

MiMo 4G/5G Dome Combination Antenna Range

PANORAMA ANTENNAS

L[G]M[X]M[X]-6-60[-24-58]



- Low Profile 2x2 4G/5G MiMo
- Up to 6 x 6 MiMo Dual Band WiFi
- Optional GPS/GNSS Active Antenna 26dB LNA

The L[G]M[X]M[X]-6-60[-24-58] range has been designed to provide 2x2 4G/5G MiMo performance from 617-960/1710-6000MHz in a robust low profile package. The flexible platform allows the main elements to be combined with a number of other functions including GPS/GNSS and up to 6x6 MiMo WiFi 2.4/5.0GHz.

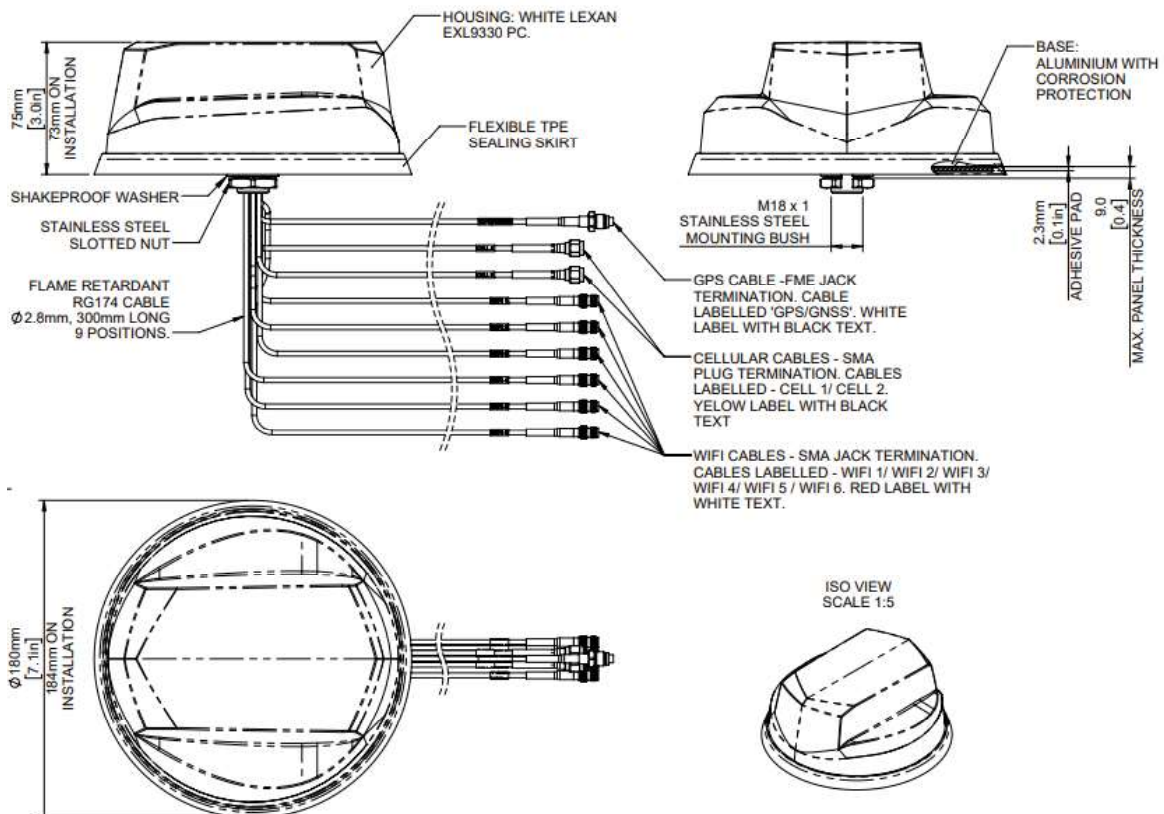
The antenna is designed to be panel mounted and can be fitted on a conductive or non- conductive panel. Supplied with integrated flame retardant RG174 cables (Compliant to UNECE 118.01 and EN45545-2) and a halogen free flame retardant radome the antenna is suitable for many environments and applications.

