

MiMo 4G/5G Dome Combination Antenna Range

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

PANORAMA ANTENNAS



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.

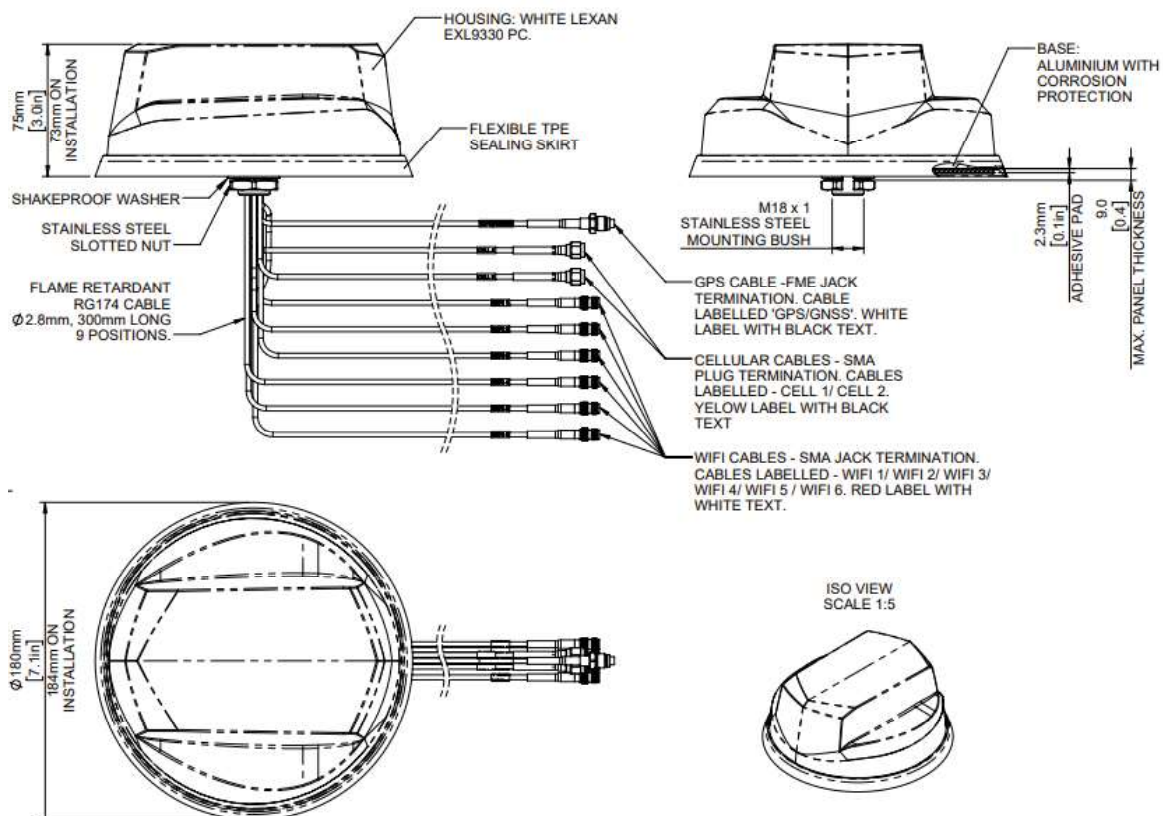
The antenna is designed to be panel mounted and can be fitted on a conductive or non- conductive panel. Supplied with integrated flame retardant RG174 cables (Compliant to UNECE 118.01 and EN45545-2) and a halogen free flame retardant radome the antenna is suitable for many environments and applications.

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	4G/5G Elements	617-960MHz	5					
		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						
Typcal 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	4G/5G Elements	67-960MHz		5	
		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			
Typcal 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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L[G]M[X]M[X]-6-60[-24-58]

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		617-960MHz	5		
	4G/5G Elements	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		-	
Typcal 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

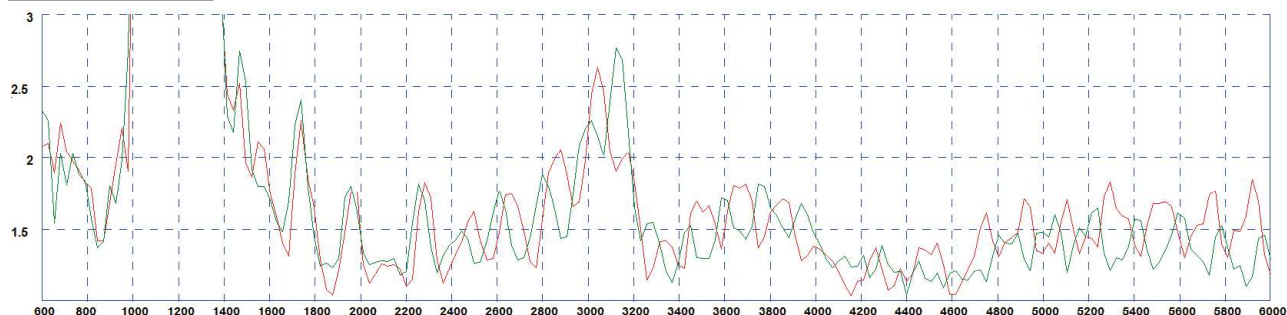
MiMo 4G/5G Dome Combination Antenna Range

