

4G/5G Low Profile Antenna

LP-IN2830

PANORAMA ANTENNAS



- Cost effective 2G/3G/4G/5G antenna solution
- Designed for bracket or cabinet/enclosure installation
- Integral 1m (3') double shielded coaxial cable
- IP68 rated

LP-IN2830 is an omni-directional broad band antenna range covering 617-960/1427-6000MHz which has been specially adapted for use in hostile, frequently flooded environments for applications like sewer monitoring and water metering.

The antenna is designed to be wall, mast or panel mounted either using a bracket (not supplied) or on a device / enclosure. The exposed metal parts of the antenna body are 316 stainless steel making the antenna very resistant to corrosion.

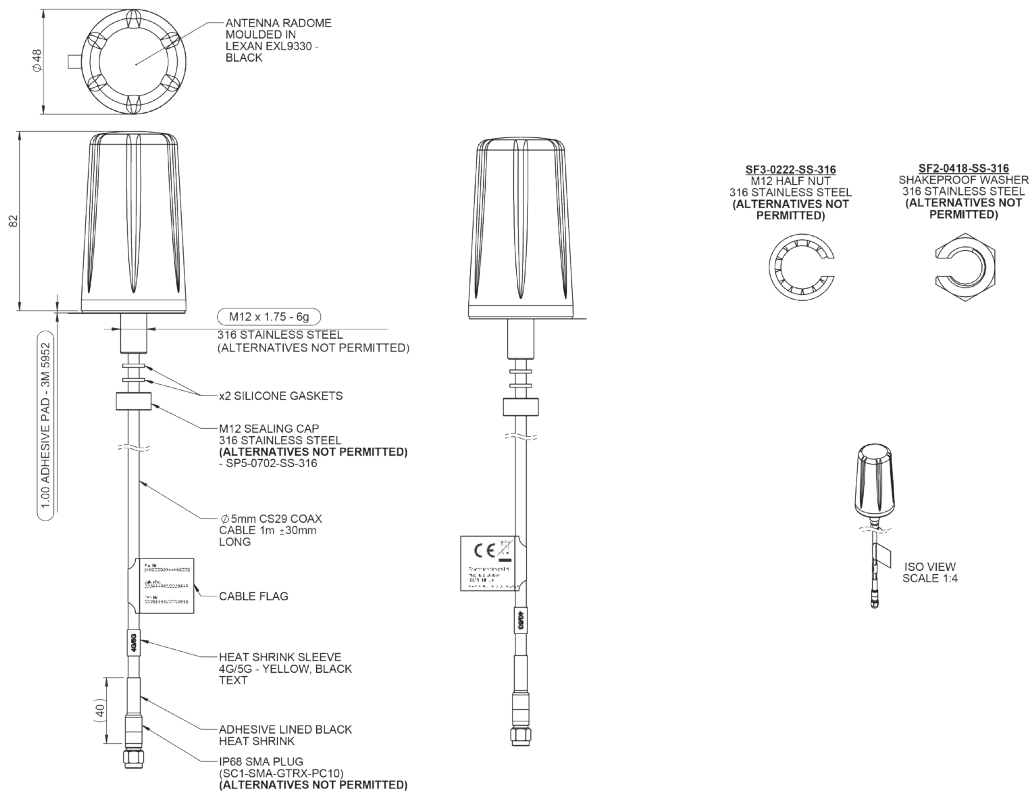
The omni-directional radiation pattern allows easy placement of the antenna in any position, without requiring directional alignment.

The LP-IN2830 antenna is supplied with an integral ultra-low loss FR CS29 coaxial cable, of various lengths, fitted a special SMA plug which forms a seal preventing water wicking up the cable into the antenna housing during submersion.

This antenna is protected to IP68 even when mounted on a bracket provided that the SMA plug is properly connected.

Technical Drawing

LP-IN2830 Shown



4G/5G Low Profile Antenna

LP-IN2830

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Product Data

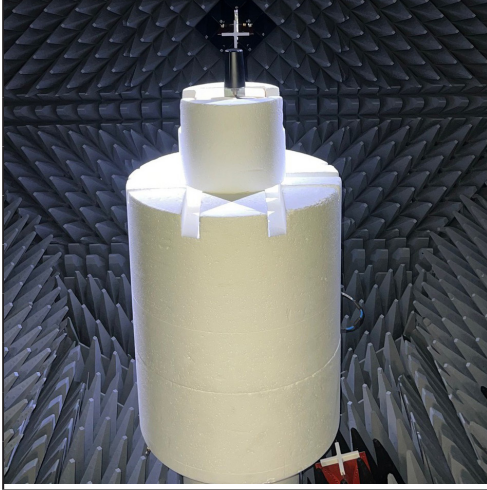
Part No.		LP-IN2830
Electrical Data		
Frequency Range (MHz)		617-960 / 1427-6000
Operational Band		2G / 3G / 4G / 5G
Typical VSWR*		<3:1
Peak Gain* (dBi)	617-960MHz	2.8
	1427-2700MHz	3.6
	3300-6000MHz	5.5
Polarisation		Vertical
Pattern		Omni-directional
Impedance		50Ω
Max Input Power (W)		30
Mechanical Data		
Dimensions	Height mounted	82mm (3.2")
	Diameter	48mm (1.89")
Operating Temp (°C)		-40° / +85°C (-40° / 185°F)
Material		Lexan EXL 9330, 316 Stainless Steel
Material Approvals		Radome ASA Material - UL 746C F1, UL 94-V0
Colour		Black
Ingress Protection		IP68
Mounting Data		
Fixing		Panel mount
Mounting Hole Diameter		12 mm (0.5")
Cable Data		
Type		FR CS29
Diameter		5mm (0.2")
Length		1m (3.3')
Termination		IP68 SMA Plug

* Typical VSWR and peak gain measured in free space on bracket with 0.5 m (1.6') of CS29 cable

