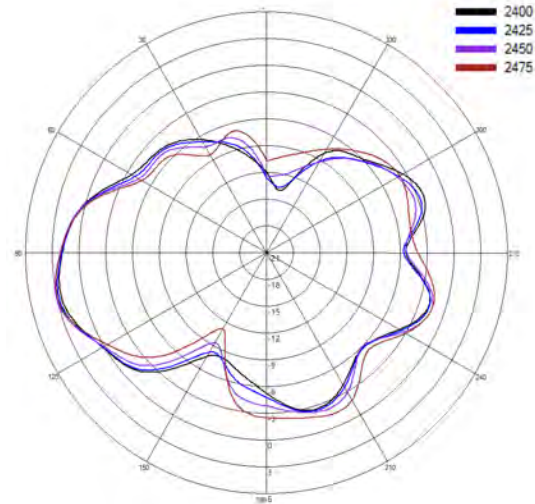


WiFi Pattern-Data on Ground Plane -WiFi -1

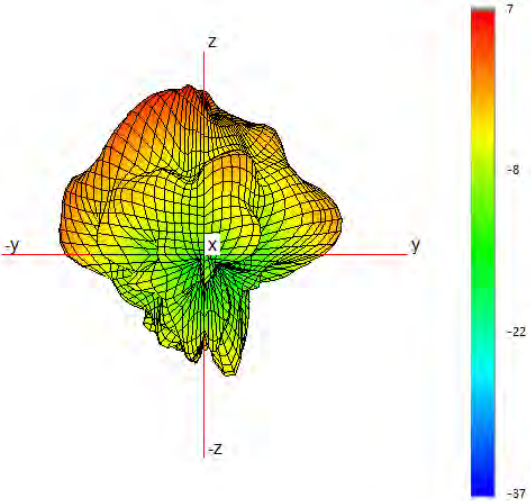
Typical 3D Pattern- WiFi - 1 - 2450 MHz



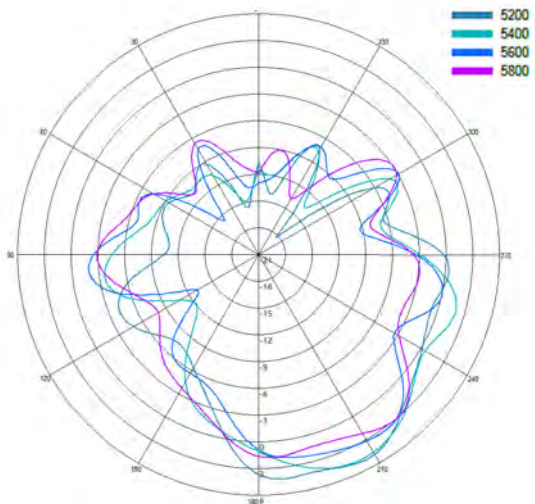
Typical H Plane- WiFi - 1 - Patterns- 2400-2475MHz