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Electrical Data

Typical VSWR - 4G/5G Elements*



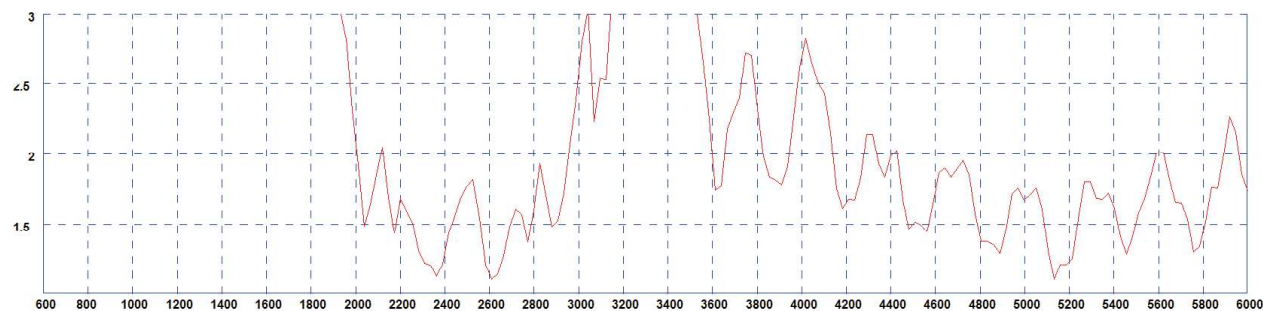
* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

Typical Isolation - 4G/5G Elements*



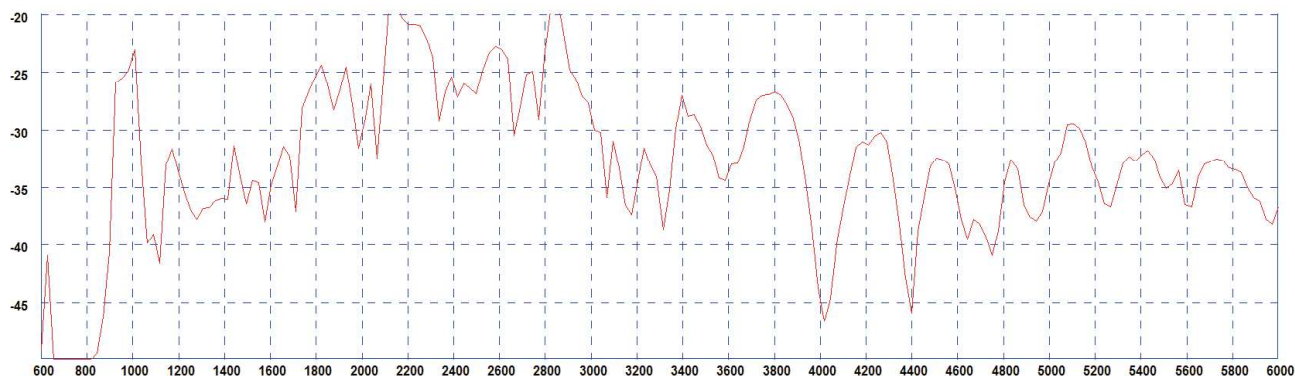
* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

Typical VSWR - WiFi Elements*



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

Typical Isolation - WiFi Elements*



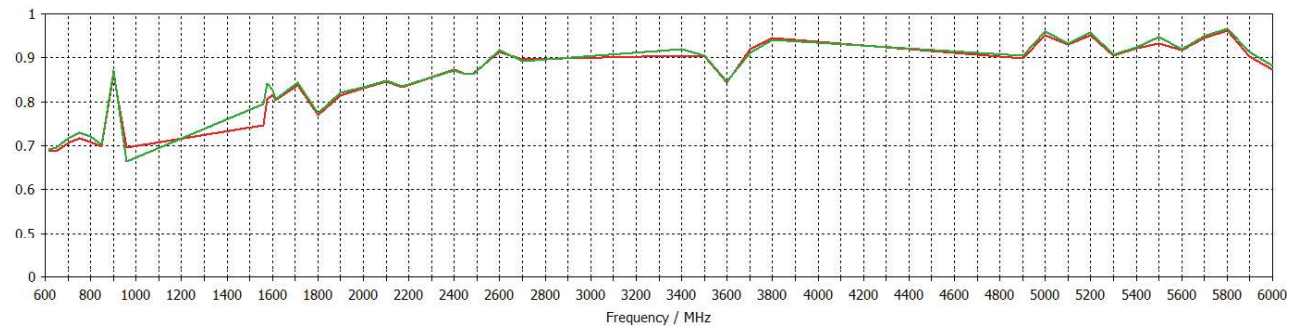
* measured with 0.5m (1.5') of RG174 cable on a 600x600mm (2'x2') groundplane

