868MHz
Low Profile Antenna

LPWTC-868-[X]

- Low profile
- Covers 868MHz
- Adhesive or screw mount
- Designed for metal panels
- Multiple cable routing options

The Panorama LPWTC-868-[X] antenna range is designed to decrease the lifetime cost of M2M and smart metering installations by offering a robust, effective antenna that is easy to install.

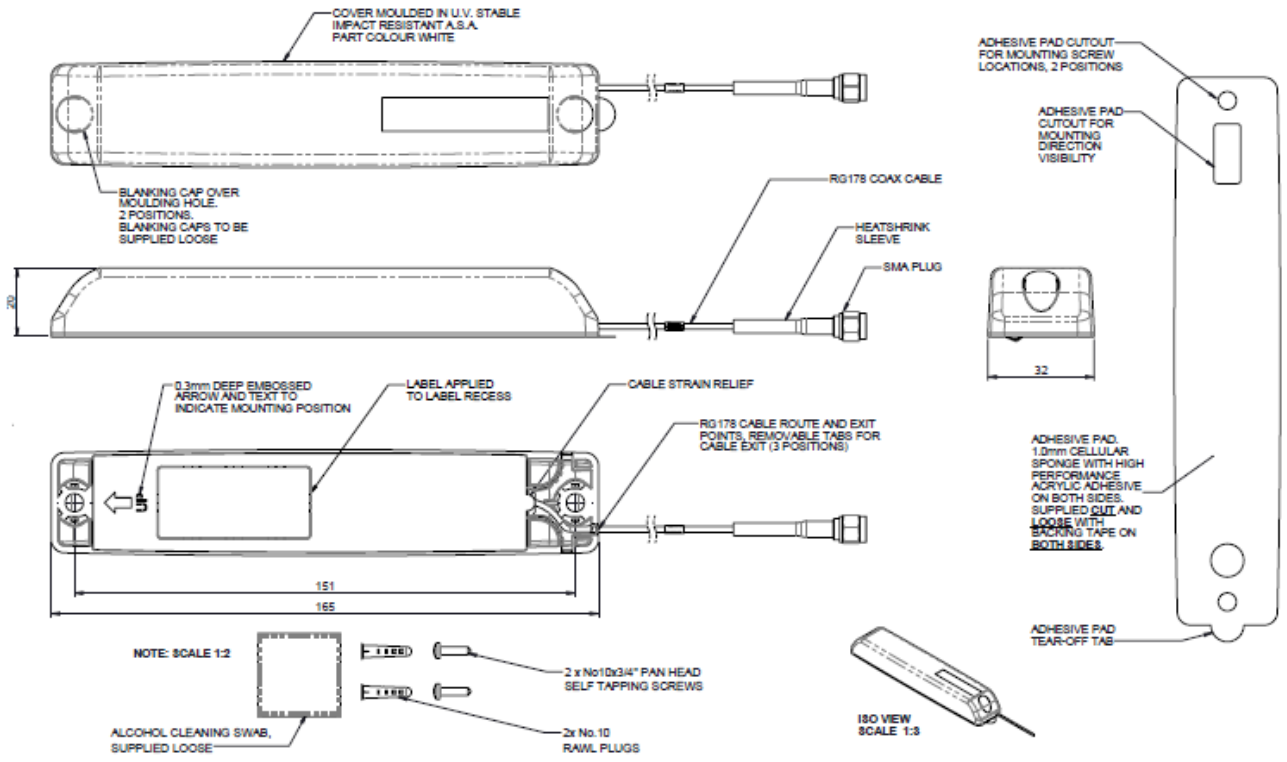
Covering the 868MHz band the antenna is designed primarily for mounting on metal surfaces but maintains acceptable performance even on non-conductive panels or in free space. The antenna is omni-directional and the efficient element design ensures a high first time connection rate and an ongoing, robust communications link.

The antenna can be installed using the supplied acrylic adhesive pad or via the integrated screw mounting bosses. Performance may change based on mounting surface.

The LPWTC features an ultra slim 1.78mm diameter cable which can permit the cable to run through some enclosure sealing gaskets allowing installation without drilling any holes.