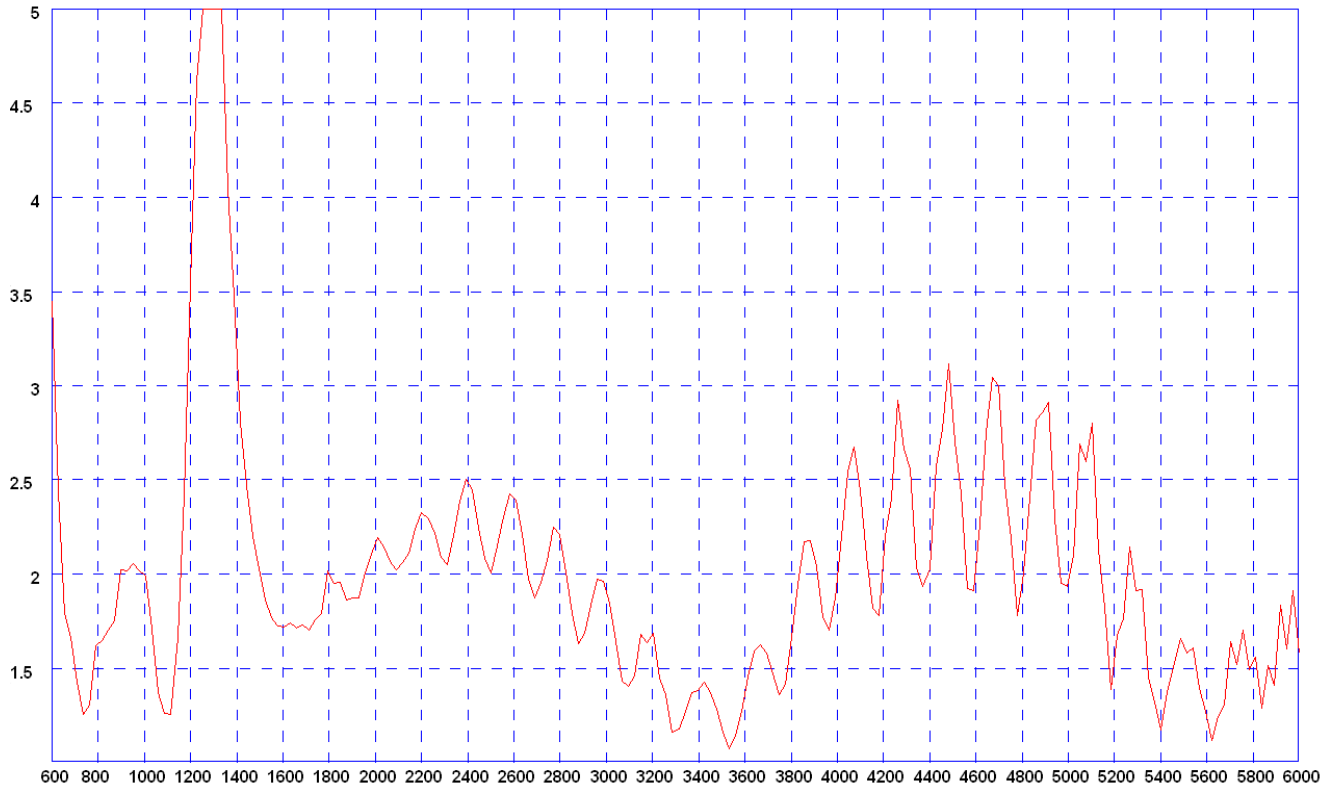
4G/5G Low Profile Antenna

LP-IN2830

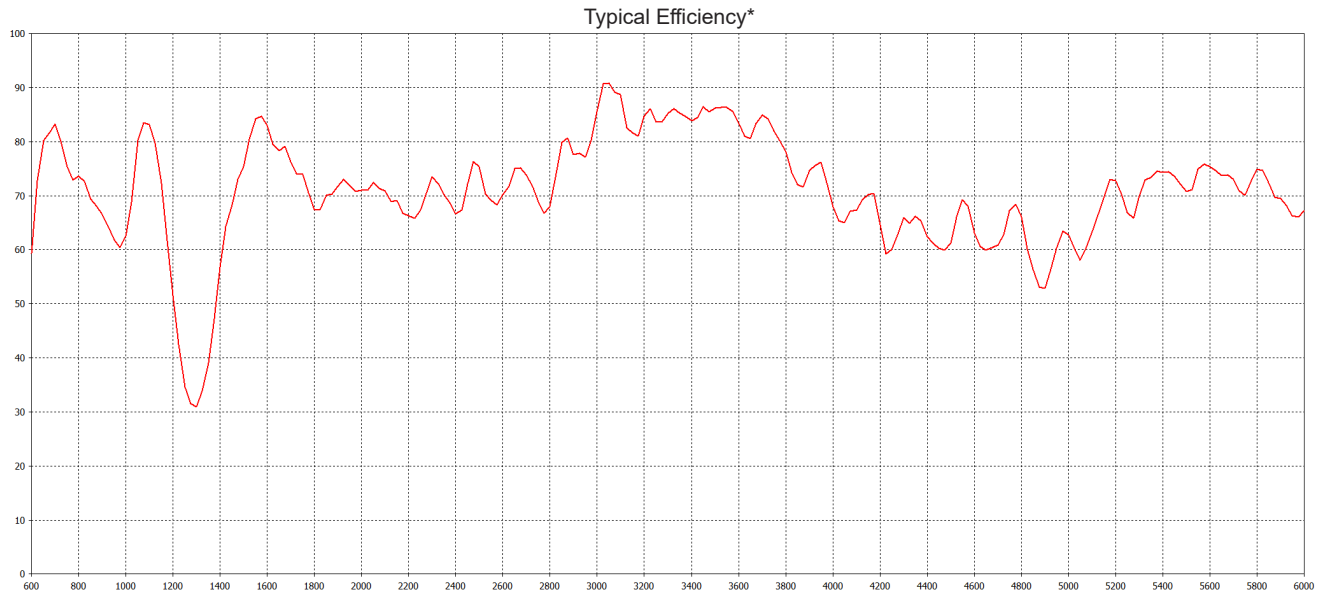
Electrical Data Cell-
Free Space on bracket

Measurement Conditions	4G/5G Antenna			
	Frequency Range (MHz)	LTE Bands	Peak Gain (dBi)	Efficiency (%)
LP-IN2830 measured in free space on bracket with 0.5m (1.6') of CS29 Cable 	617-698	71, 105	2.0	75
	699-798	12,13, 14 17,28	2.4	77
	807- 862	5,19,20,26,27	2.4	71
	880-960	8	2.8	64
	1427-1518	11, 21, 74,75,76	3.6	72
	1710-1920	2,3,4,9,25,35,39,66	2.6	71
	1920-2170	1,23	2.6	71
	2300-2400	30,40	3.0	70
	2496-2690	7,38,41	3.4	72
	3300-4200	22,42,43,48,77,78	5.5	78
	4400-5000	79	4.9	62

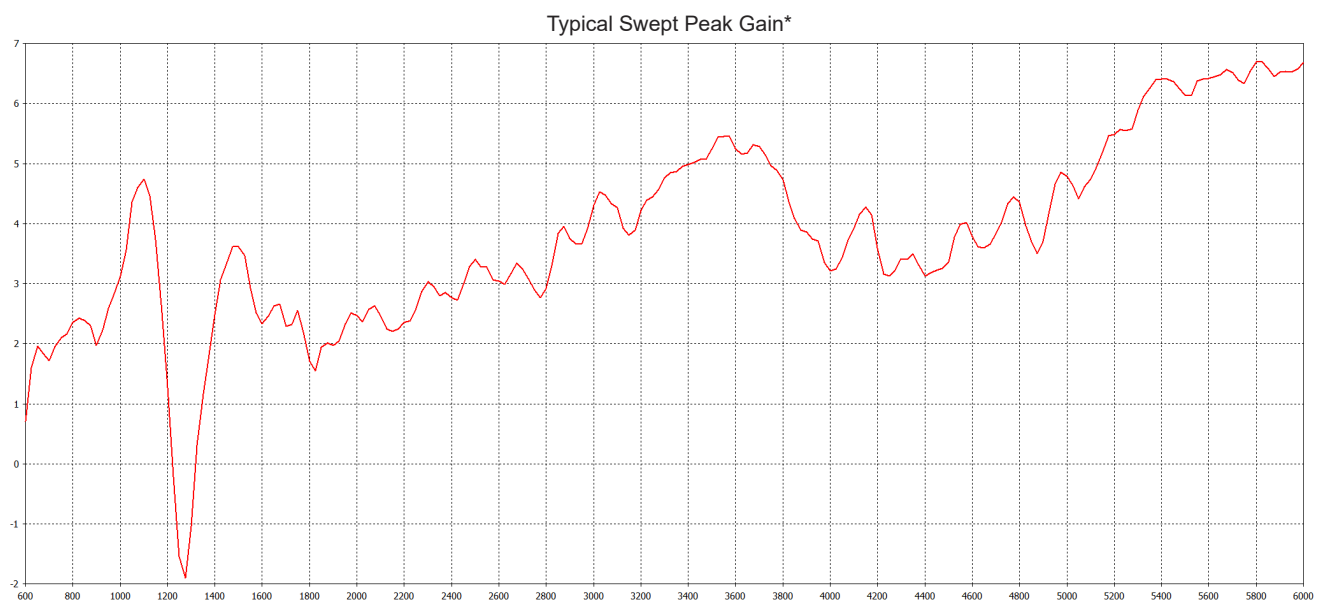
Typical VSWR*



*VSWR measured in free space on bracket with 0.5m (1.6') of CS29 cable



*Efficiency measured in free space on bracket with 0.5m (1.6') of CS29 cable



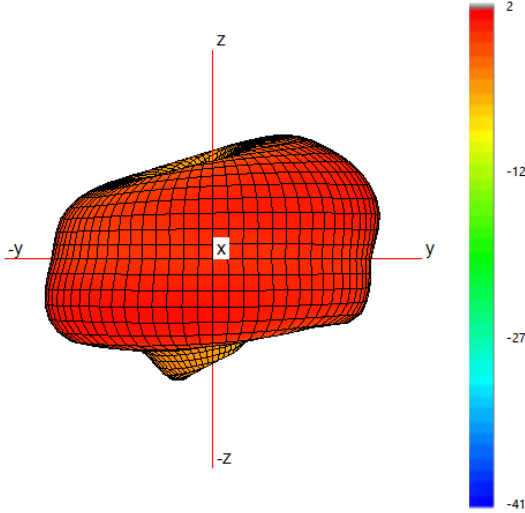
*Peak Gain measured in free space on bracket with 0.5m (1.6') of CS29 cable

