

# 2G/3G/4G/5G Low Profile Antenna

LPB-6-60-NJ

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## LPB-6-60-NJ

- Ultra Wide Band - 2G/3G/4G/5G
- N (f) Connector
- Bracket Supplied

The LPB-6-60-NJ antenna is a cost effective omni-directional broad band antenna for 4G/3G/2G and 5G devices from 617-960/1427-6000MHz and is suitable for external or internal installation.

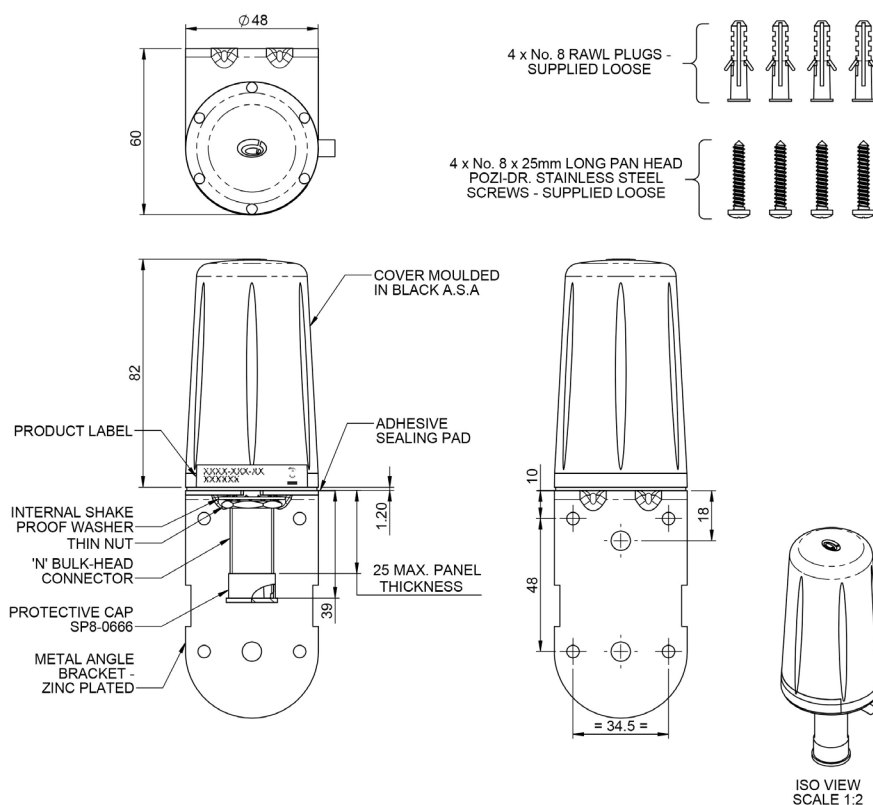
The design of the mounting bracket enables simple wall mounting using the supplied screws and wall plugs or mast mounting using a pipe clip or cable ties (not supplied).

The omni-directional radiation pattern allows easy placement of the antenna in an elevated position.

This antenna is an ideal solution for use in industrial and domestic environments with cellular modems/routers and Machine to Machine (M2M) wireless connectivity applications.

### Technical Drawing

LPB-6-60-NJ Shown



# 2G/3G/4G/5G Low Profile Antenna

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## Product Data

Part No.		
LPB-6-60-NJ		
Electrical Data		
Frequency Range (MHz)		617-960 / 1427-6000
Operational Band		2G/3G/4G/5G
Typical VSWR*		<3:1
Polarisation		Vertical
Pattern		Omni-directional
Impedance		50Ω
Max Input Power (W)		30
Mechanical Data		
Dimensions (mm)	Height	82 (3.22")
	Diameter	48 (1.89")
Operating Temp (°C)		-40° / +80°C ( -40° / 176°F )
Material		ASA
Colour		Black
Ingress Protection		IP65
Mounting Data		
Fixing		Panel mount or Bracket mount
Hole Diameter (mm)		16 (5/8")
Max Panel Thickness (mm)		25 (1")
Weight - Packed (g)		250
Connector Data		
Type	N (f)	


\*Typical VSWR as measured across 95% of relevant bands on supplied bracket with no cable.

# 2G/3G/4G/5G Low Profile Antenna

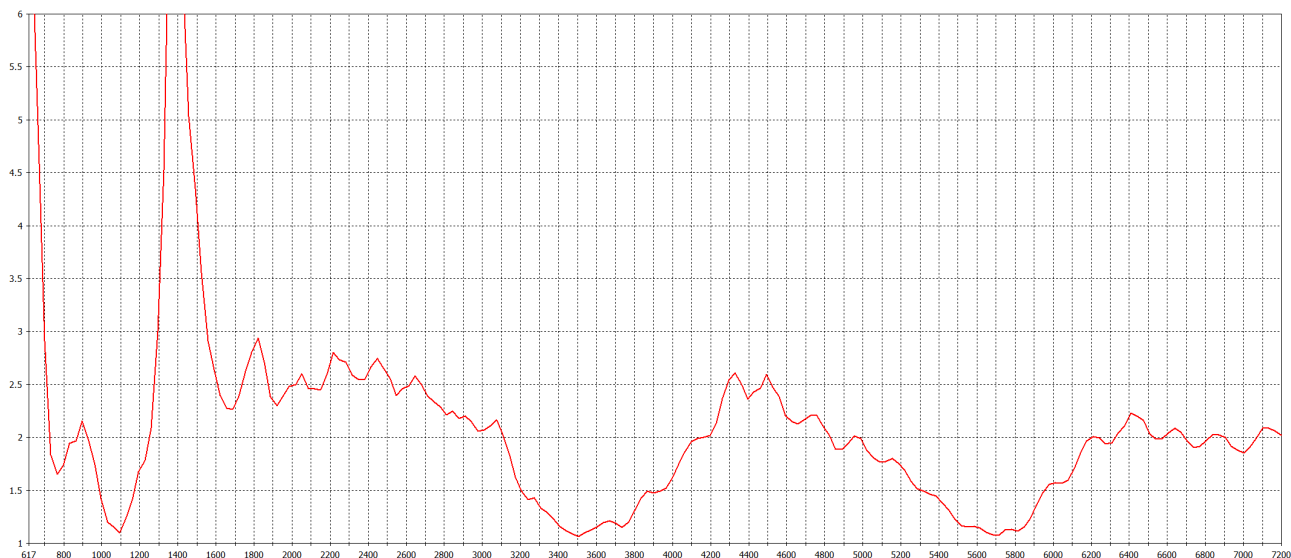
LPB-6-60-NJ

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Electrical Data on  
Bracket

Measurement Conditions	4G/5G Antenna				
LPB-6-60-NJ measured in free space on bracket with no cable	Frequency Range (MHz)	LTE Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
	617-698	71	Cell	1.6	47
	699-798	12,13,14,17,28	Cell	2.1	81
	807-862	5,19,20,26,27	Cell	1.9	80
	880-960	8	Cell	1.8	73
	1427-1518	11,21,74,75,76	Cell	1.7	48
	1710-1920	2,3,4,9,25,35,39,66	Cell	2.2	72
	1920-2170	1,23	Cell	2.7	73
	2300-2400	30,40	Cell	2.3	69
	2496-2690	7,38,41	Cell	3.4	73
	3300-4200	22,42,43,48,77,78	Cell	7.4	91
	4400-5000	79	Cell	6.0	78

Typical VSWR\*



\*Measured on supplied bracket with no cable.