The LGM variants have an integrated GPS/GNSS module supporting GPS, Glonass, Galileo and Compass with 26dB LNA gain. This GPS module features advanced filtering for LTE B13/14 designed to minimise potential in band interference.

The antenna is available with a black or white radome which meets IK10 for vandal resistance and IP69K for ingress protection.

Technical Drawing

LGMHM-6-60-24-58 Shown



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| Part No. | | LGMHM-6-60-24-58 | LGMHMB-6-60-24-58 | LGMQM-6-60-24-58 | LGMQMB-6-60-24-58 |
|---|------------------------------|------------------------------------|-------------------|------------------|-------------------|
| Electrical Data | | | | | |
| Frequency Range (MHz) | 4G/5G Elements | 2x 617-960 / 1710-6000 | | | |
| | WiFi Elements | 6x 2.4/4.9-6GHz | | 4x 2.4/4.9-6GHz | |
| Peak Gain: Isotropic : All Elements Fed | | 617-960MHz | 5 | | |
| | 4G/5G Elements | 1710-3800MHz | 9 | | |
| | | 4900-6000MHz | 10 | | |
| | WiFi Elements | 2.4GHz | 8 | | |
| | | 4.9-6.0GHz | 10 | | |
| Typical Efficiency | 4G/5G Elements | >70% | | | |
| | WiFi Elements | >80% | | | |
| Isolation | 4G/5G Elements | >12dB | | | |
| | WiFi Elements | >20dB | | | |
| Correlation Co-efficient | 4G/5G Elements | < 0.1 | | | |
| | WiFi Elements | <0.1 | | | |
| Nominal Impedance | 50Ω | | | | |
| GPS/GNSS Data | | | | | |
| Frequency Range (MHz) | 1562-1612 | | | | |
| VSWR | <2.0:1 ± 4MHz | | | | - |
| Gain: LNA | 26dB | | | | |
| Out of band rejection | >40dB (@ > +/- 100MHz f) | | | | |
| Typical Noise Figure | -2.7dB | | | | |
| Notch Filter rejection @787MHz | 23dBm | | | | |
| Operating Voltage | 3 - 5V DC | | | | |
| Typical Current (mA) | 15 | | | | |
| Mechanical Data | | | | | |
| Dimensions (mm) | Height | 75 (3") | | | |
| | Diameter | 180 (7.1") | | | |
| Operating Temp | -40° / +80°C (-40° / +176°F) | | | | |
| Colour | White | Black | White | Black | |
| Ingress Protection | IP69K | | | | |
| Mounting Data | | | | | |
| Mounting type | Panel mount | | | | |
| Max panel thickness (mm) | 7 (0.27") | | | | |
| Mounting hole (mm) | 19 (3/4") | | | | |
| Cable Data | | | | | |
| All Cables | Type | RG174 -FR (UN ECE118.01 Compliant) | | | |
| | Diameter (mm) | 2.8 (0.1") | | | |
| | Length (m) | 0.3 (1') | | | |
| Terminations | | | | | |
| 4G/5G | SMA (m) | | | | |
| WiFi | SMA (f) | | | | |
| GPS/GNSS | FME (f) | | | | |

MiMo 4G/5G Dome Combination Antenna Range

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L[G]M[X]M[X]-6-60[-24-58]