4G/5G Low Profile Antenna

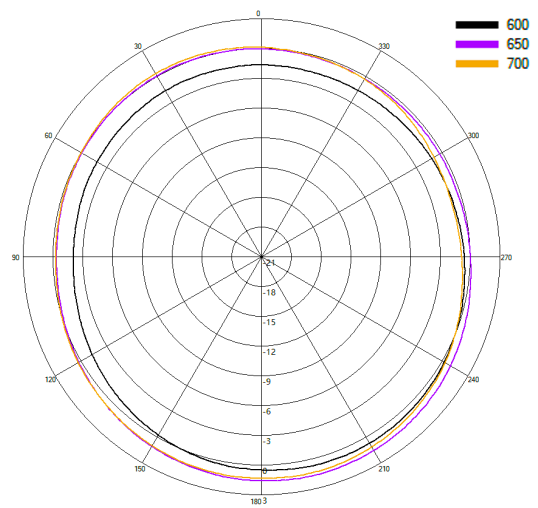
LP-IN2830

3D Pattern Data in Free Space on bracket Cell

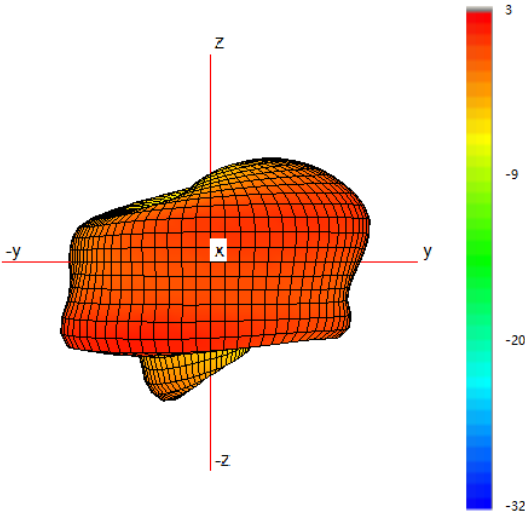
Typical 3D Pattern- Cell - 650 MHz



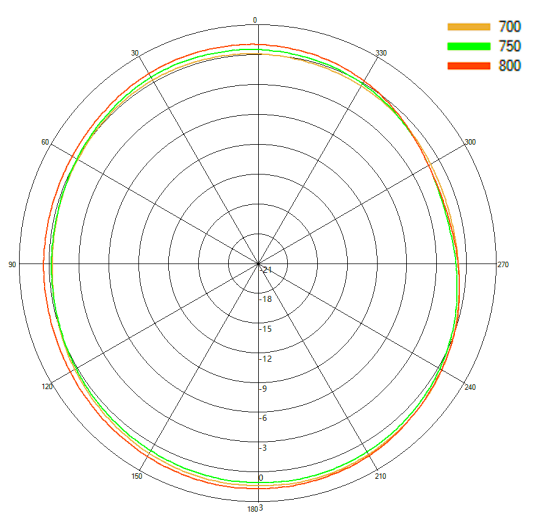
Typical H Plane- Cell - Patterns- 600-700MHz



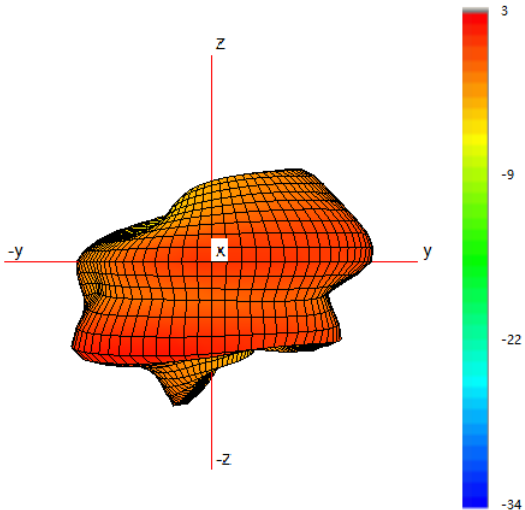
Typical 3D Pattern- Cell - 750 MHz



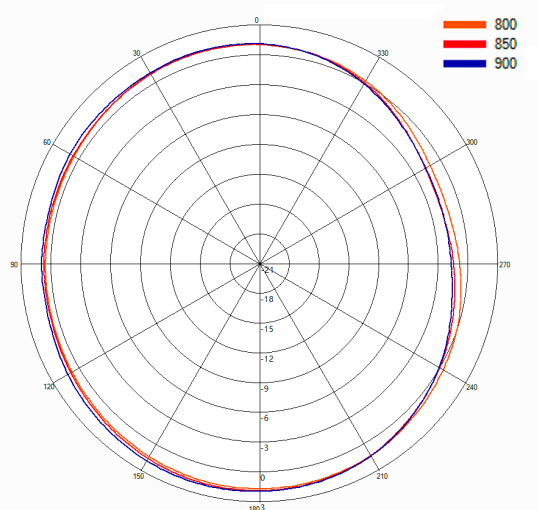
Typical H Plane- Cell - Patterns- 700-800MHz