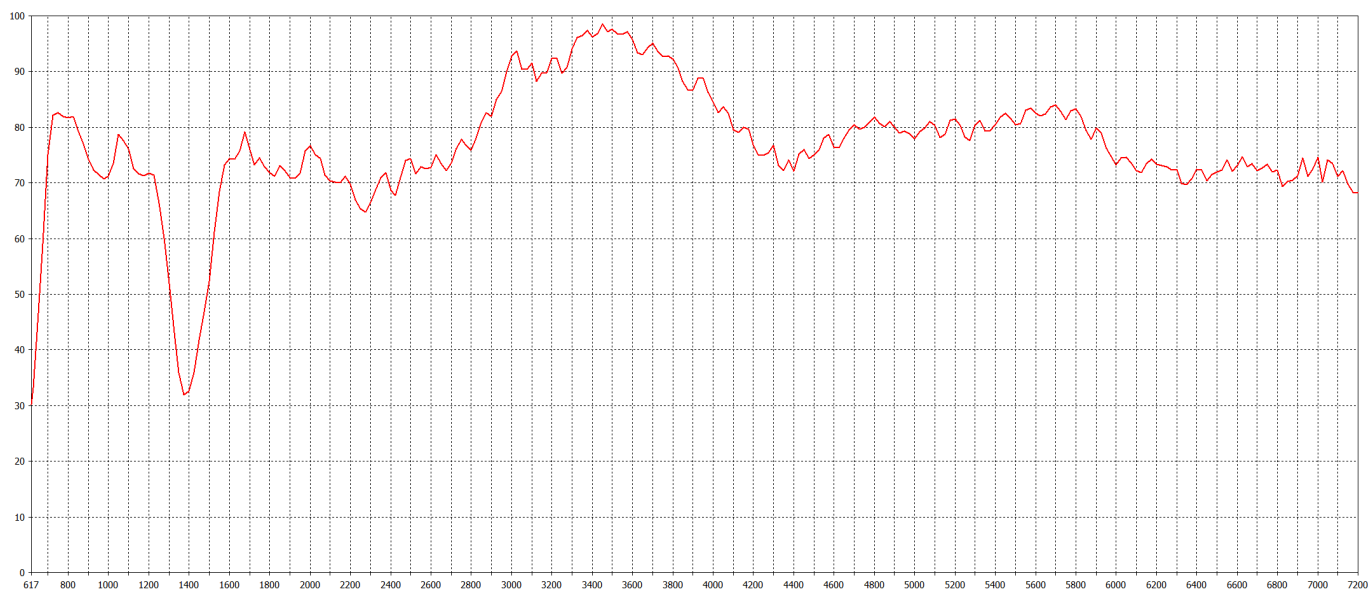
# 2G/3G/4G/5G Low Profile Antenna

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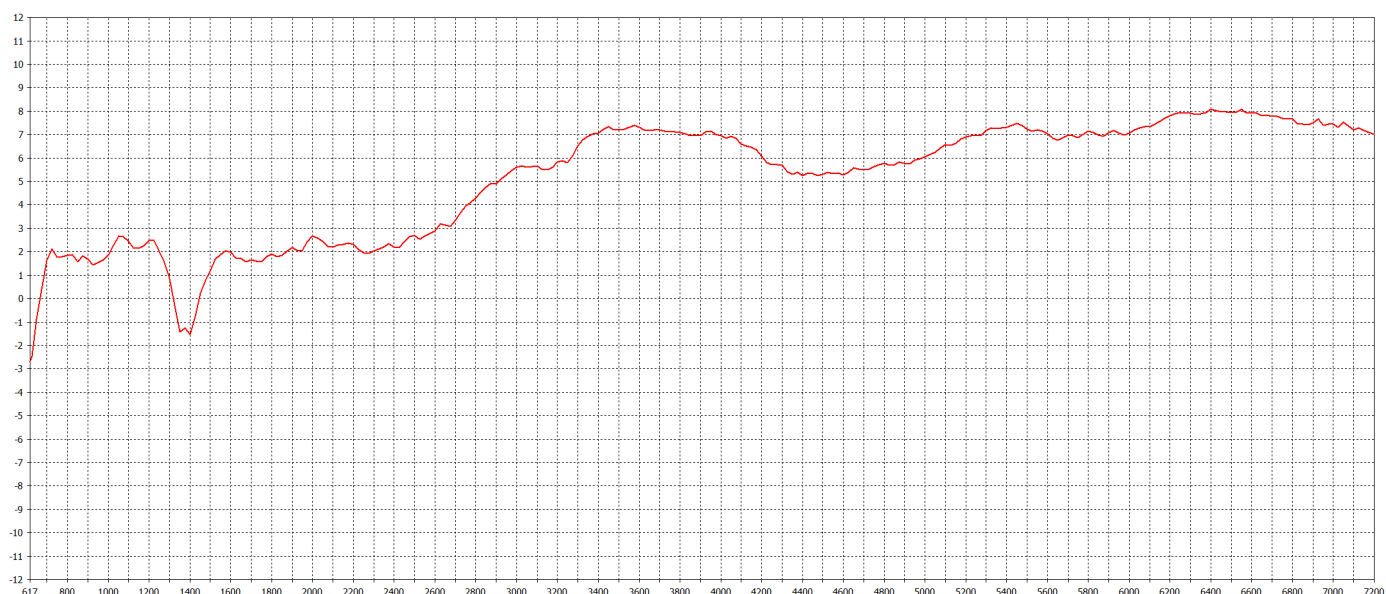
Electrical Data on  
Bracket

Typical Efficiency\*



\* Antenna measured on supplied bracket with no cable.

Typical Swept Peak Gain\*



\*Red trace shows antenna on supplied bracket with no cable.

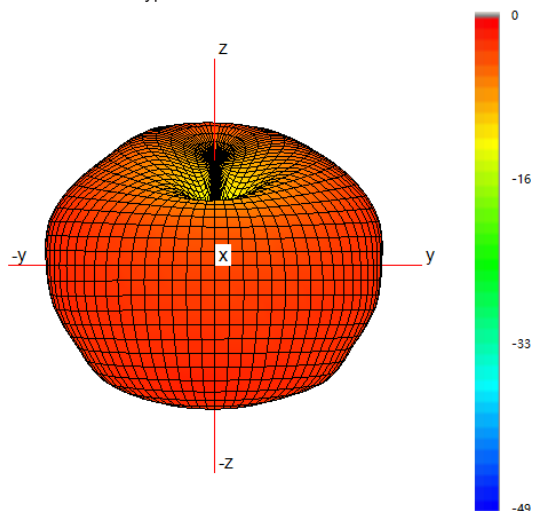
# 2G/3G/4G/5G Low Profile Antenna

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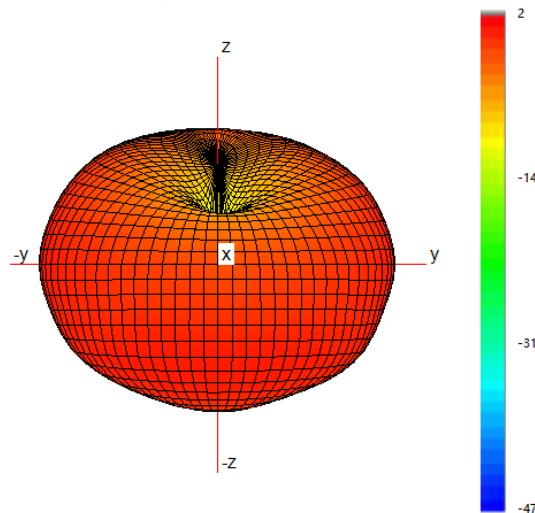
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## 3D Pattern Data on Bracket

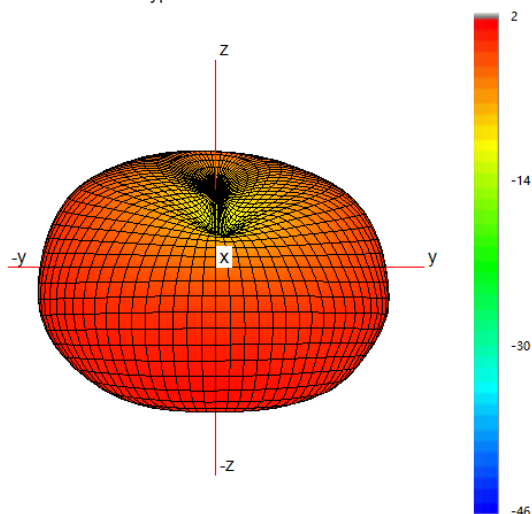
Typical 3D Cell Pattern - 650 MHz



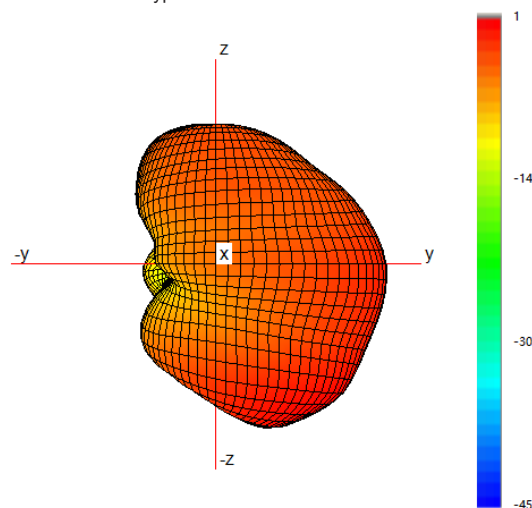
Typical 3D Cell Pattern - 750 MHz



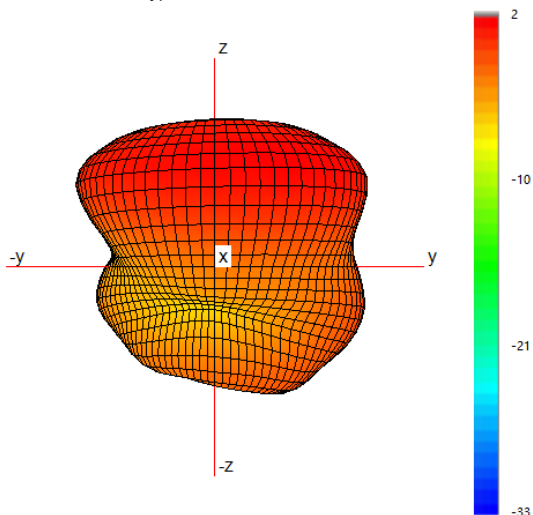
Typical 3D Cell Pattern - 850 MHz



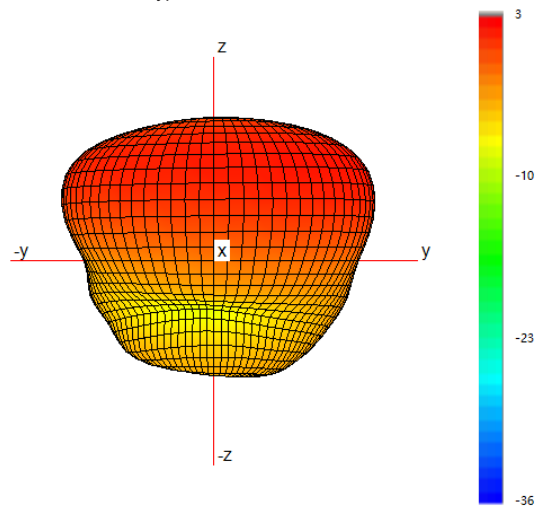
Typical 3D Cell Pattern- 1475 MHz



Typical 3D Cell Pattern - 1800 MHz



Typical 3D Cell Pattern - 2150 MHz



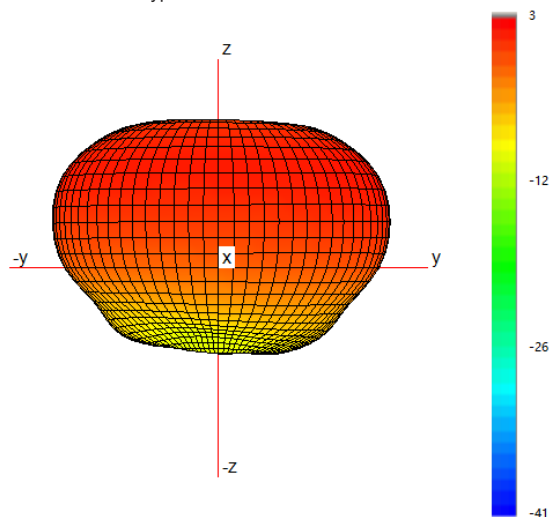
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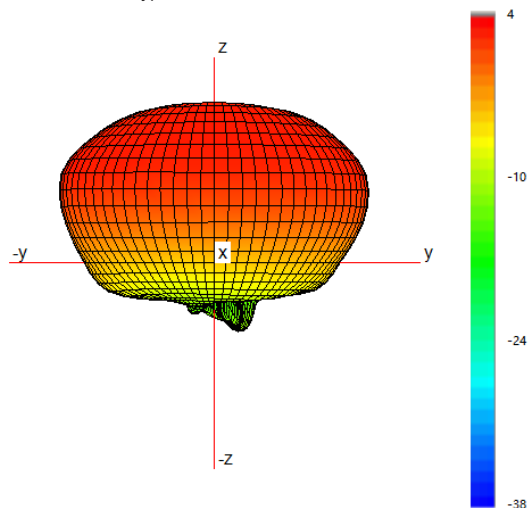
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3D Pattern Data on  
Bracket