| Part No. | | LGMTM-6-60-24-58 | LGMTMB-6-60-24-58 | LGMDM-6-60-24-58 | LGMDMB-6-60-24-58 |
|---|------------------------------|------------------------------------|-------------------|------------------|-------------------|
| Electrical Data | | | | | |
| Frequency Range (MHz) | 4G/5G Elements | 2x 617-960 / 1710-6000 | | | |
| | WiFi Elements | 3x 2.4/4.9-6GHz | | 2x 2.4/4.9-6GHz | |
| Peak Gain: Isotropic : All Elements Fed | | 67-960MHz | 5 | | |
| | 4G/5G Elements | 1710-3800MHz | 9 | | |
| | | 4900-6000MHz | 10 | | |
| | WiFi Elements | 2.4GHz | 8 | | |
| | | 4.9-6.0GHz | 10 | | |
| Typical Efficiency | 4G/5G Elements | >70% | | | |
| | WiFi Elements | >80% | | | |
| Isolation | 4G/5G Elements | >12dB | | | |
| | WiFi Elements | >20dB | | | |
| Correlation Co-efficient | 4G/5G Elements | < 0.1 | | | |
| | WiFi Elements | <0.1 | | | |
| Nominal Impedance | 50Ω | | | | |
| GPS/GNSS Data | | | | | |
| Frequency Range (MHz) | 1562-1612 | | | | |
| VSWR | <2.0:1 ± 4MHz | | | | |
| Gain: LNA | 26dB | | | | |
| Out of band rejection | >40dB (@ > +/- 100MHz f) | | | | |
| Typical Noise Figure | -2.7dB | | | | |
| Notch Filter rejection @787MHz | 23dBm | | | | |
| Operating Voltage | 3 - 5V DC | | | | |
| Typical Current (mA) | 15 | | | | |
| Mechanical Data | | | | | |
| Dimensions | Height | 75 (3") | | | |
| | Diameter | 180 (7.1") | | | |
| Operating Temp | -40° / +80°C (-40° / +176°F) | | | | |
| Colour | White | Black | White | Black | |
| Ingress Protection | IP69K | | | | |
| Mounting Data | | | | | |
| Mounting type | Panel mount | | | | |
| Max panel thickness (mm) | 7 (0.27") | | | | |
| Mounting hole (mm) | 19 (3/4") | | | | |
| Cable Data | | | | | |
| All Cables | Type | RG174 -FR (UN ECE118.01 Compliant) | | | |
| | Diameter (mm) | 2.8 (0.1") | | | |
| | Length (m) | 0.3 (1') | | | |
| Terminations | | | | | |
| 4G/5G | SMA (m) | | | | |
| WiFi | SMA (f) | | | | |
| GPS/GNSS | FME (f) | | | | |

MiMo 4G/5G Dome Combination Antenna Range

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| Part No. | | LGMM-6-60 | LGMMB-6-60 | LPMM-6-60 | LPMMB-6-60 |
|---|----------------|------------------------------------|------------|-----------|------------|
| Electrical Data | | | | | |
| Frequency Range (MHz) | 4G/5G Elements | 2x 617-960 / 1710-6000 | | | |
| Peak Gain: Isotropic : All Elements Fed | 4G/5G Elements | 617-960MHz | 5 | | |
| | | 1710-3800MHz | 9 | | |
| | | 4900-6000MHz | 10 | | |
| Typical Efficiency | 4G/5G Elements | >70% | | | |
| Isolation | 4G/5G Elements | >12dB | | | |
| Correlation Co-efficient | 4G/5G Elements | < 0.1 | | | |
| Nominal Impedance | | 50Ω | | | |
| GPS/GNSS Data | | | | | |
| Frequency Range (MHz) | | 1562-1612 | | | - |
| VSWR | | <2.0:1 ± 4MHz | | | - |
| Gain: LNA | | 26dB | | | - |
| Out of band rejection | | >40dB (@ > +/- 100MHz f) | | | - |
| Typical Noise Figure | | -2.7dB | | | - |
| Notch Filter rejection @787MHz | | 23dBm | | | - |
| Operating Voltage | | 3 - 5V DC | | | - |
| Typical Current (mA) | | 15 | | | - |
| Mechanical Data | | | | | |
| Dimensions | Height | 75 (3") | | | |
| | Diameter | 180 (7.1") | | | |
| Operating Temp | | -40°/ +80°C (-40° / +176°F) | | | |
| Colour | | White | Black | White | Black |
| Ingress Protection | | IP69K | | | |
| Mounting Data | | | | | |
| Mounting type | | Panel mount | | | |
| Max panel thickness (mm) | | 7 (0.27") | | | |
| Mounting hole (mm) | | 19 (3/4") | | | |
| Cable Data | | | | | |
| All Cables | Type | RG174 -FR (UN ECE118.01 Compliant) | | | |
| | Diameter (mm) | 2.8 (0.1") | | | |
| | Length (m) | 0.3 (1') | | | |
| Terminations | | | | | |
| 4G/5G | | SMA (m) | | | |
| GPS/GNSS | | FME (f) | | | - |