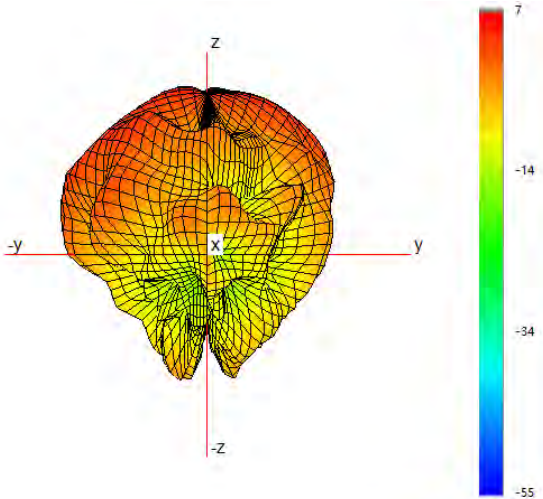
Typical 3D Pattern- WiFi - 1 - 5500 MHz



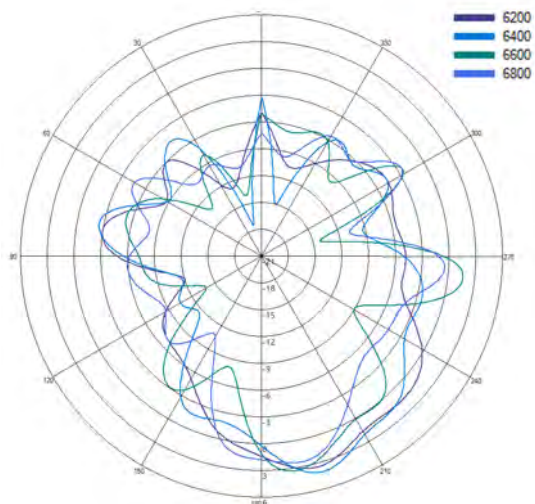
Typical H Plane- WiFi - 1 - Patterns- 5200-5800MHz