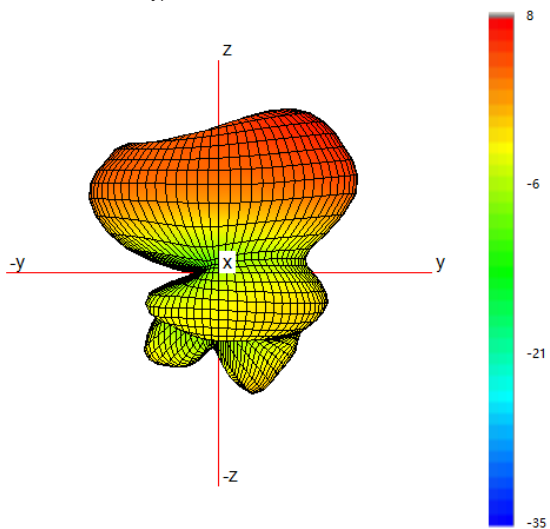
Typical 3D Cell Pattern - 2350 MHz



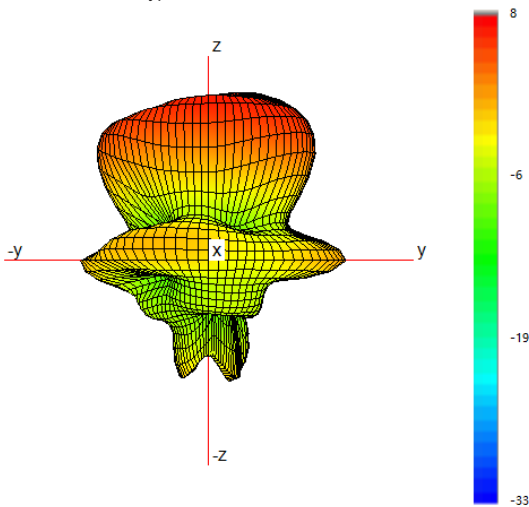
Typical 3D Cell Pattern - 2650 MHz



Typical 3D Cell Pattern - 3600 MHz



Typical 3D Cell Pattern - 5600 MHz



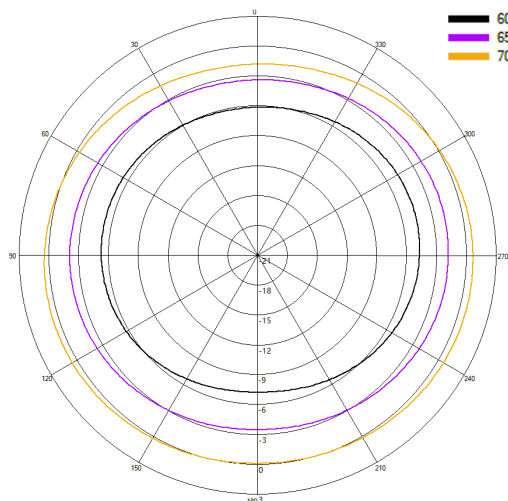
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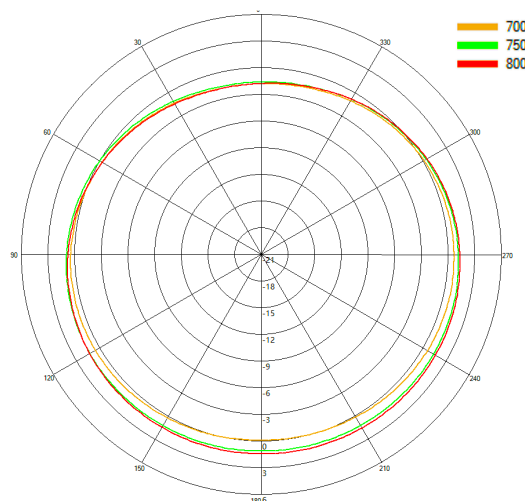
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## 2D H Plane Pattern Data on Bracket

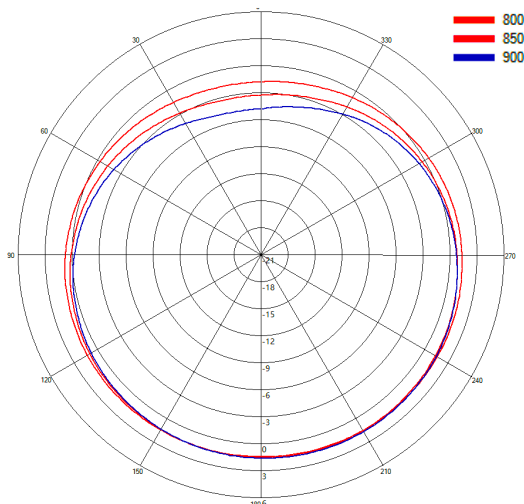
Typical H Plane Cell Patterns - 600-700 MHz



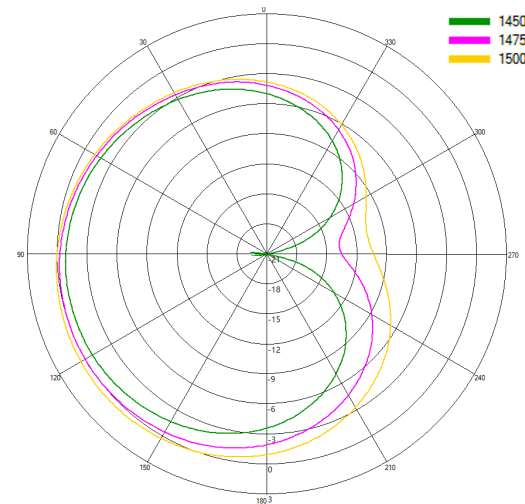
Typical H Plane Cell Patterns - 700-800 MHz



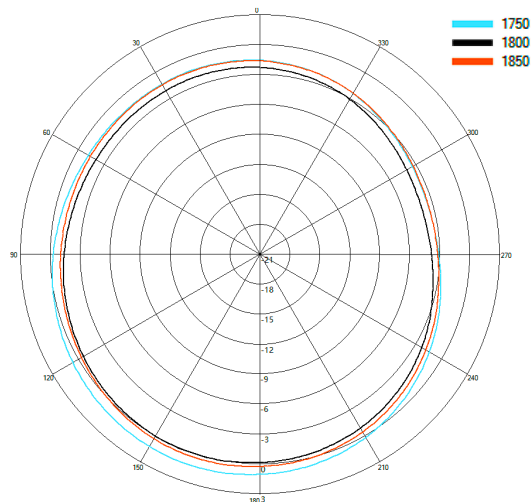
Typical H Plane Cell Patterns - 800-900 MHz



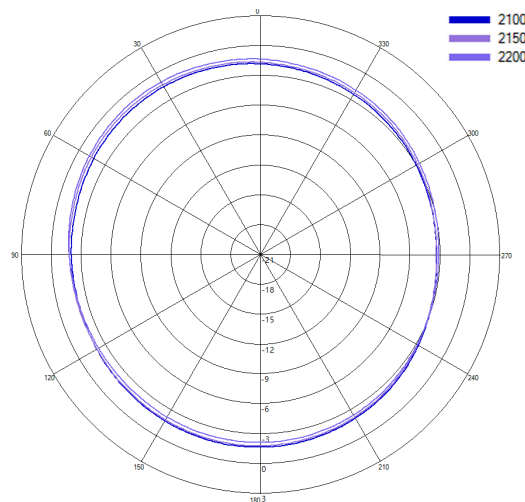
Typical H Plane Cell Patterns - 1450-1500 MHz



Typical H Plane Cell Patterns - 1750-1850 MHz



Typical H Plane Cell Patterns - 2100-2200 MHz



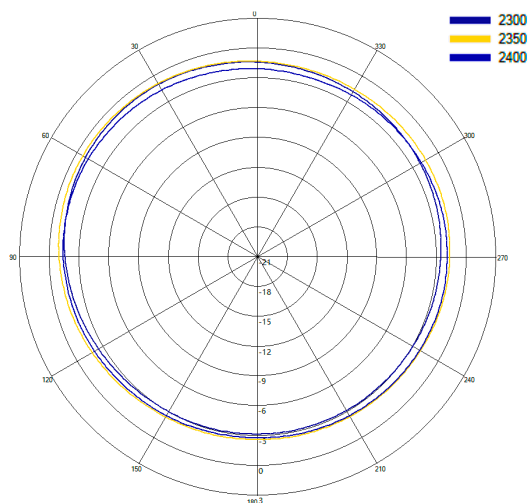
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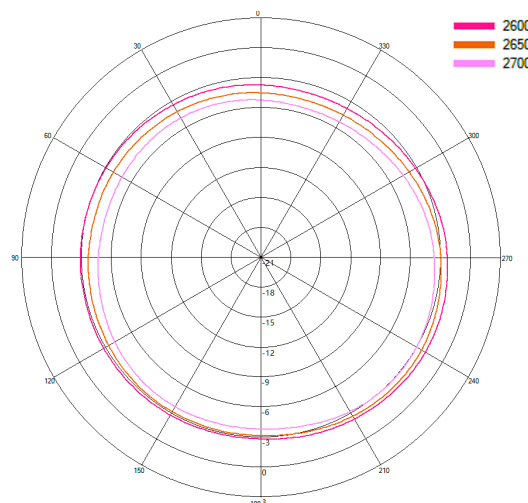
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2D H Plane Pattern  
Data on Bracket