* Typical Isolation and VSWR stated as measured with 0.5m (1.5') of cable

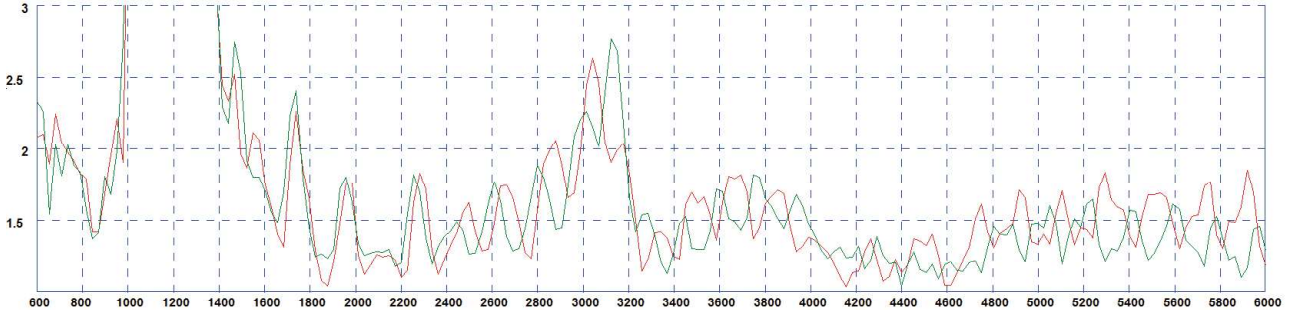
† Peak gain simulated with all elements fed on 600x600mm ground plane excluding cable loss

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Electrical Data

Typical VSWR - 4G/5G Elements*



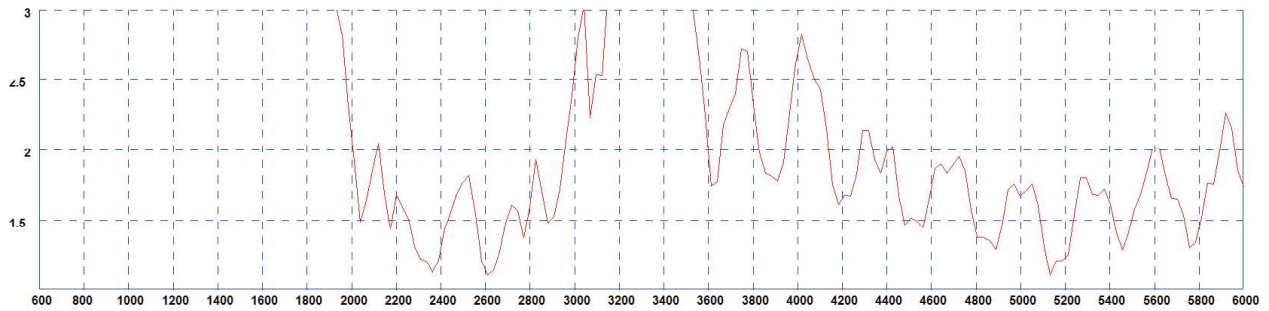
* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