Typical 3D Pattern- WiFi - 1 - 6500 MHz

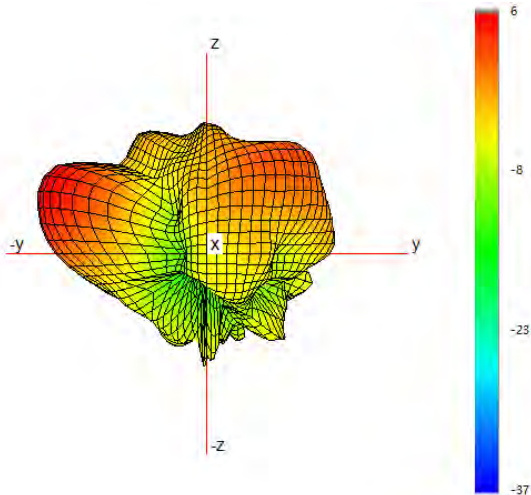


Typical H Plane- WiFi - 1 - Patterns- 6200-6800MHz

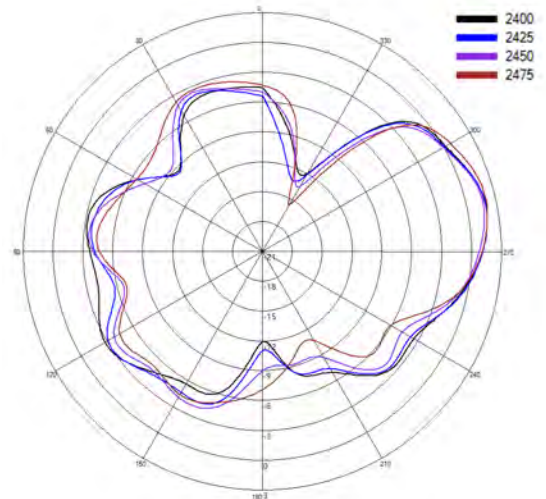


WiFi Pattern-Data on
Ground Plane -WiFi -2

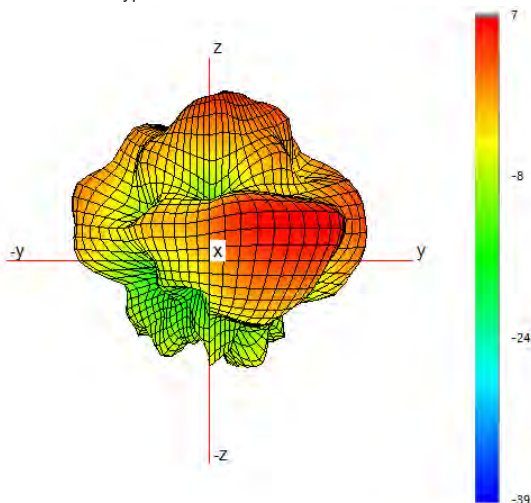
Typical 3D Pattern- WiFi - 2 - 2450 MHz



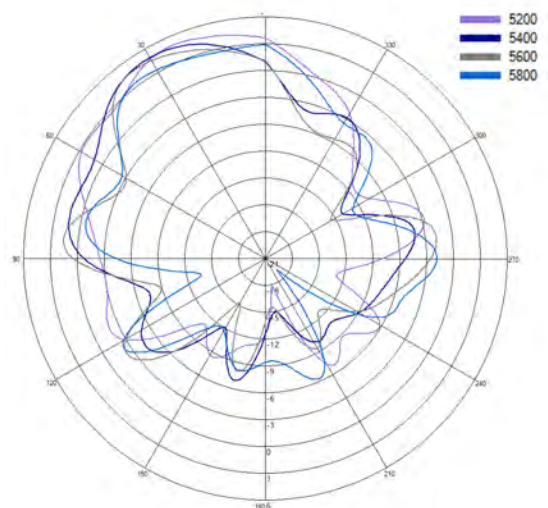
Typical H Plane- WiFi - 2 - Patterns- 2400-2475MHz



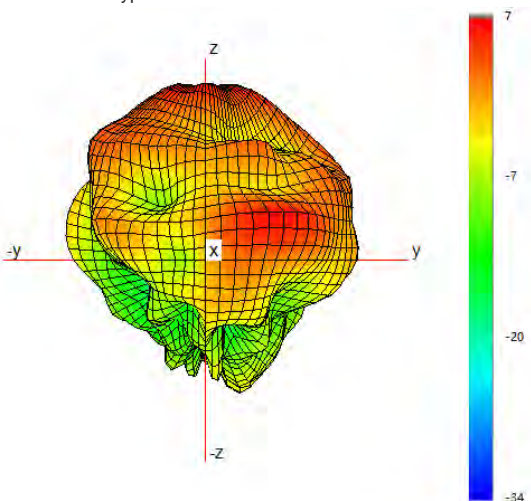
Typical 3D Pattern- WiFi - 2 - 5500 MHz



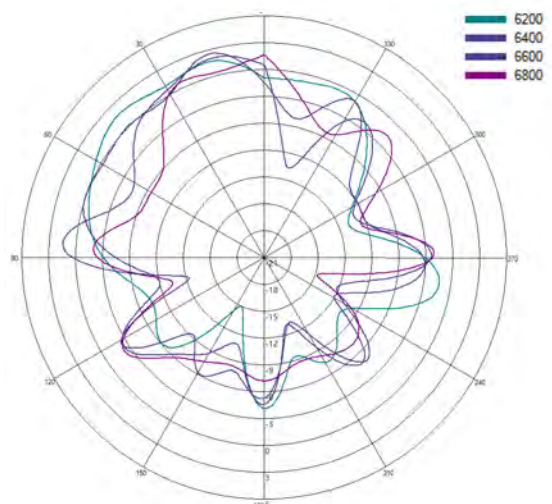
Typical H Plane- WiFi - 2 - Patterns- 5200-5800MHz