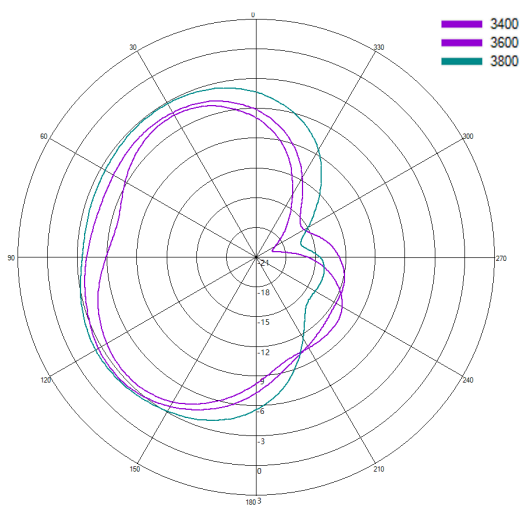
Typical H Plane Cell Patterns - 2300-2400 MHz



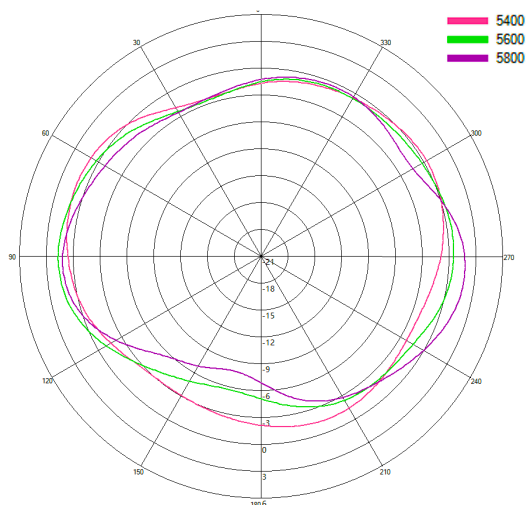
Typical H Plane Cell Patterns - 2600-2700 MHz



Typical H Plane Cell Patterns - 3400-3800 MHz



Typical H Plane Cell Patterns - 5400-5800 MHz



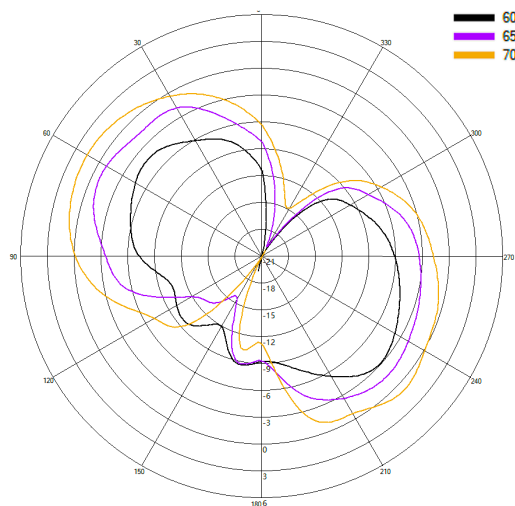
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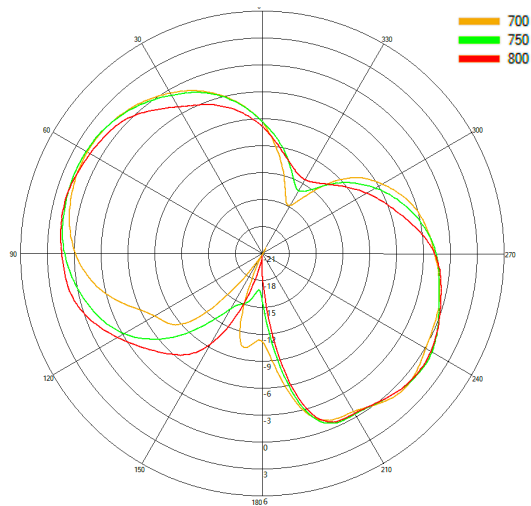
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## 2D E Plane Pattern Data on Bracket

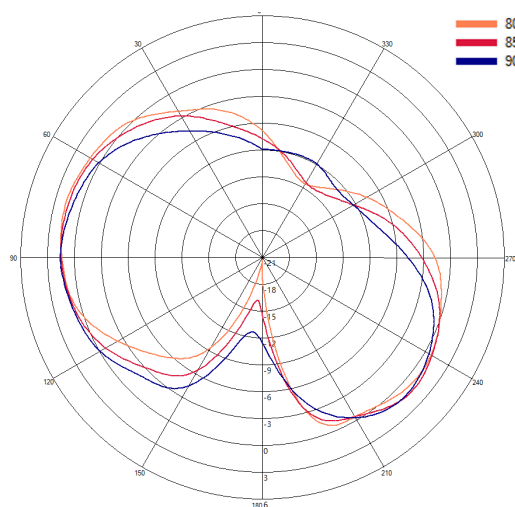
Typical E Plane Cell Patterns - 600-700 MHz



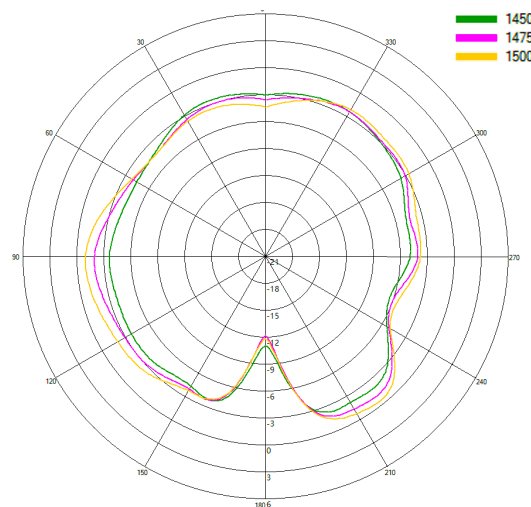
Typical E Plane Cell Patterns - 700-800 MHz



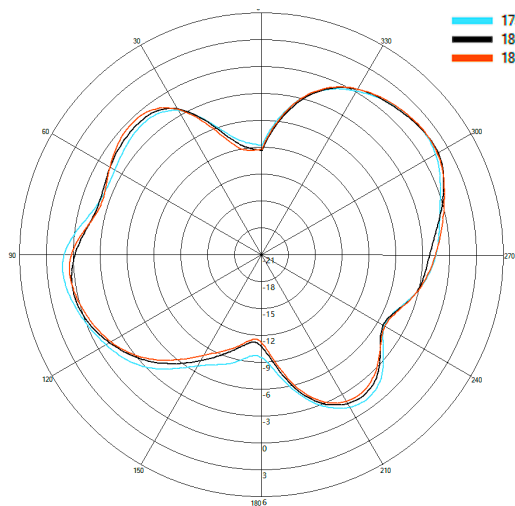
Typical E Plane Cell Patterns - 800-900 MHz



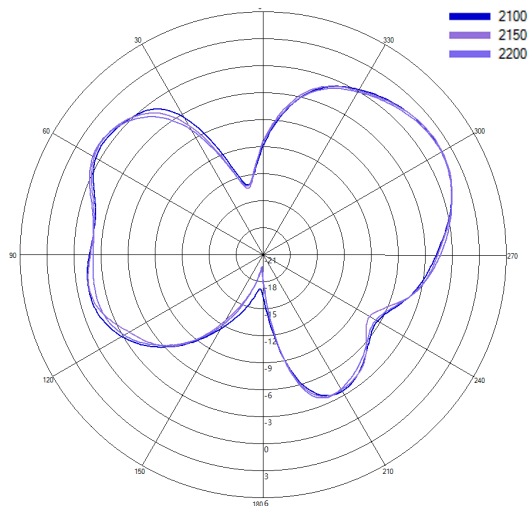
Typical E Plane Cell Patterns - 1450-1500 MHz



Typical E Plane Cell Patterns - 1750-1850 MHz



Typical E Plane Cell Patterns - 2100-2200 MHz



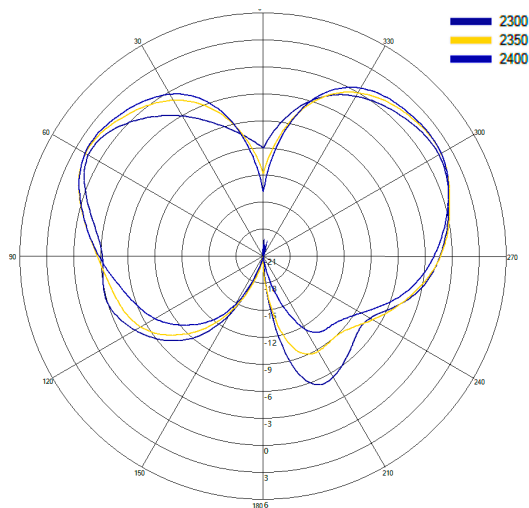
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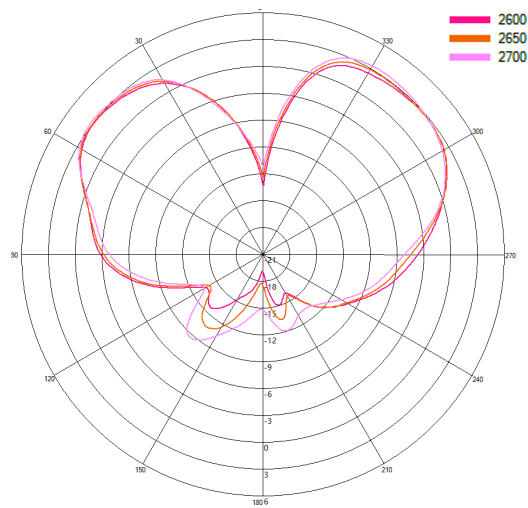
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2D E Plane Pattern  
Data on Bracket