Typical Isolation - 4G/5G Elements*



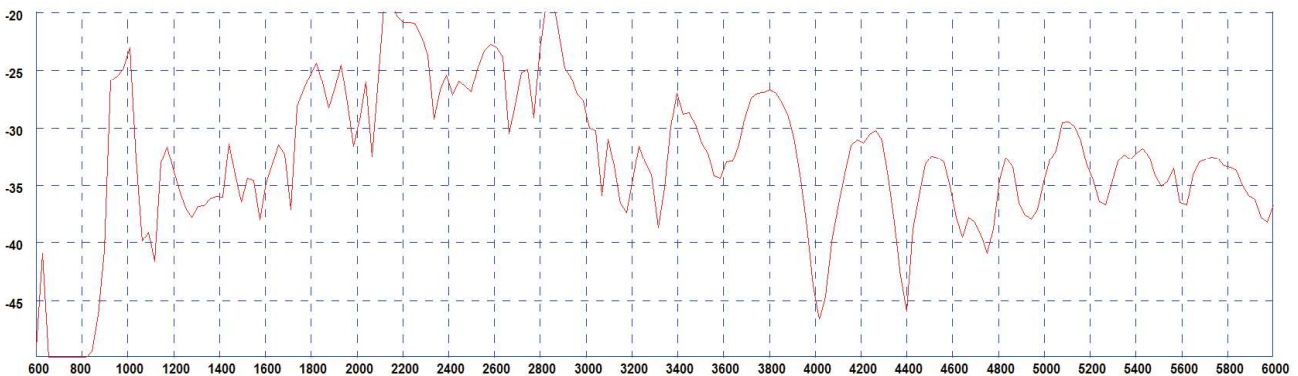
* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

Typical VSWR - WiFi Elements*



* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

Typical Isolation - WiFi Elements*



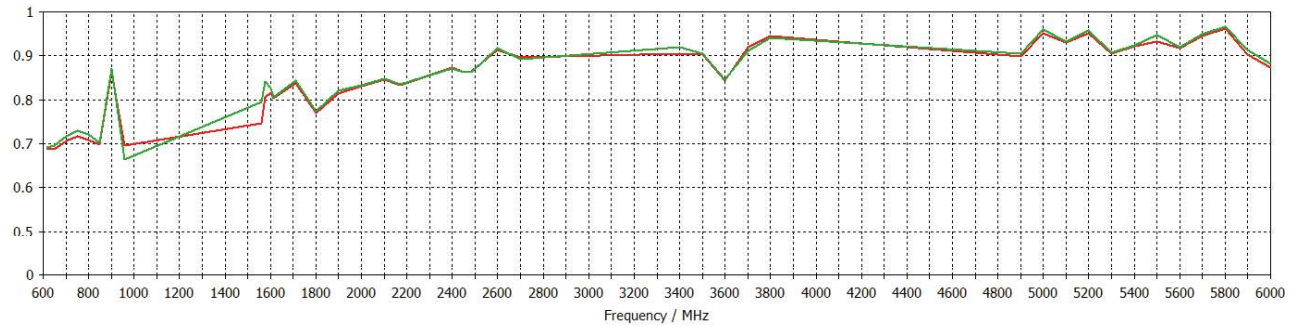
* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

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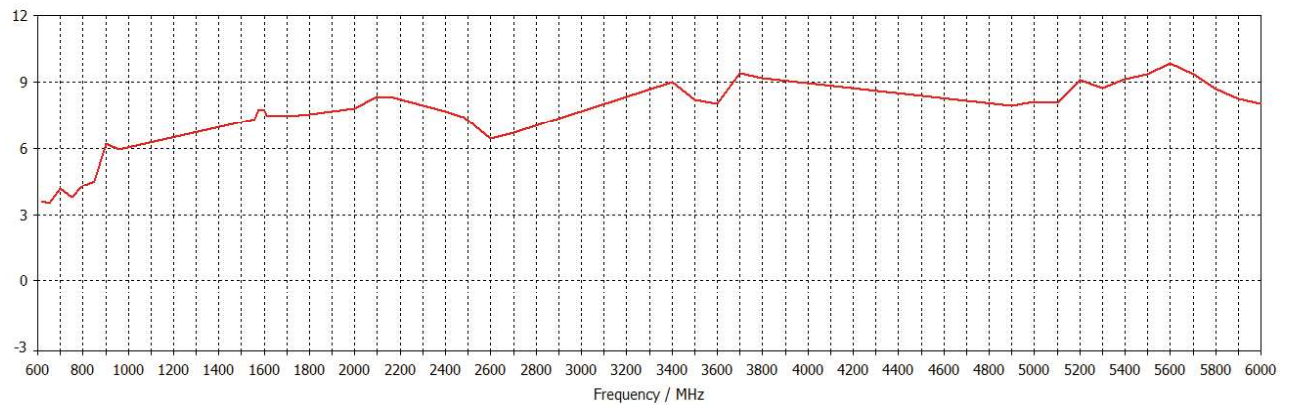
L[G]M[X]M[X]-6-60[-24-58]