Typical 3D Pattern- Cell - 850 MHz

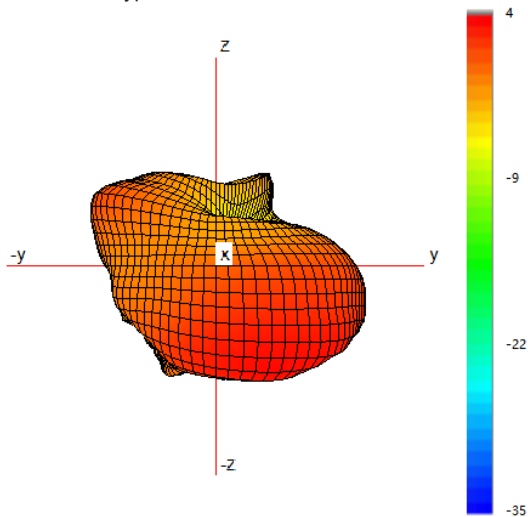


Typical H Plane- Cell - Patterns- 800-900MHz

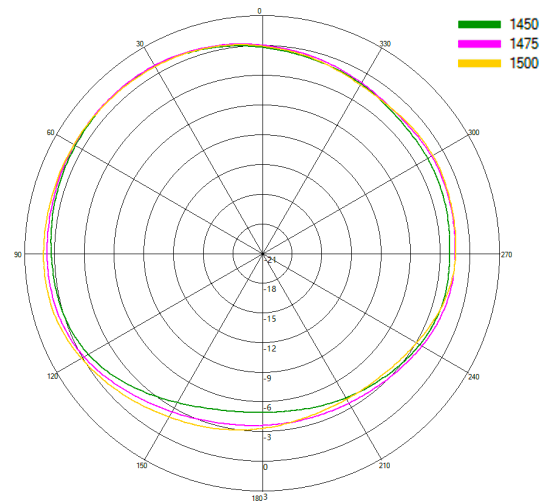


3D Pattern Data in Free Space on bracket Cell

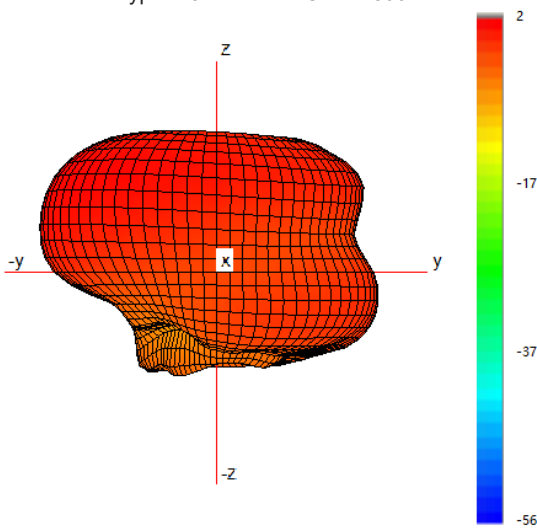
Typical 3D Pattern- Cell - 1475 MHz



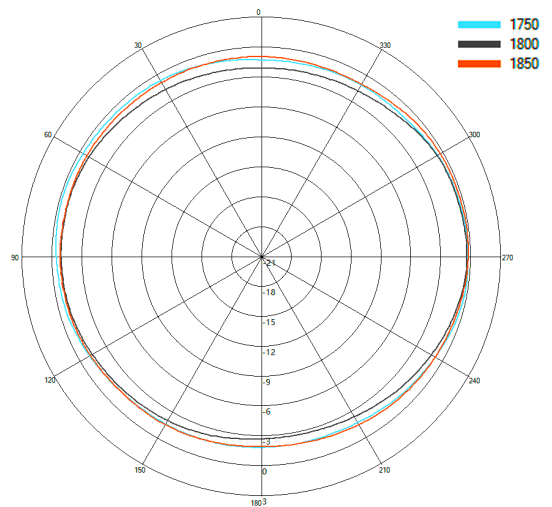
Typical H Plane- Cell- Patterns- 1450-1500 MHz



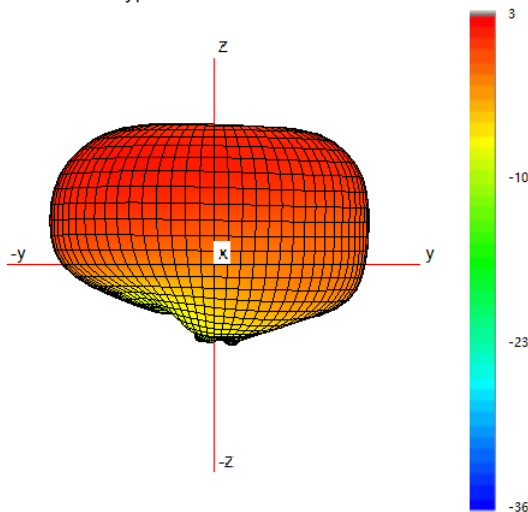
Typical 3D Pattern- Cell - 1800 MHz



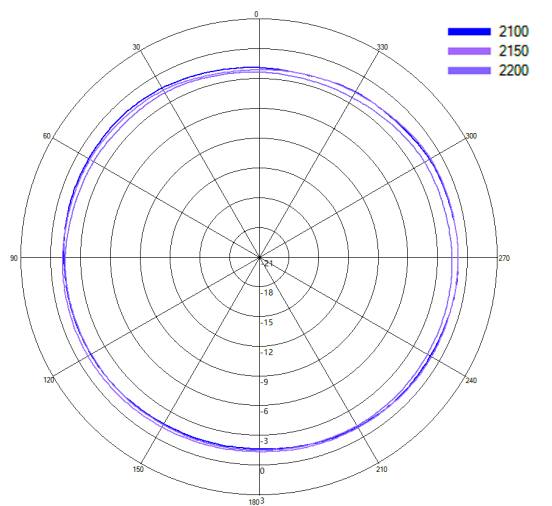
Typical H Plane- Cell- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell - 2150 MHz



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

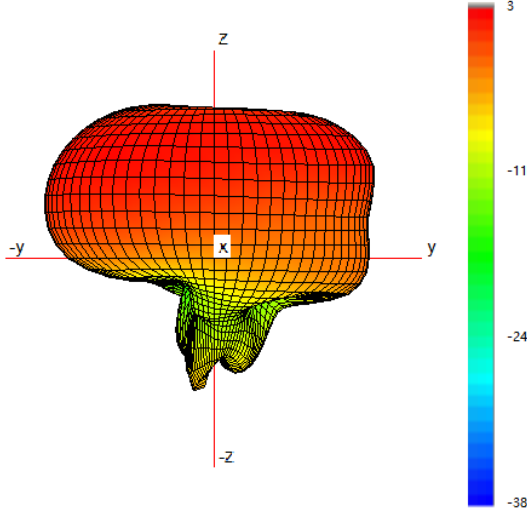


4G/5G Low Profile Antenna

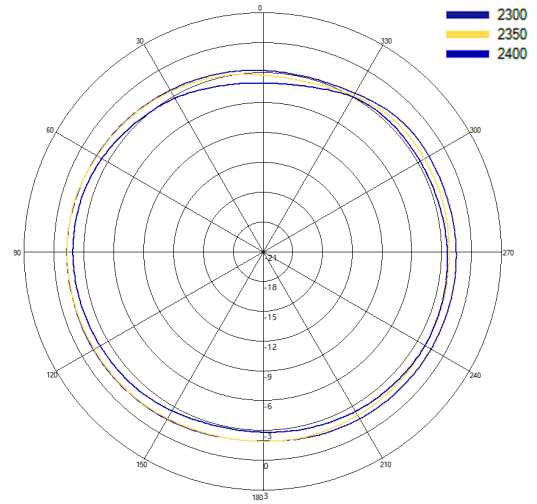
LP-IN2830

3D Pattern Data in Free Space on bracket Cell

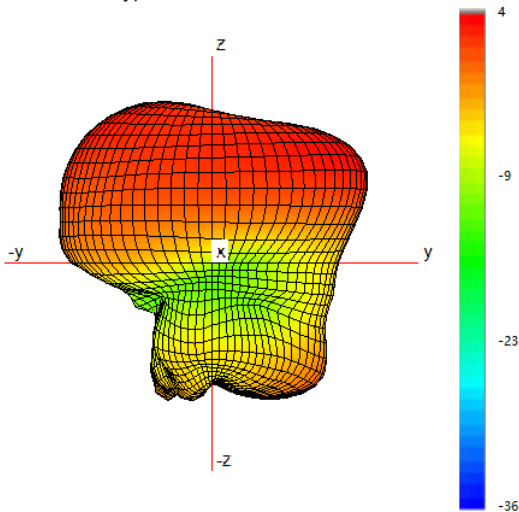
Typical 3D Pattern- Cell - 2350 MHz



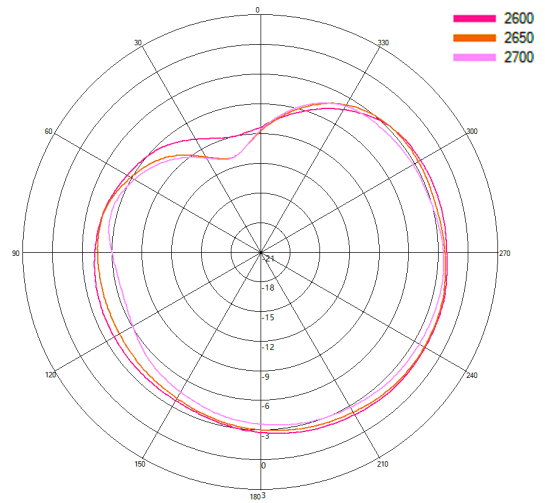
Typical H Plane- Cell - Patterns- 2300-2400 MHz



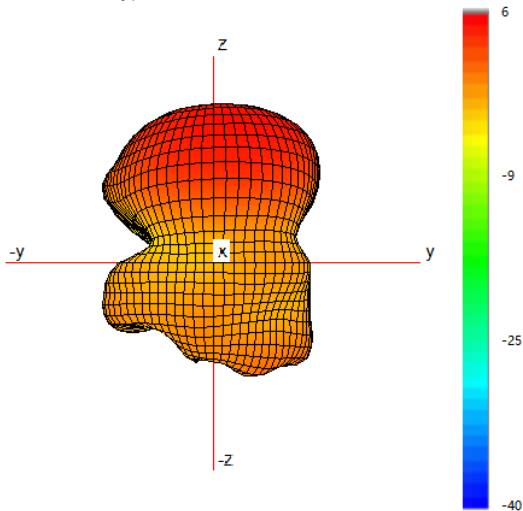
Typical 3D Pattern- Cell - 2650 MHz



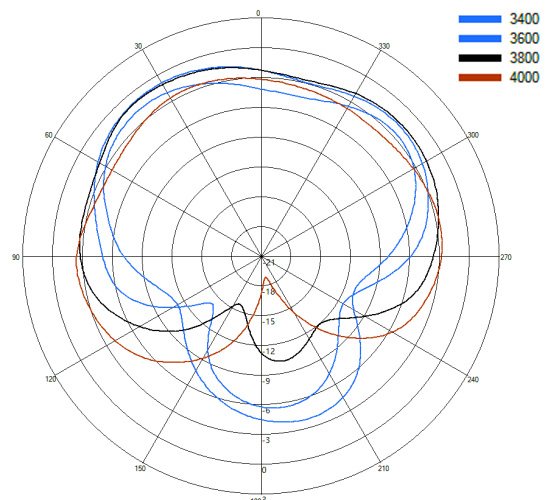
Typical H Plane- Cell - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell - 3600 MHz