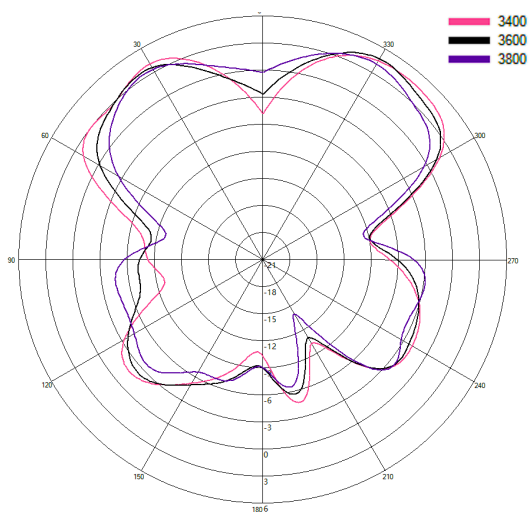
Typical E Plane Cell Patterns - 2300-2400 MHz



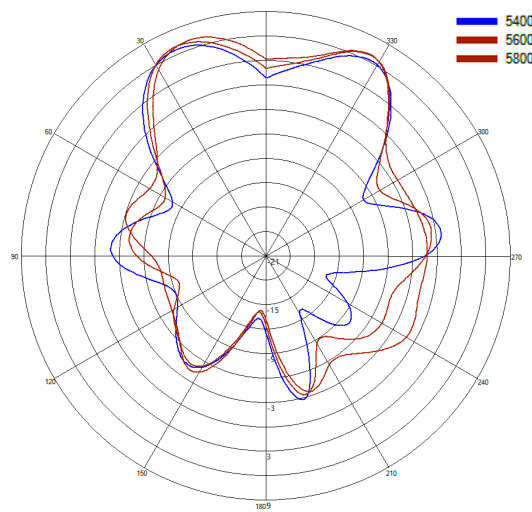
Typical E Plane Cell Patterns - 2600-2700 MHz



Typical E Plane Cell Patterns - 3400-3800 MHz



Typical E Plane Cell Patterns - 5400-5800 MHz




# 2G/3G/4G/5G Low Profile Antenna

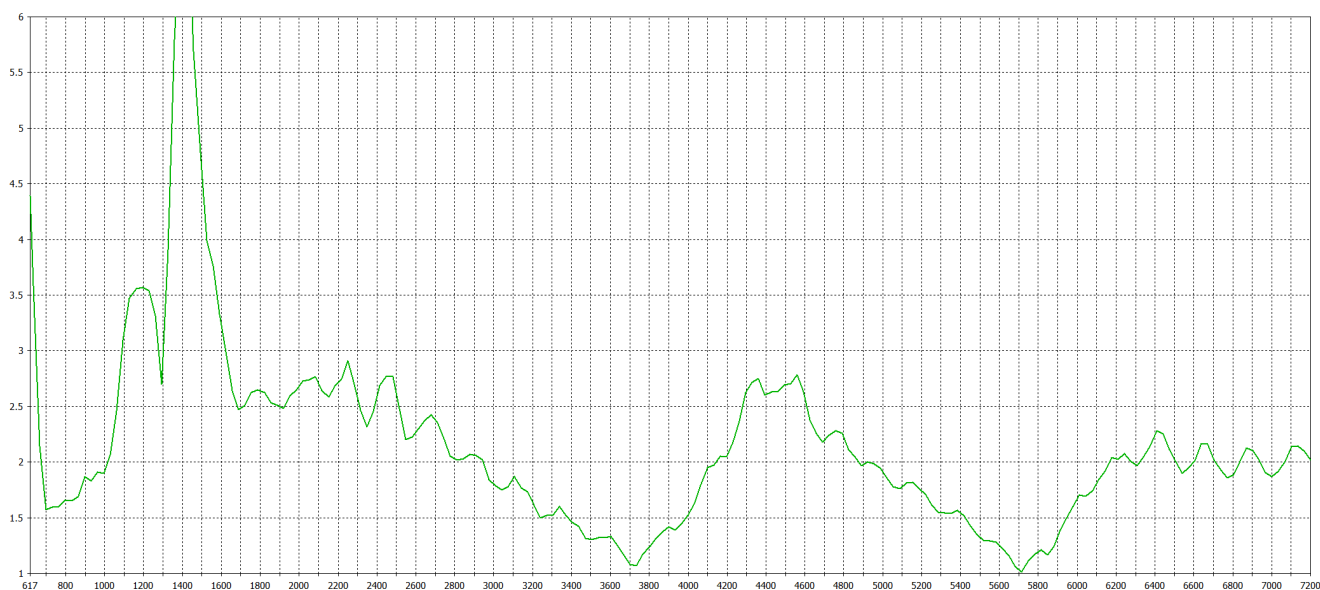
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Electrical Data on  
Ground Plane

Measurement Conditions	4G/5G Antennas				
LPB-6-60-NJ measured on 400x400 ground plane with no cable	Frequency Range (MHz)	LTE Bands	Antenna Element	Peak Gain (dBi)	Efficiency (%)
	617-698	71	Cell	3.0	76
	699-798	12,13,14,17,28	Cell	3.5	87
	807-862	5,19,20,26,27	Cell	4.3	95
	880-960	8	Cell	4.5	95
	1427-1518	11,21,74,75,76	Cell	3.2	45
	1710-1920	2,3,4,9,25,35,39,66	Cell	4.5	67
	1920-2170	1,23	Cell	4.4	75
	2300-2400	30,40	Cell	3.6	76
	2496-2690	7,38,41	Cell	4.5	80
	3300-4200	22,42,43,48,77,78	Cell	8.2	91
	4400-5000	79	Cell	6.8	81

Typical VSWR\*



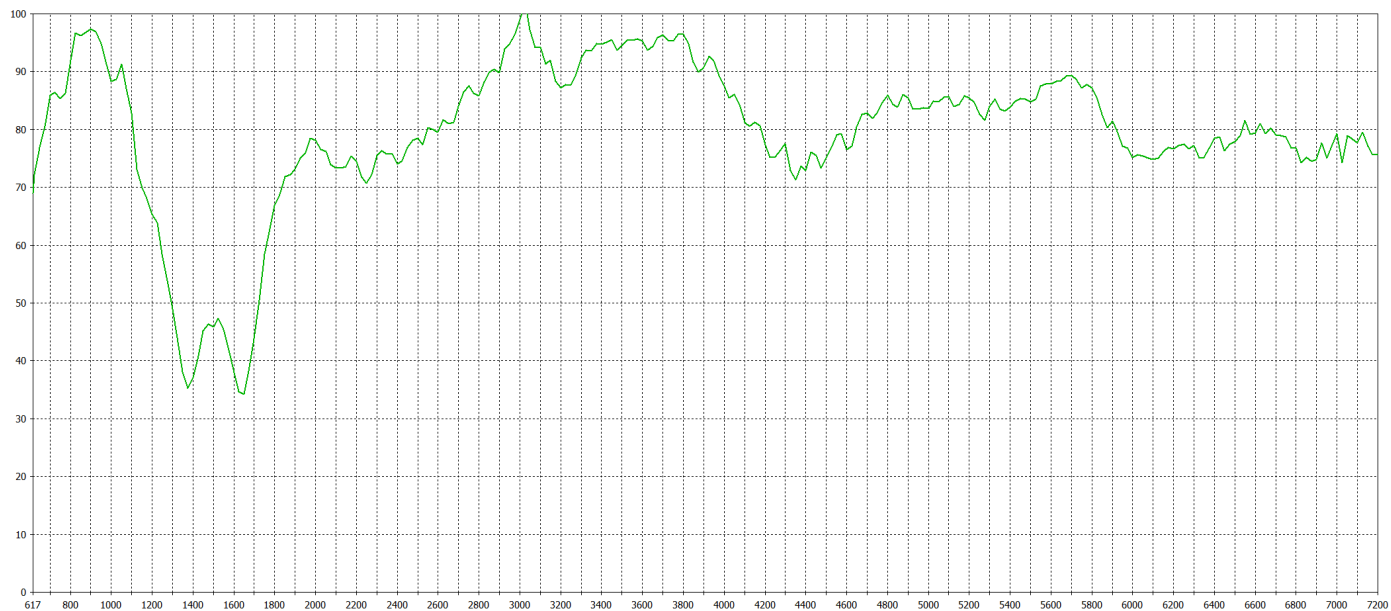
\* Measured on 400x400 ground plane with no cable.