Typical Efficiency- 4G/5G Elements*



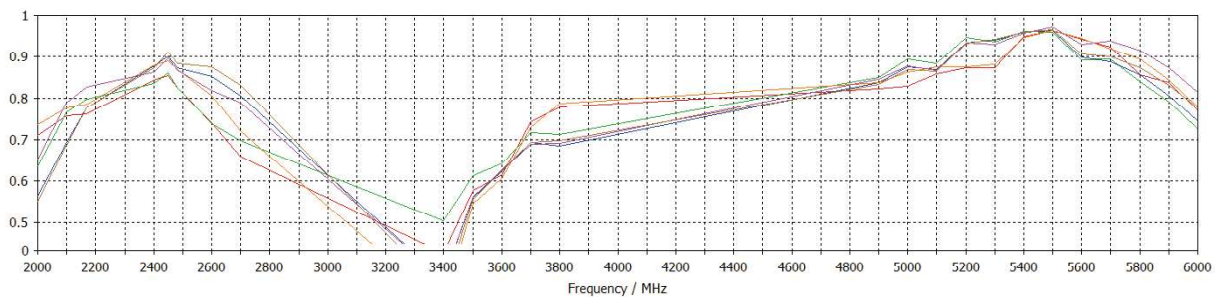
* Efficiency modelled with CST Microwave Studio and ignores cable losses

Typical Peak Gain - 4G/5G Elements*



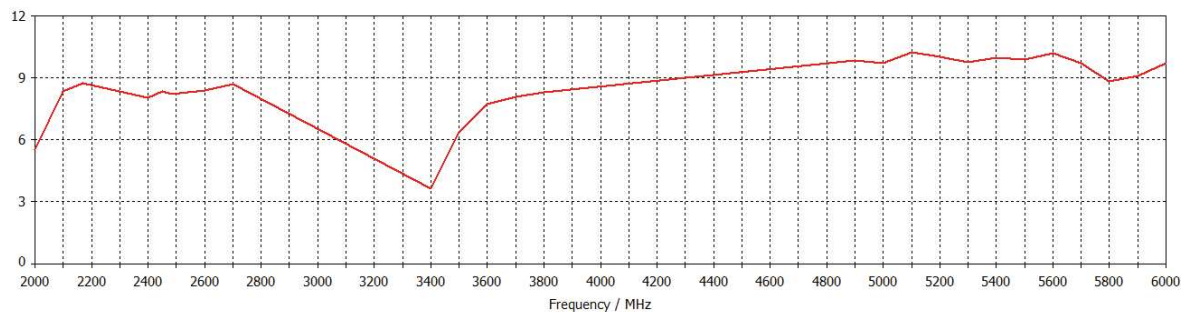
*Swept peak gain modelled with all elements fed in CST Microwave Studio on a 600x600mm (2'x2') ground plane excluding cable loss

Typical Efficiency - WiFi Elements*



* Efficiency modelled with CST Microwave Studio and ignores cable losses

Typical Swept Peak Gain - WiFi Elements*



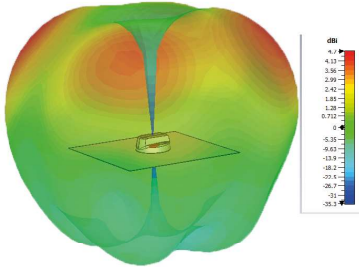
*Swept peak gain modelled with all elements fed in CST Microwave Studio on a 600x600mm (2'x2') ground plane excluding cable loss