Typical 3D Pattern- WiFi - 2 - 6500 MHz

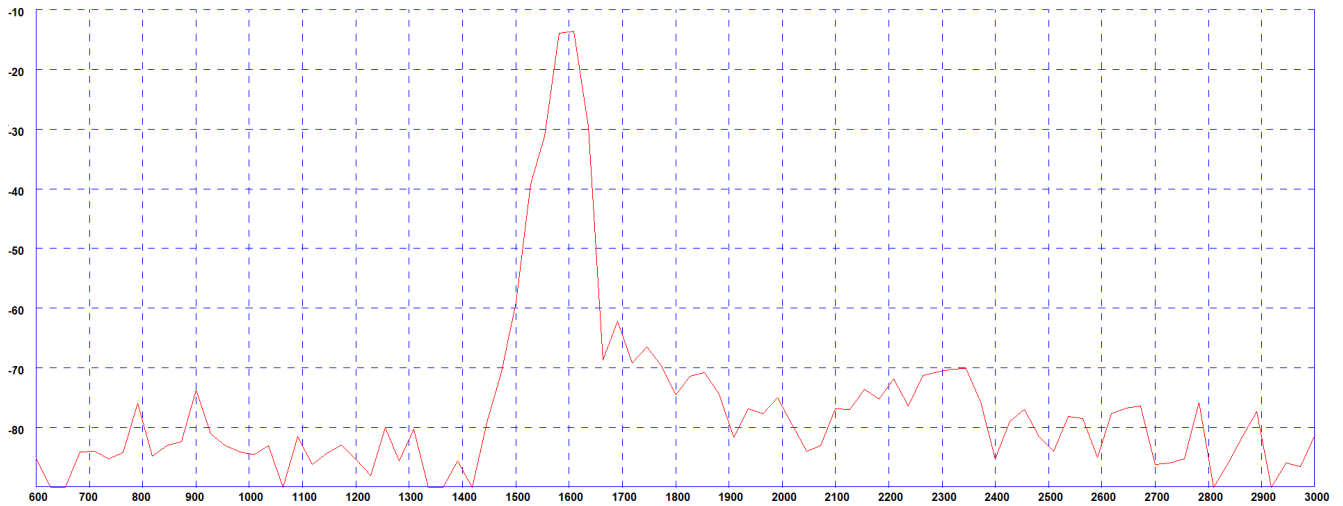


Typical H Plane- WiFi - 2 - Patterns- 6200-6800MHz

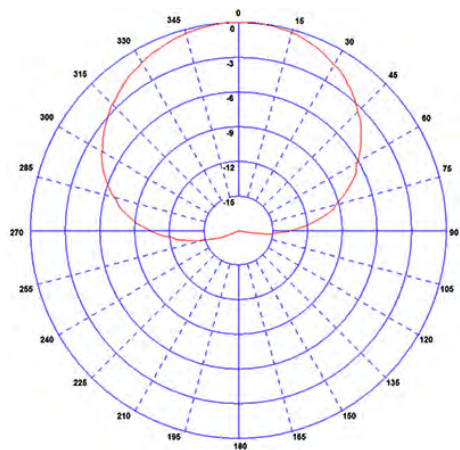


Electrical Data- L1
GPS/GNSS

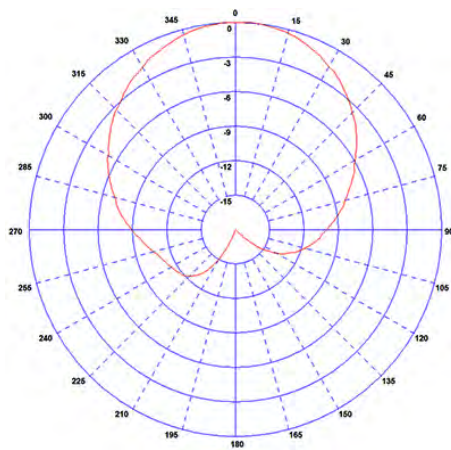
Swept Gain GPS/GNSS



Typical E Plane Pattern - GPS/GNSS 1575 MHz

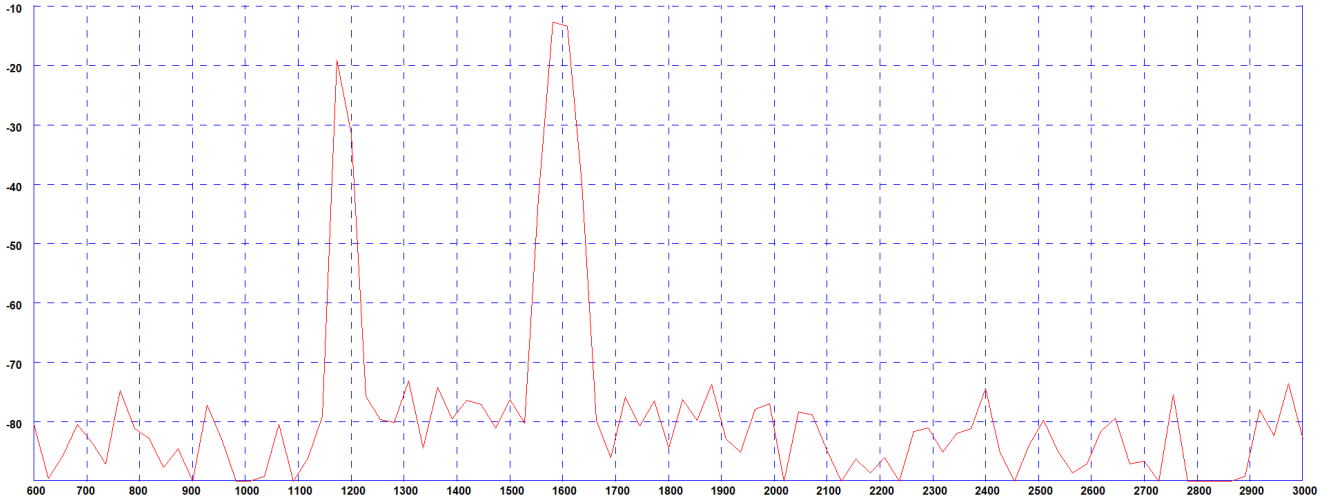