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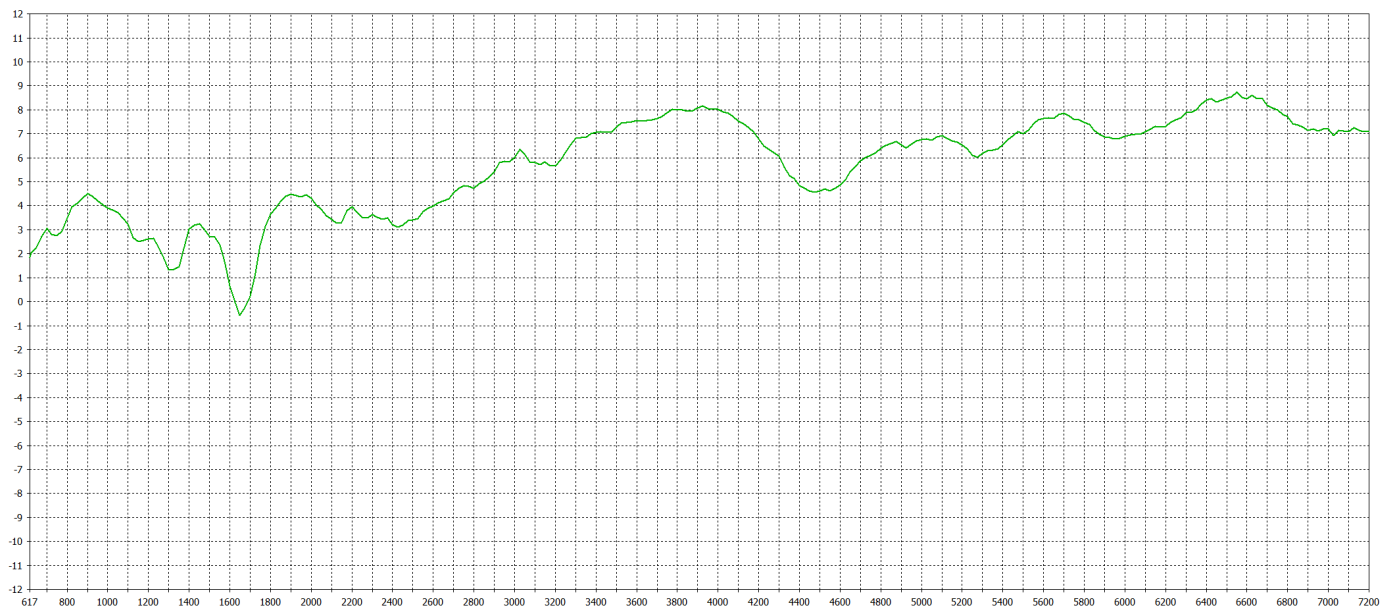
Electrical Data on  
Ground Plane

Typical Efficiency\*



\* Antenna measured on 400x400 ground plane with no cable.

Typical Swept Peak Gain\*



\*Green trace shows antenna on 400x400 ground plane with no cable.

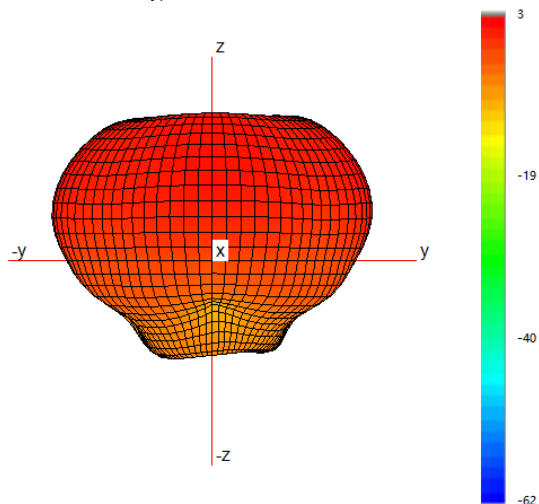
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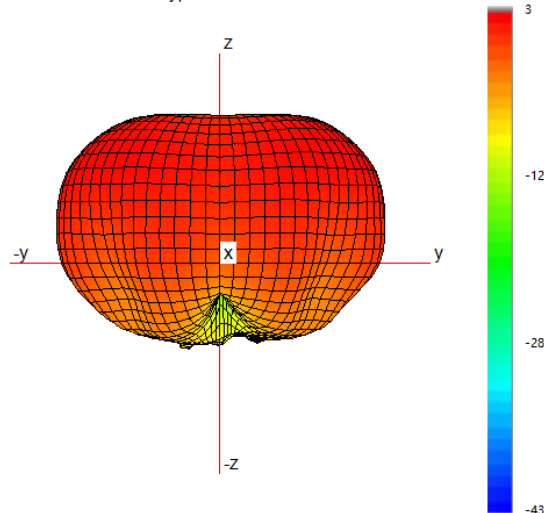
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## 3D Pattern Data on Ground Plane

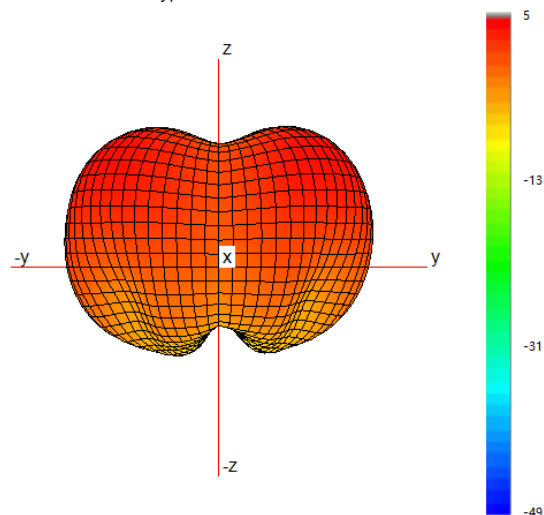
Typical 3D Cell Pattern - 650 MHz



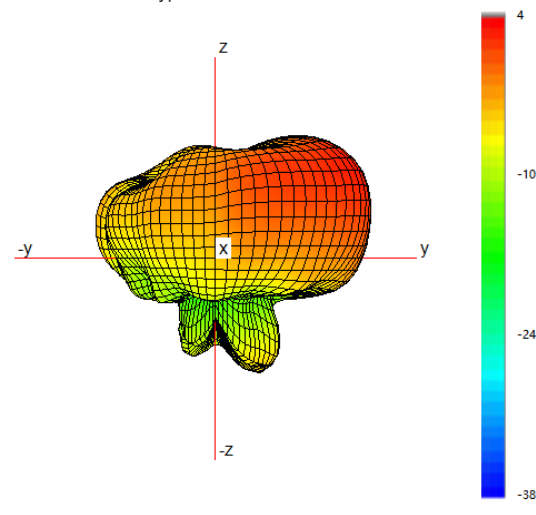
Typical 3D Cell Pattern - 750 MHz



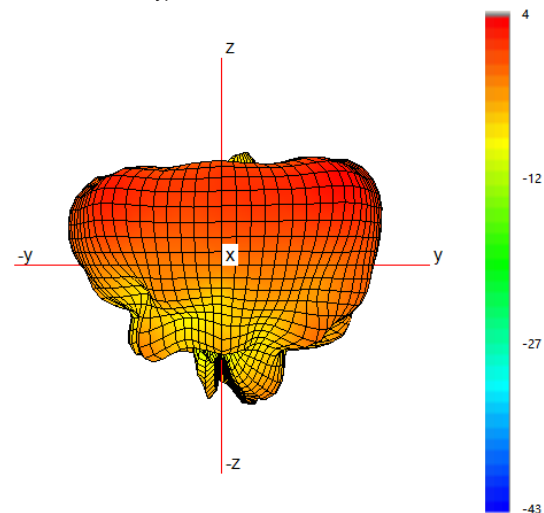
Typical 3D Cell Pattern - 850 MHz



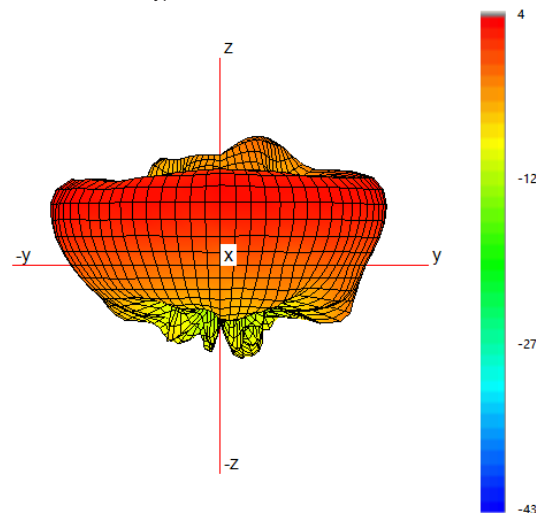
Typical 3D Cell Pattern- 1475 MHz



Typical 3D Cell Pattern - 1800 MHz



Typical 3D Cell Pattern - 2150 MHz

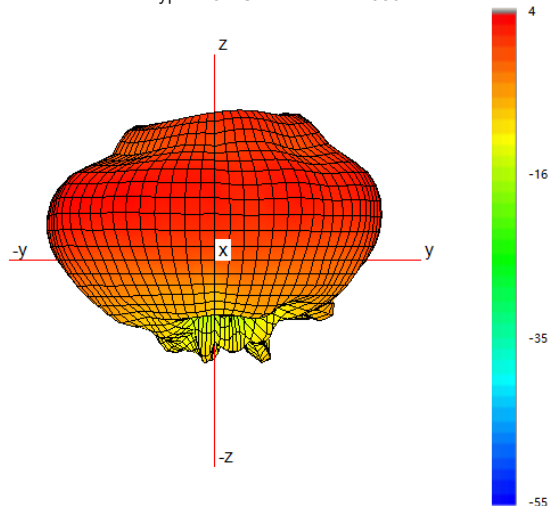


# 2G/3G/4G/5G Low Profile Antenna LPB-6-60-NJ

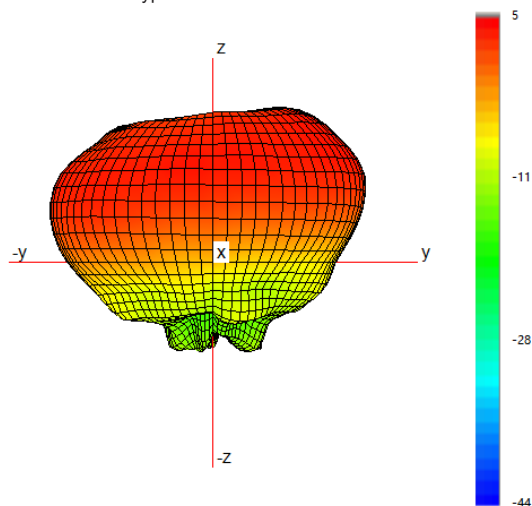
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## 3D Pattern Data on Ground Plane