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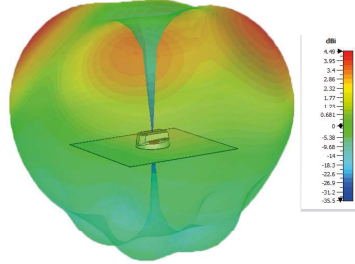
L[G]M[X]M[X]-6-60[24-58]

4G/5G Pattern Data

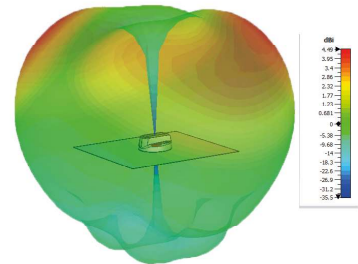
Typical 3D Pattern - 4G/5G Elements 617MHz



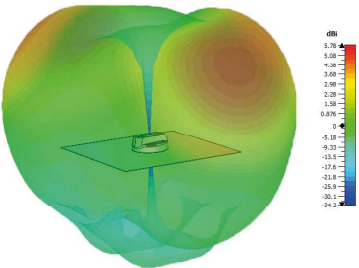
Typical 3D Pattern - 4G/5G Elements 700MHz



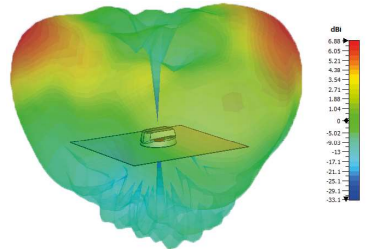
Typical 3D Pattern - 4G/5G Elements 800MHz



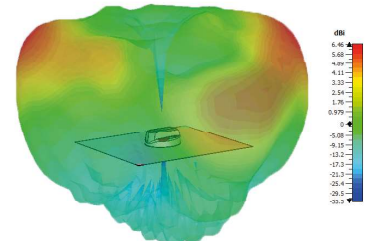
Typical 3D Pattern - 4G/5G Elements 900MHz



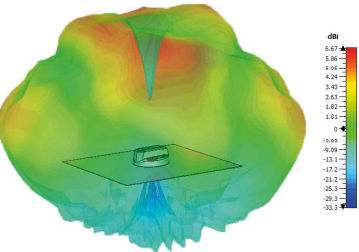
Typical 3D Pattern - 4G/5G Elements 1800MHz



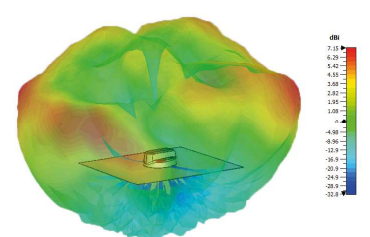
Typical 3D Pattern - 4G/5G Elements 2000MHz



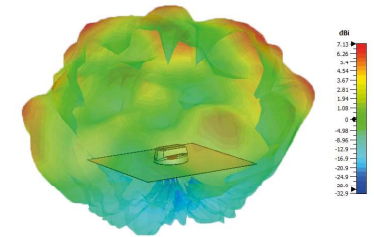
Typical 3D Pattern - 4G/5G Elements 2600MHz



Typical 3D Pattern - 4G/5G Elements 3600MHz

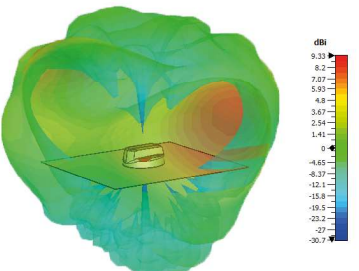


Typical 3D Pattern - 4G/5G Elements 5400MHz

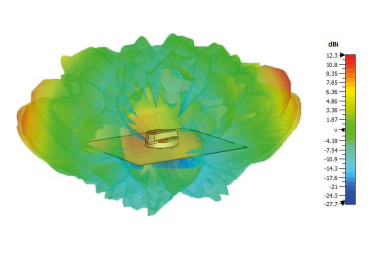


WiFi Pattern Data

Typical 3D Pattern - WiFi Elements 2400MHz



Typical 3D Pattern - WiFi Elements 5400MHz



*Patterns are LGMHM-6-60-24-58 modelled in CST Microwave Studio with all elements of each type fed.