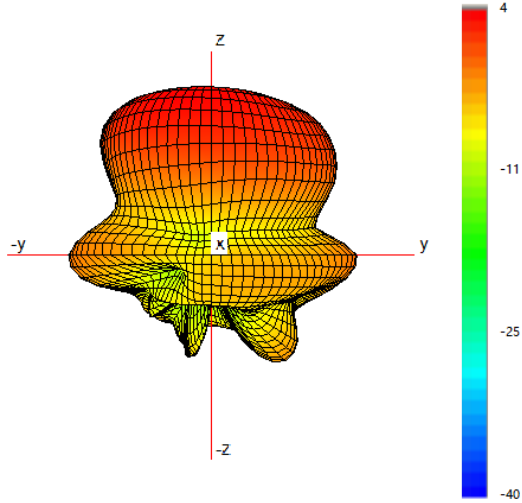


Typical H Plane- Cell - Patterns- 3400-4000 MHz

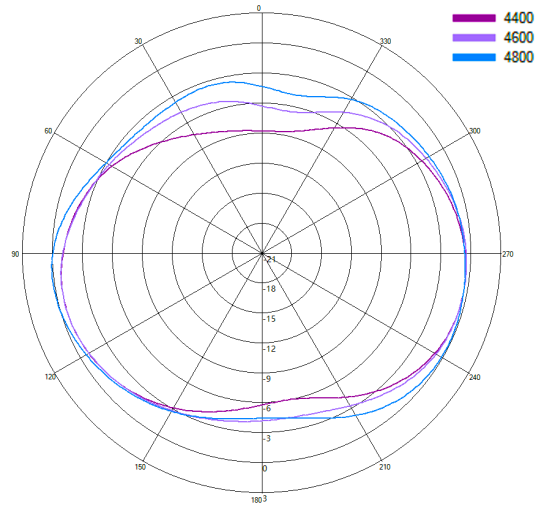


3D Pattern Data in Free Space on bracket Cell

Typical 3D Pattern- Cell - 4700 MHz



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

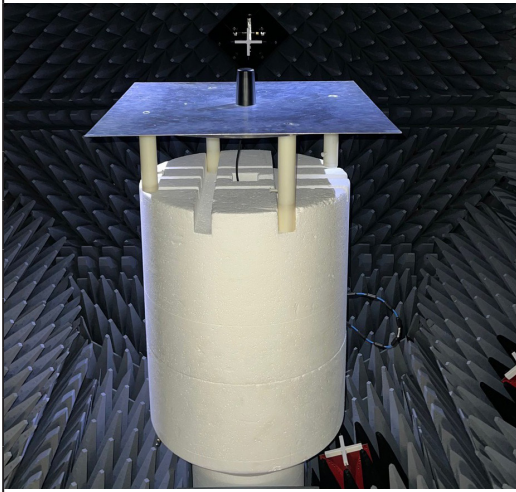


4G/5G Low Profile Antenna

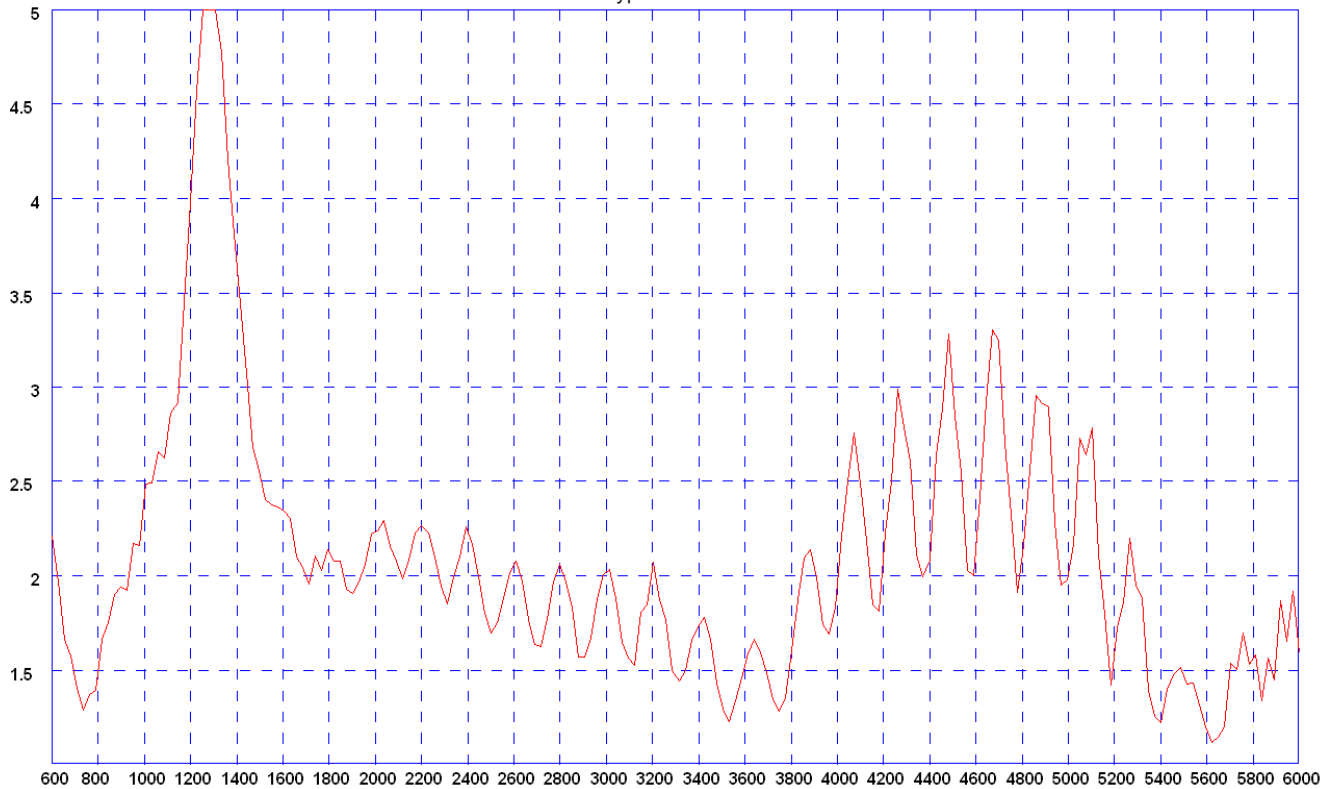
LP-IN2830

Electrical Data Cell -
Ground Plane

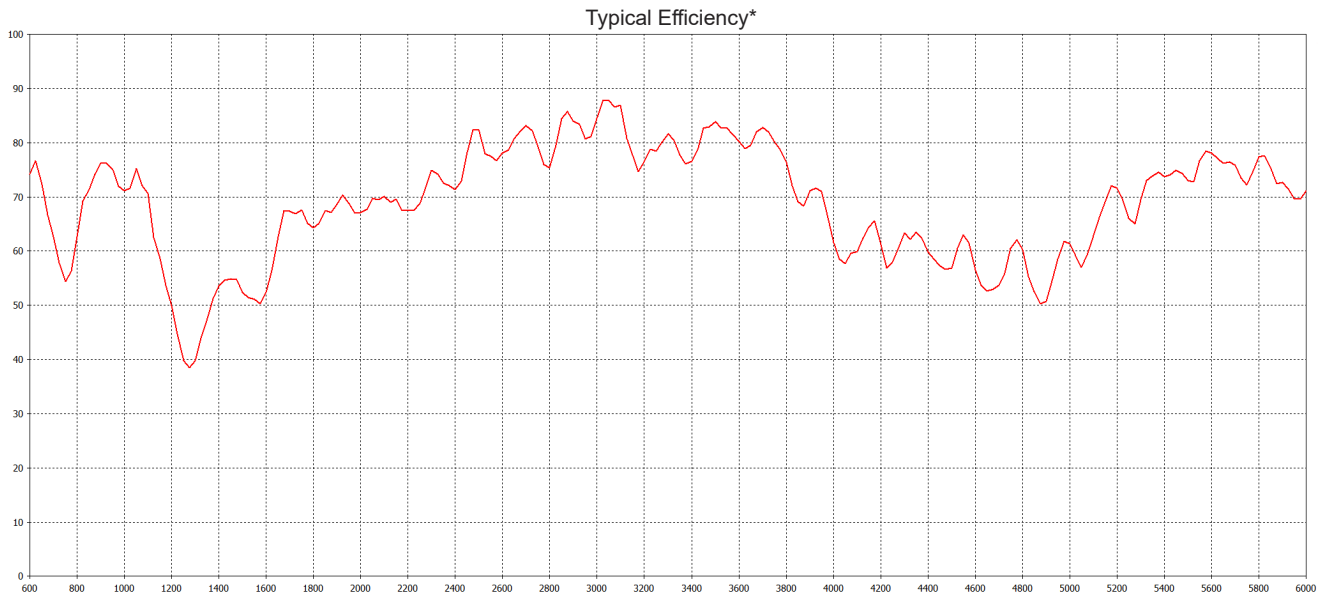
Measurement Conditions	4G/5G Antenna			
	Frequency Range (MHz)	LTE Bands	Peak Gain (dBi)	Efficiency (%)
LP-IN2830 measured on 600x600mm (2'x2') ground plane with 0.5m (1.6') of CS29 Cable	617-698	71, 105	3.8	71