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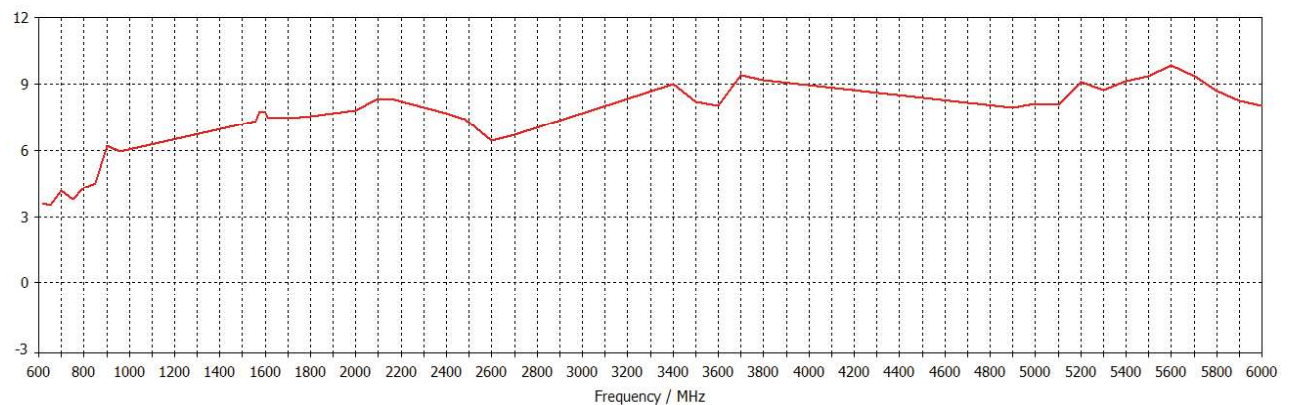
L[G]M[X]M[X]-6-60[-24-58]

Typical Efficiency- 4G/5G Elements*



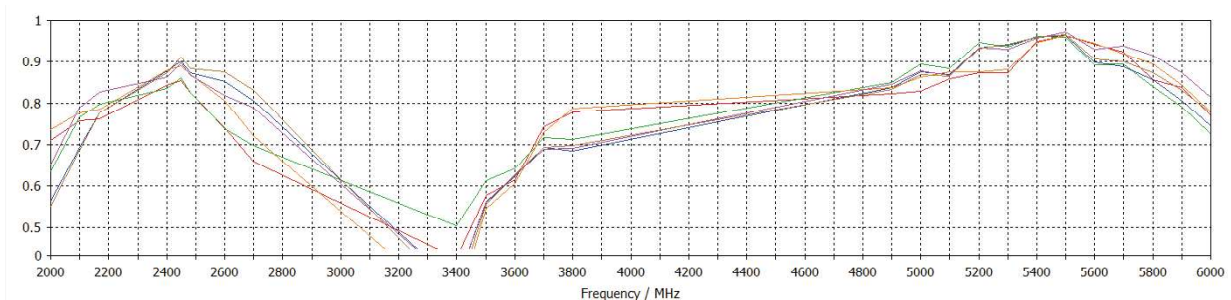
* Efficiency modelled with CST Microwave Studio and ignores cable losses

Typical Peak Gain - 4G/5G Elements*



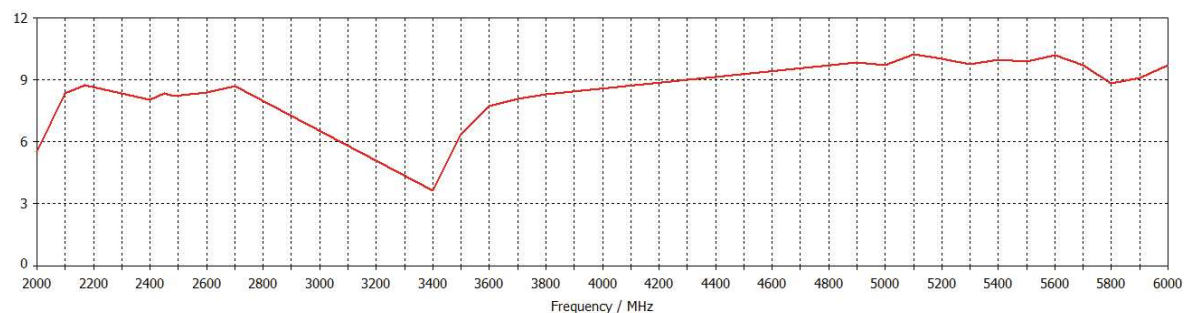
*Swept peak gain modelled with all elements fed in CST Microwave Studio on a 600x600mm (2'x2') ground plane excluding cable loss