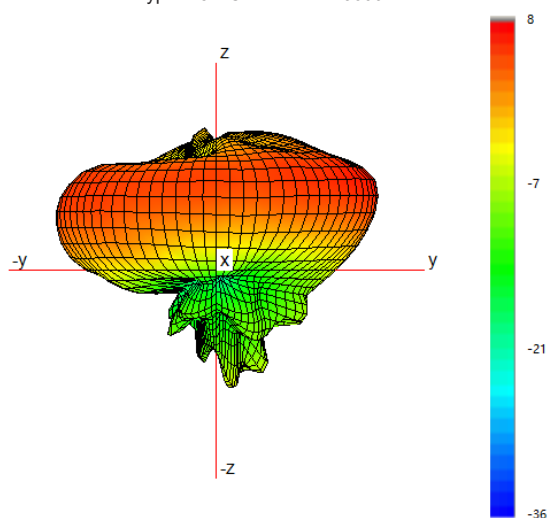
Typical 3D Cell Pattern - 2350 MHz



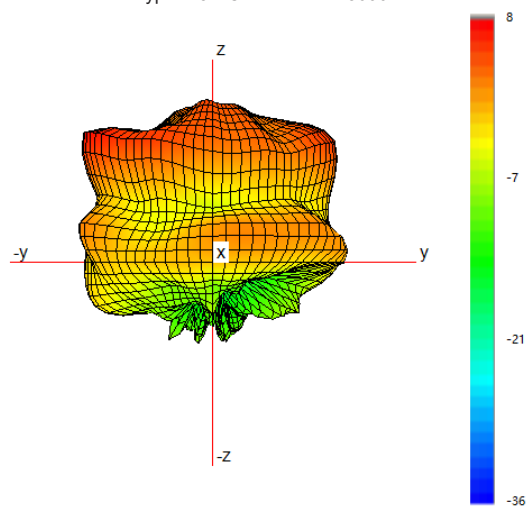
Typical 3D Cell Pattern - 2650 MHz



Typical 3D Cell Pattern - 3600 MHz



Typical 3D Cell Pattern - 5600 MHz



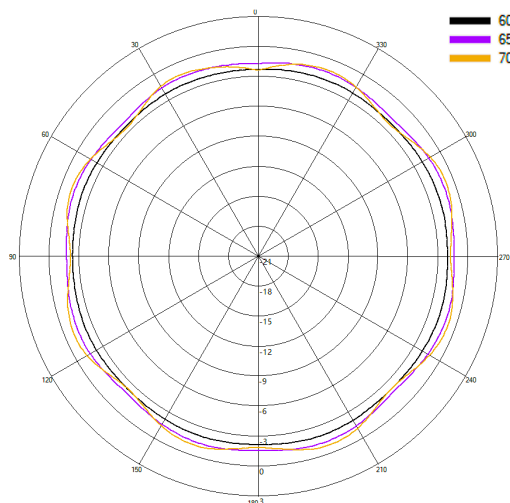
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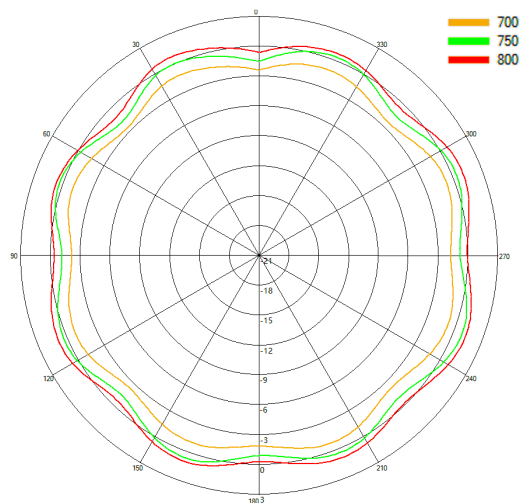
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## 2D H Plane Pattern Data on Ground Plane

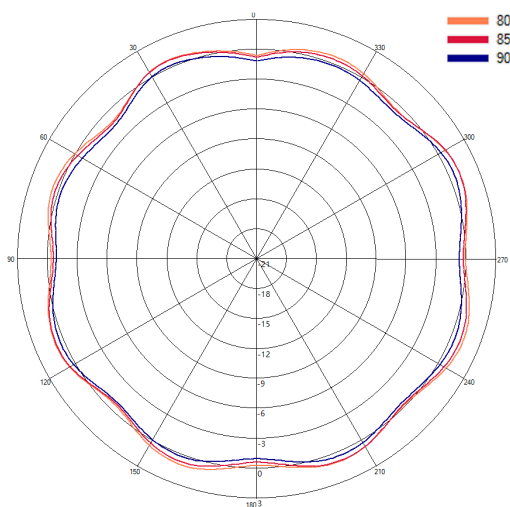
Typical H Plane Cell Patterns - 600-700 MHz



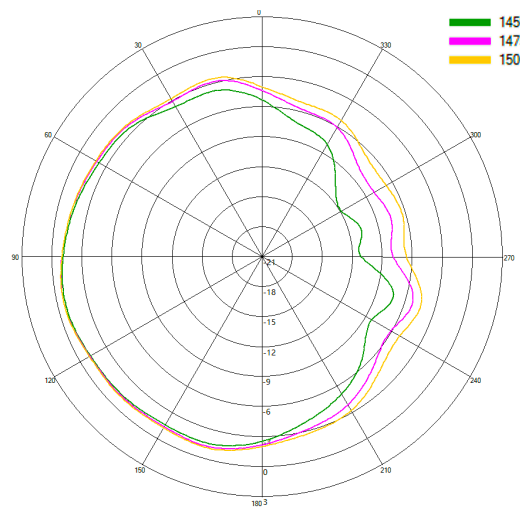
Typical H Plane Cell Patterns - 700-800 MHz



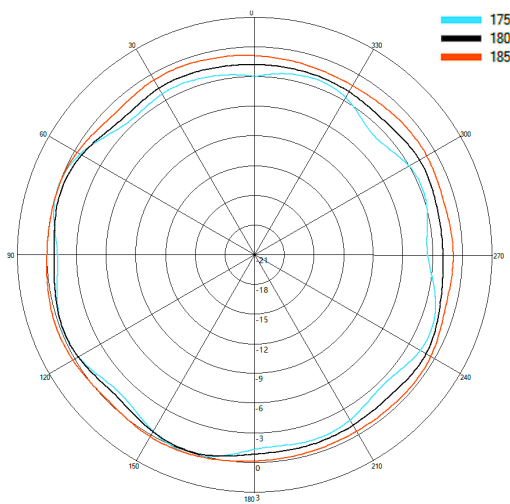
Typical H Plane Cell Patterns - 800-900 MHz



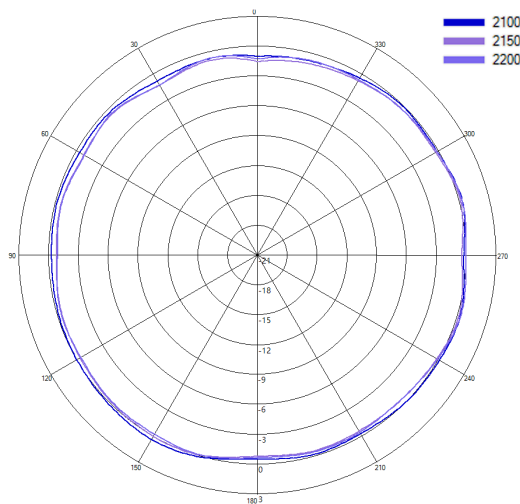
Typical H Plane Cell Patterns - 1450-1500 MHz



Typical H Plane Cell Patterns - 1750-1850 MHz



Typical H Plane Cell Patterns - 2100-2200 MHz



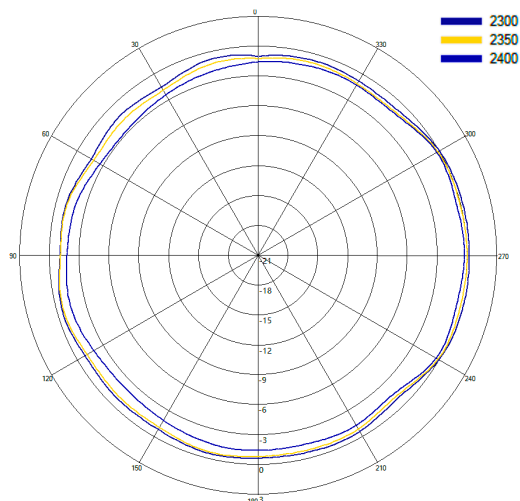
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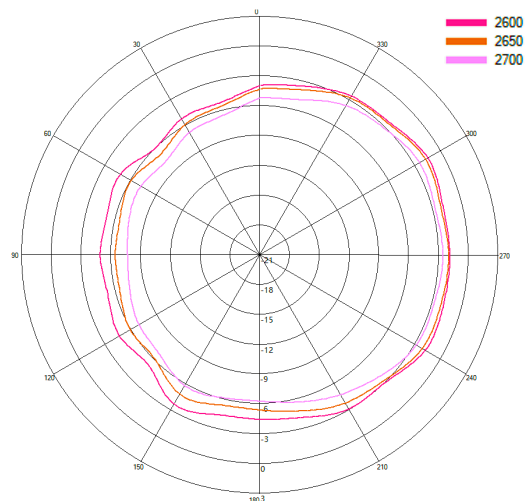
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2D H Plane Pattern  
Data on Ground Plane

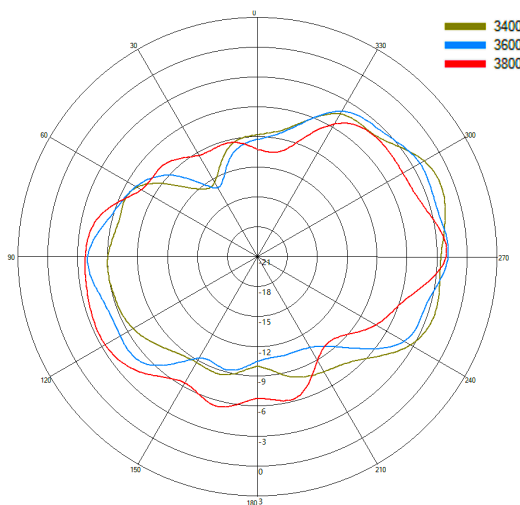
Typical H Plane Cell Patterns - 2300-2400 MHz