	699-798	12,13, 14 17,28	3.1	59
	807 - 862	5,19,20,26,27	3.5	69
	880-960	8	3.9	75
	1427-1518	11, 21, 74,75,76	4.1	54
	1710-1920	2,3,4,9,25,35,39,66	4.7	67
	1920-2170	1,23	4.6	69
	2300-2400	30,40	4.1	73
	2496-2690	7,38,41	4.7	80
	3300-4200	22,42,43,48,77,78	6.7	74
	4400-5000	79	5.6	57



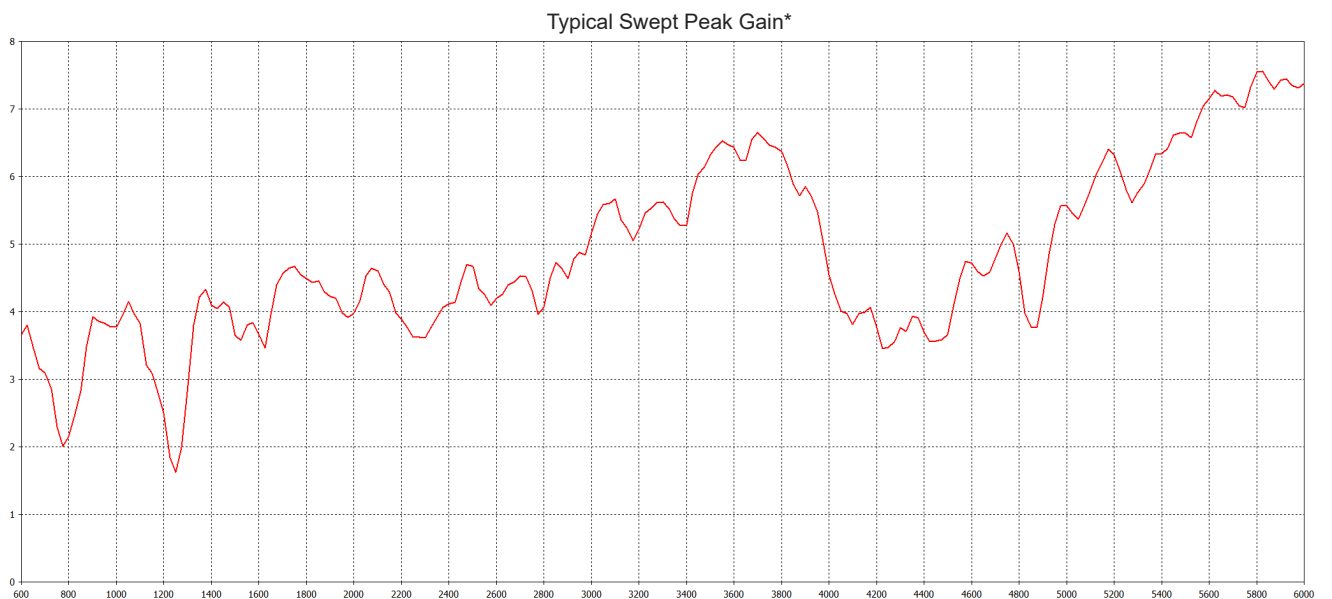
Typical VSWR*



*VSWR measured on 600x600mm (2'x2') ground plane with 0.5m (1.6') of CS29 cable



*Efficiency measured on 600x600mm (2'x2') ground plane with 0.5m (1.6') of CS29 cable



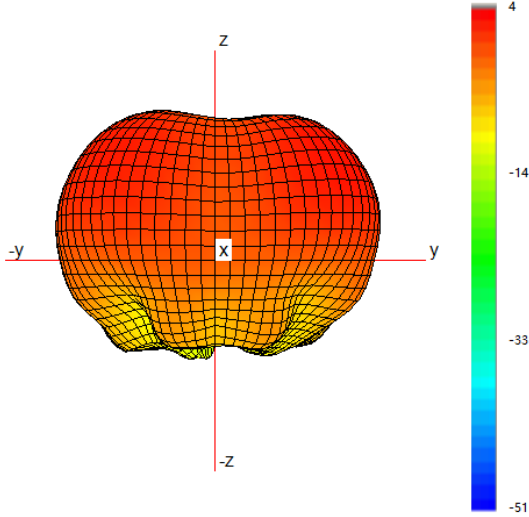
*Peak Gain measured on 600x600mm (2'x2') ground plane with 0.5m (1.6') of CS29 cable