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

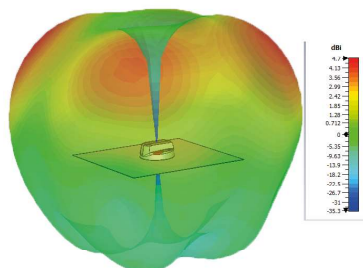
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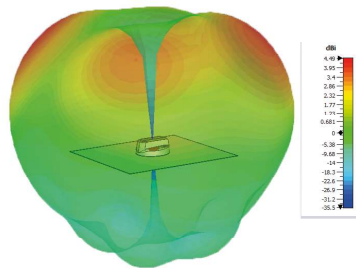
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4G/5G Pattern Data

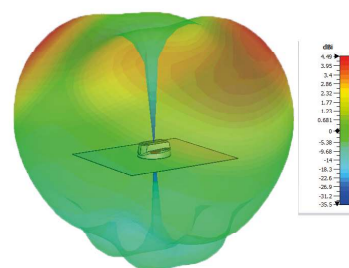
Typical 3D Pattern - 4G/5G Elements 617MHz



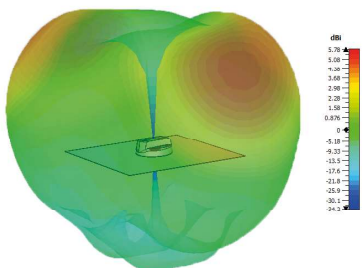
Typical 3D Pattern - 4G/5G Elements 700MHz



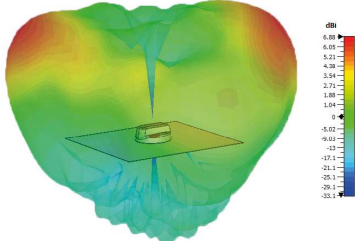
Typical 3D Pattern - 4G/5G Elements 800MHz



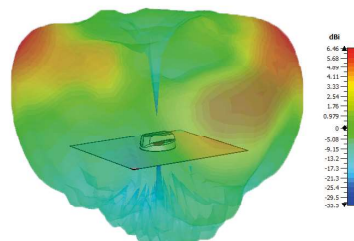
Typical 3D Pattern - 4G/5G Elements 900MHz



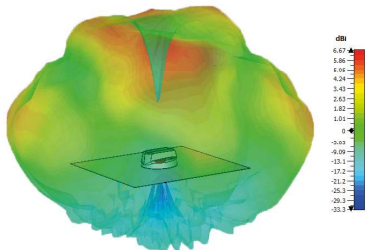
Typical 3D Pattern - 4G/5G Elements 1800MHz



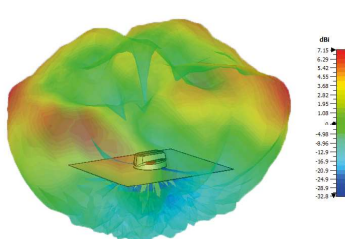
Typical 3D Pattern - 4G/5G Elements 2000MHz



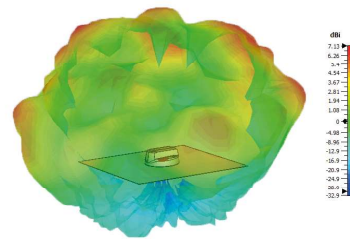
Typical 3D Pattern - 4G/5G Elements 2600MHz



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

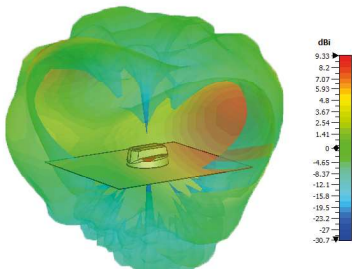


Typical 3D Pattern - 4G/5G Elements 5400MHz

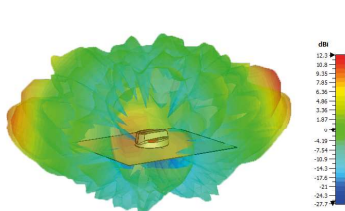


WiFi Pattern Data

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.

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