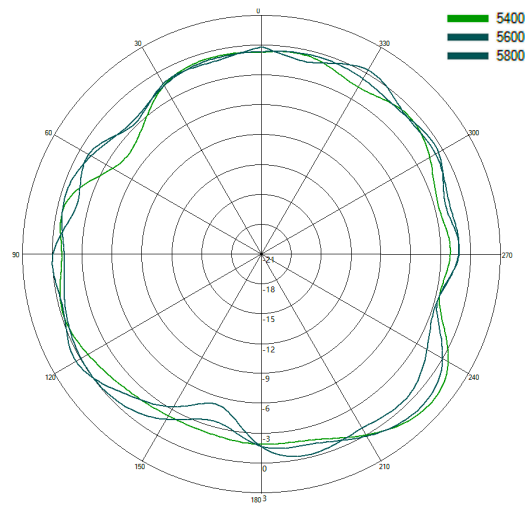
Typical H Plane Cell Patterns - 2600-2700 MHz



Typical H Plane Cell Patterns - 3400-3800 MHz



Typical H Plane Cell Patterns - 5400-5800 MHz



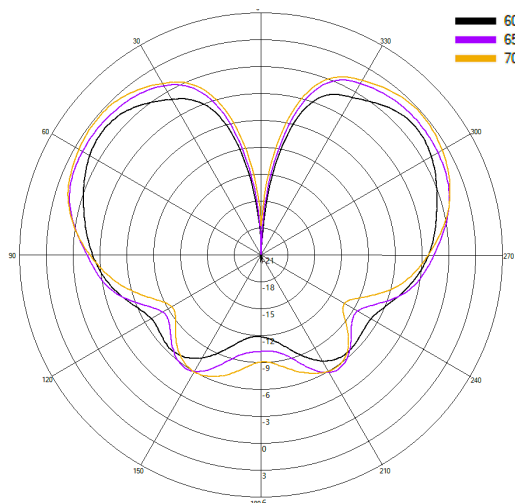
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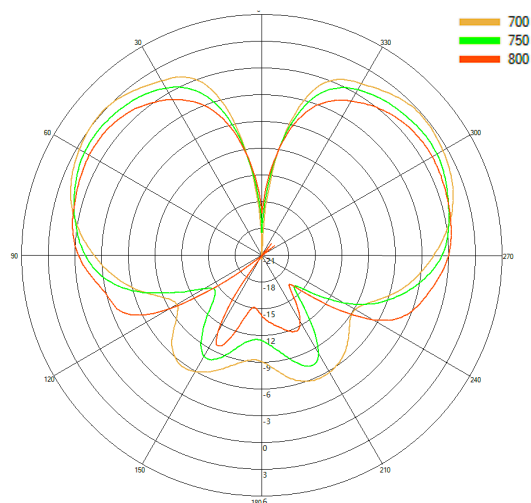
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## 2D E Plane Pattern Data on Ground Plane

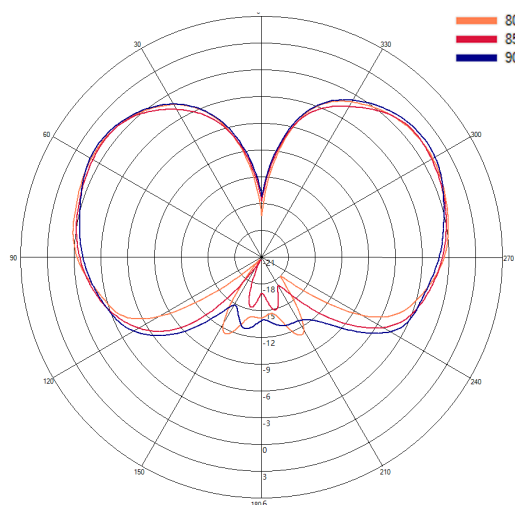
Typical E Plane Cell Patterns - 600-700 MHz



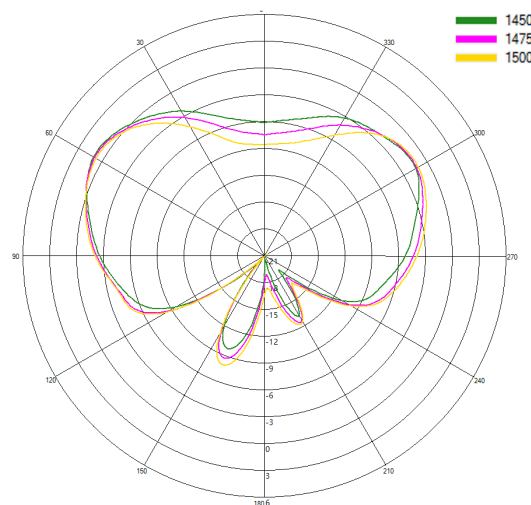
Typical E Plane Cell Patterns - 700-800 MHz



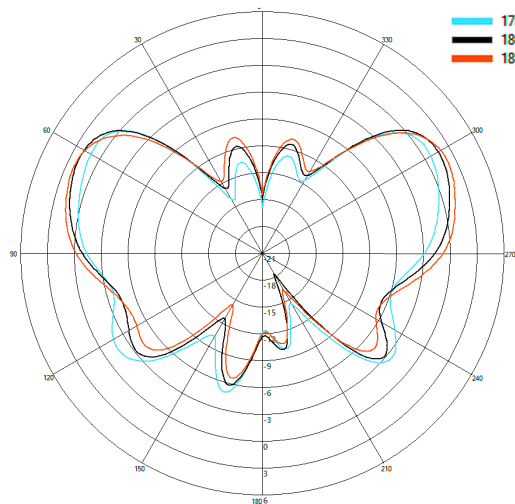
Typical E Plane Cell Patterns - 800-900 MHz



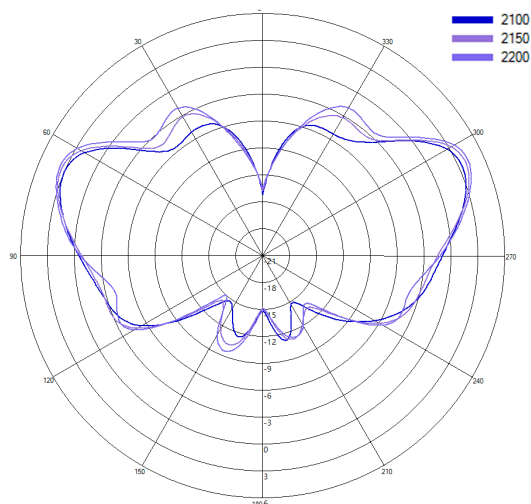
Typical E Plane Cell Patterns - 1450-1500 MHz



Typical E Plane Cell Patterns - 1750-1850 MHz



Typical E Plane Cell Patterns - 2100-2200 MHz



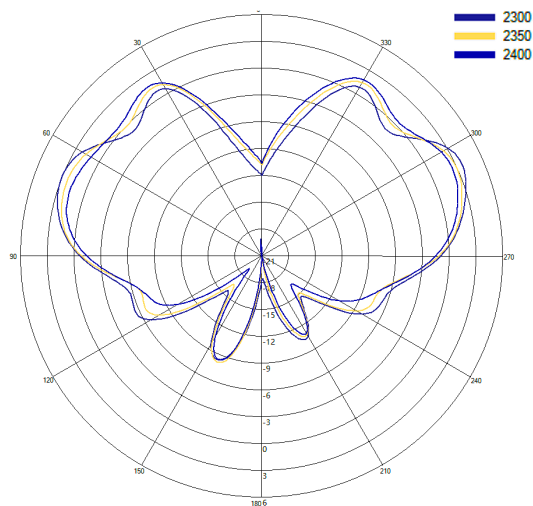
# 2G/3G/4G/5G Low Profile Antenna

LPB-6-60-NJ

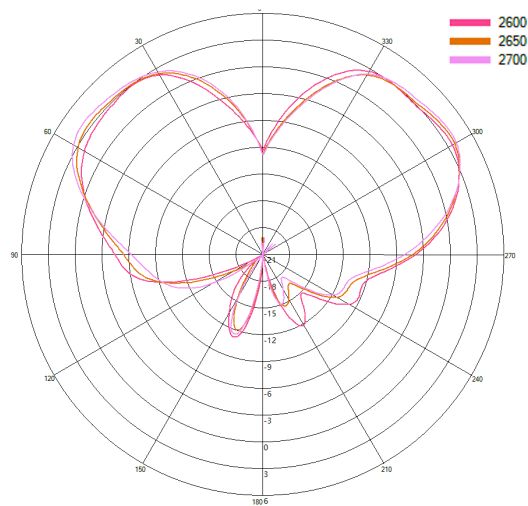
PANORAMA ANTENNAS

2D E Plane Pattern  
Data on Ground Plane

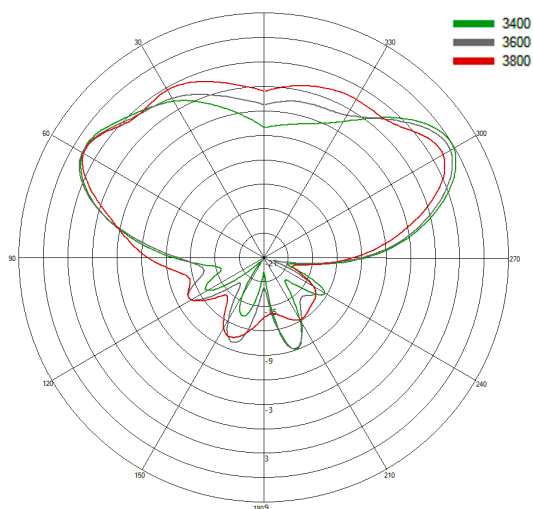
Typical E Plane Cell Patterns - 2300-2400 MHz



Typical E Plane Cell Patterns - 2600-2700 MHz



Typical E Plane Cell Patterns - 3400-3800 MHz



Typical E Plane Cell Patterns - 5400-5800 MHz