4G/5G Low Profile Antenna

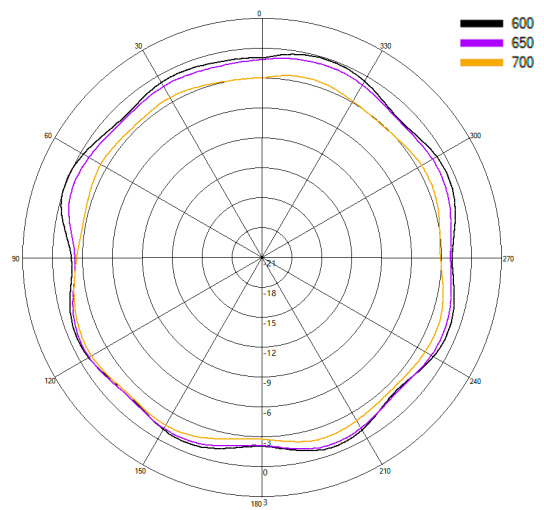
LP-IN2830

3D Pattern Data on Ground Plane Cell

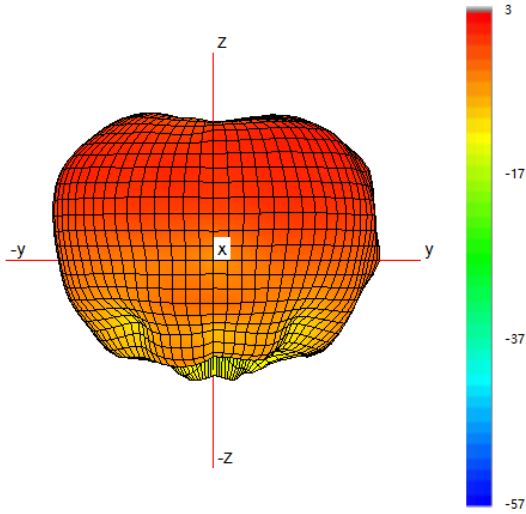
Typical 3D Pattern- Cell - 650 MHz



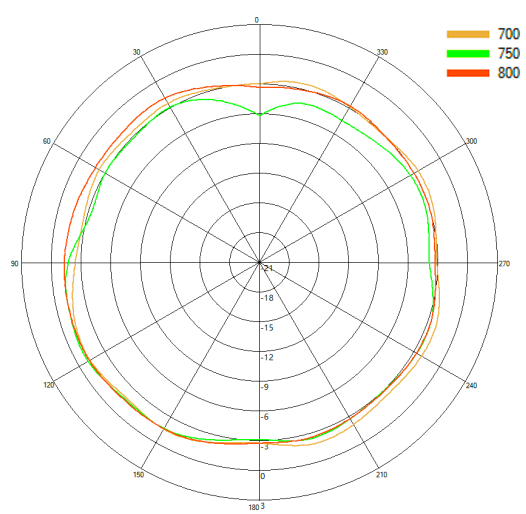
Typical H Plane- Cell - Patterns- 600-700MHz



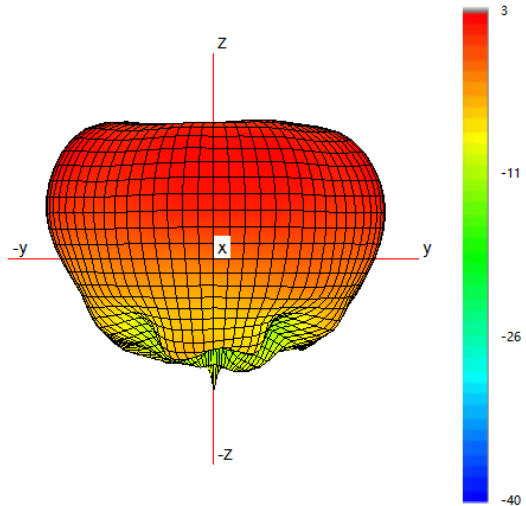
Typical 3D Pattern- Cell - 750 MHz



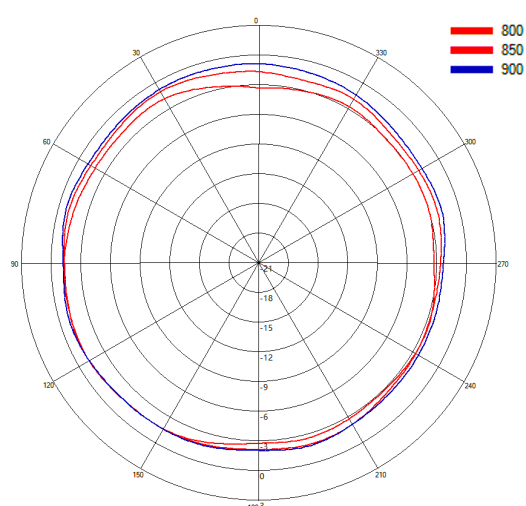
Typical H Plane- Cell - Patterns- 700-800MHz



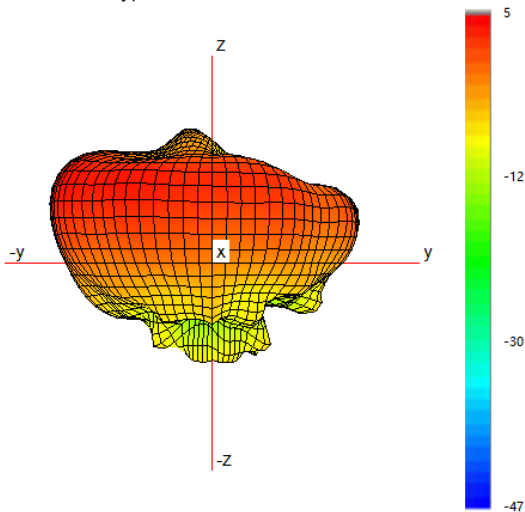
Typical 3D Pattern- Cell - 850 MHz



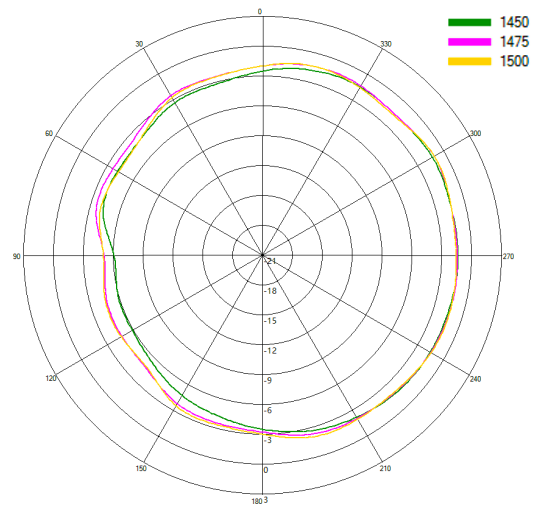
Typical H Plane- Cell - Patterns- 800-900MHz



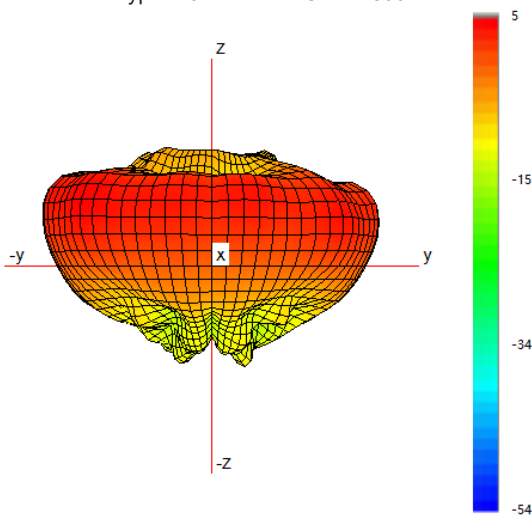
Typical 3D Pattern- Cell - 1475 MHz



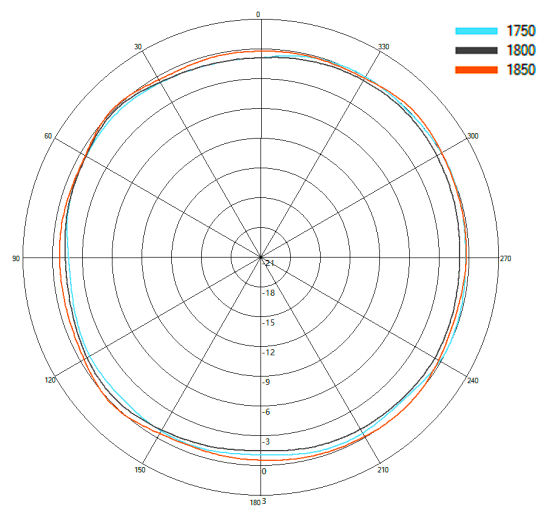
Typical H Plane- Cell- Patterns- 1450-1500 MHz