Typical E Plane Pattern - GPS/GNSS 1602 MHz

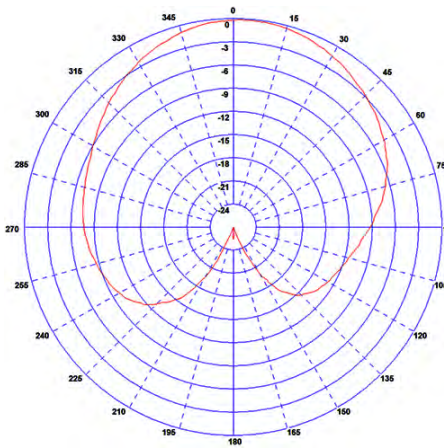


GPS/GNSS Measurements taken on 190x190mm (7.4" x 7.4") ground plane excluding cable loss

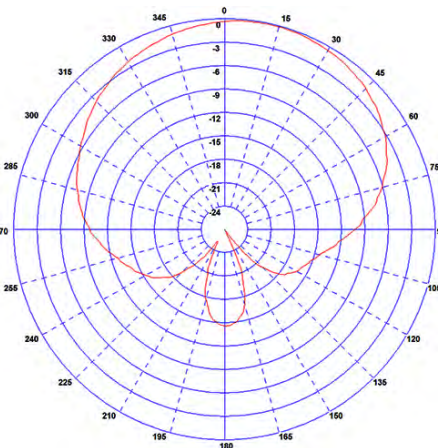
Swept Gain GPS/GNSS



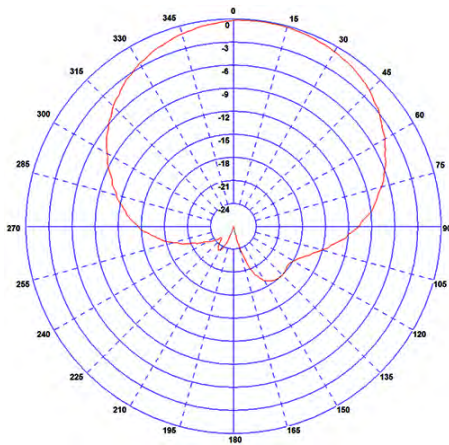
Typical E Plane Pattern - GPS/GNSS 1575 MHz



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