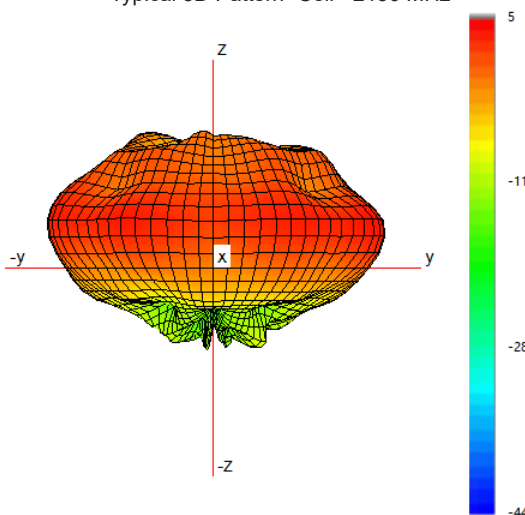
Typical 3D Pattern- Cell - 1800 MHz



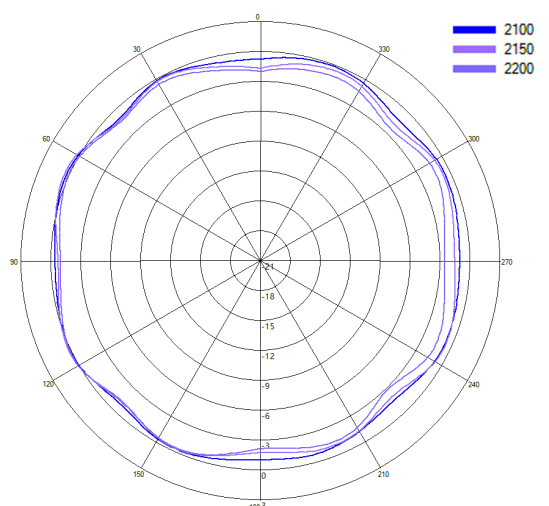
Typical H Plane- Cell- Patterns- 1750-1850 MHz



Typical 3D Pattern- Cell - 2150 MHz



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

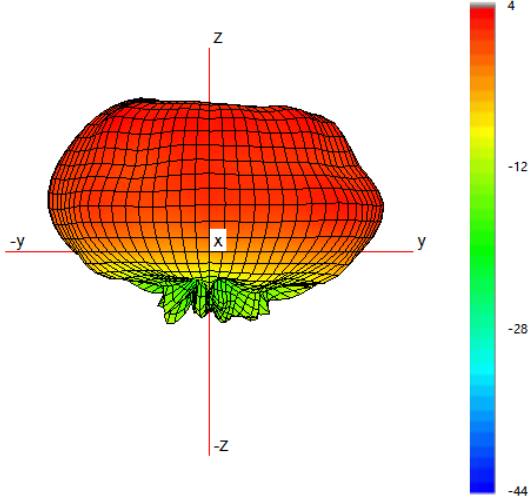


4G/5G Low Profile Antenna

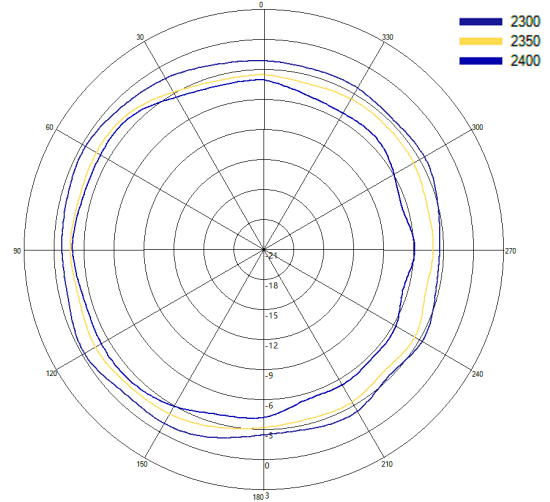
LP-IN2830

3D Pattern Data on Ground Plane Cell

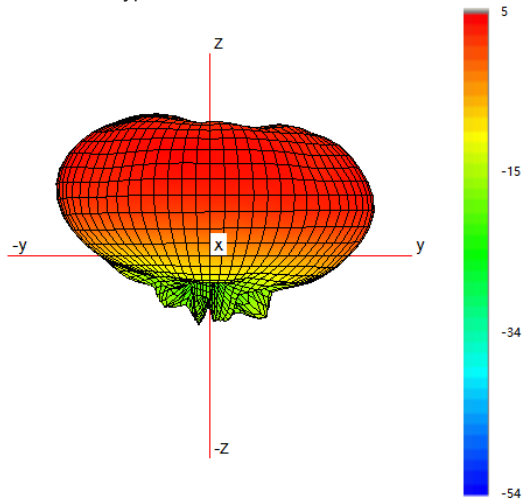
Typical 3D Pattern- Cell - 2350 MHz



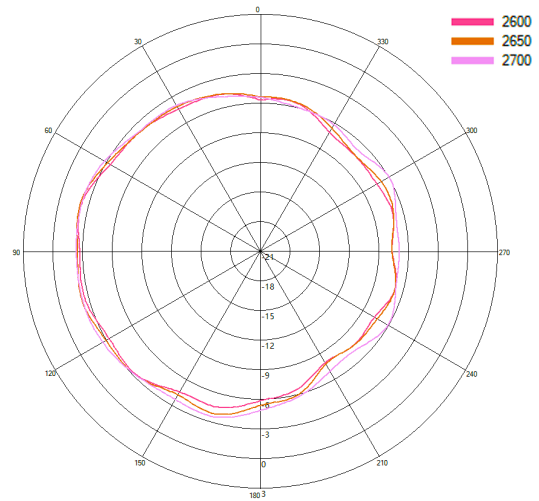
Typical H Plane- Cell - Patterns- 2300-2400 MHz



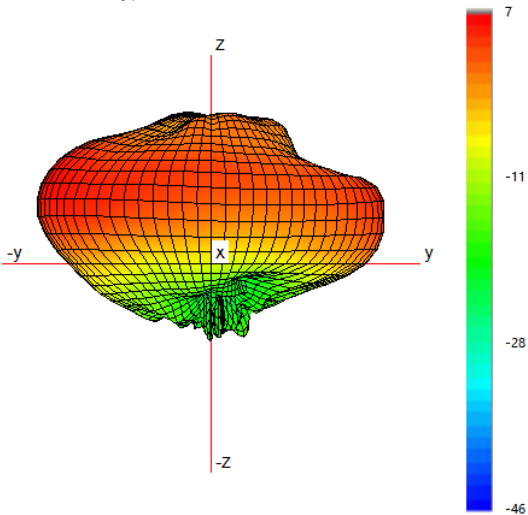
Typical 3D Pattern- Cell - 2650 MHz



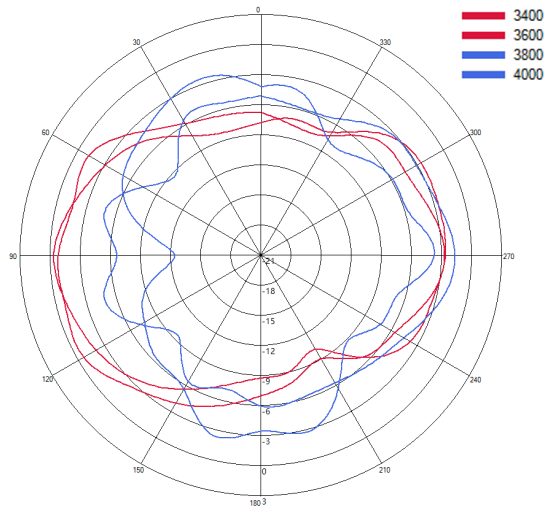
Typical H Plane- Cell - Patterns- 2600-2700 MHz



Typical 3D Pattern- Cell - 3600 MHz

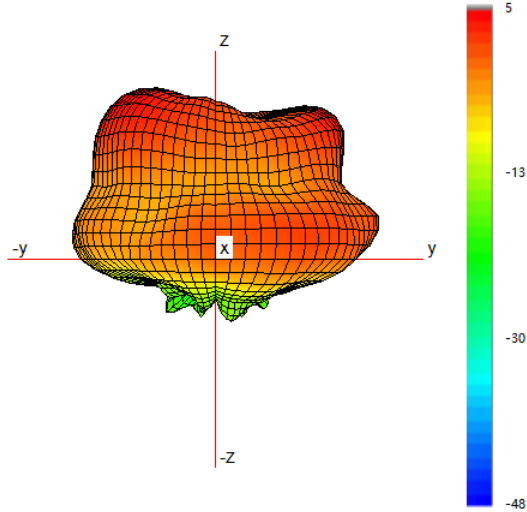


Typical H Plane- Cell - Patterns- 3400-4000 MHz



3D Pattern Data on
Ground Plane Cell

Typical 3D Pattern- Cell - 4700 MHz



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