Technical Drawing

LPWTC-868 Shown



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Product Data

Part No.			
		LPWTC-868-1-5SP	LPWTC-868-1-5RFCJ
Electrical Data			
Frequency Range (MHz)		863 - 870MHz	
Typical Peak Gain: Isotropic +		3dBi	
Typical VSWR*		<1.5:1	
Polarisation		Vertical	
Pattern		Omni-directional	
Impedance		50Ω	
Max Input Power (W)		10	
Mechanical Data			
Dimensions (mm)	Height	20 (0.79”)	
	Length	165 (6.5”)	
	Width	32 (1.26”)	
Operating Temp (°C)		-30° / +70°C (-30° /+158° F)	
Material		ASA Plastic	
Colour		White	
IP Rating		IP66 when propely installed	
Mounting Data			
Fixing		Acrylic adhesive pad & 2x ST/STL 4.8/19mm screws	
Cable Data			
Type		RG178	
Diameter (mm)		1.78 (0.07”)	
Length (m)		1.5 (4.9’)	
Termination		SMA Plug (m)	Right Angle FAKRA C Jack (f)

+Typical peak gain measured on the edge of a 600x600mm (2’x2’) groundplane with 0.6m (2’) of RG178 cable.
*Typical VSWR measured on the edge of a 600x600mm (2’x2’) groundplane in free space with 0.6m (2’) of RG178 cable.

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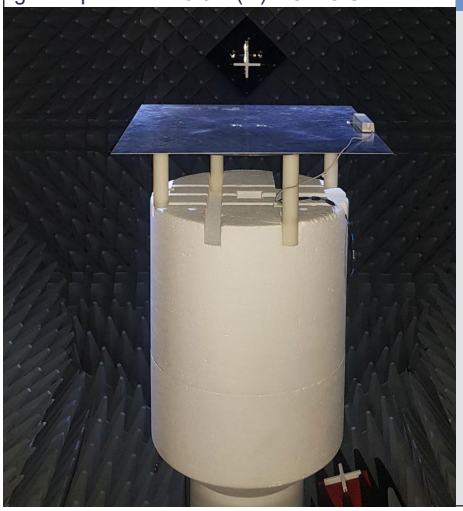
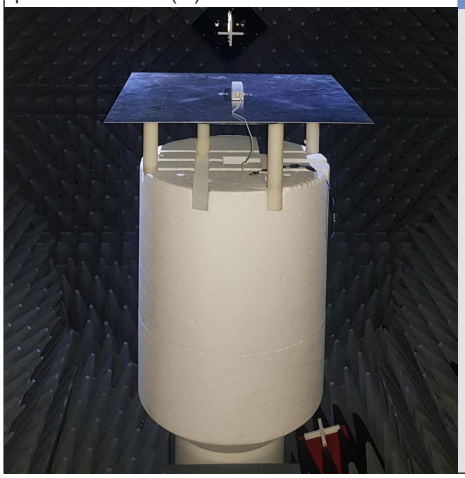
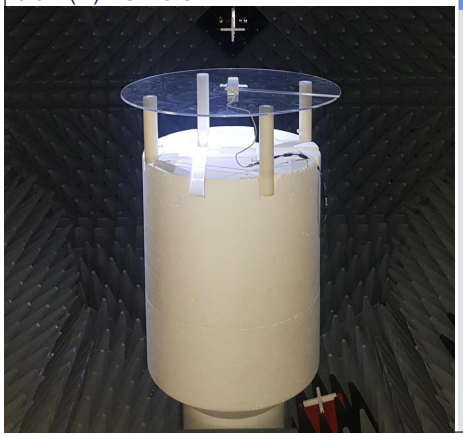
Electrical Data

Measurement Conditions	868MHz Antenna		
LPWTC-868 measured at the edge of groundplane with 0.6m (2') RG178 Cable	Frequency Range (MHz)	Peak Gain (dBi)	Efficiency (%)
	868	3.3	79

Measurement Conditions	868MHz Antenna		
LPWTC-868 measured in centre of ground-plane with 0.6m (2') RG178 Cable	Frequency Range (MHz)	Peak Gain (dBi)	Efficiency (%)
	868	2.3	58

Measurement Conditions	868MHz Antenna		
LPWTC-868 measured in free space with 0.6m (2') RG178 Cable	Frequency Range (MHz)	Peak Gain (dBi)	Efficiency (%)
	868	0	49

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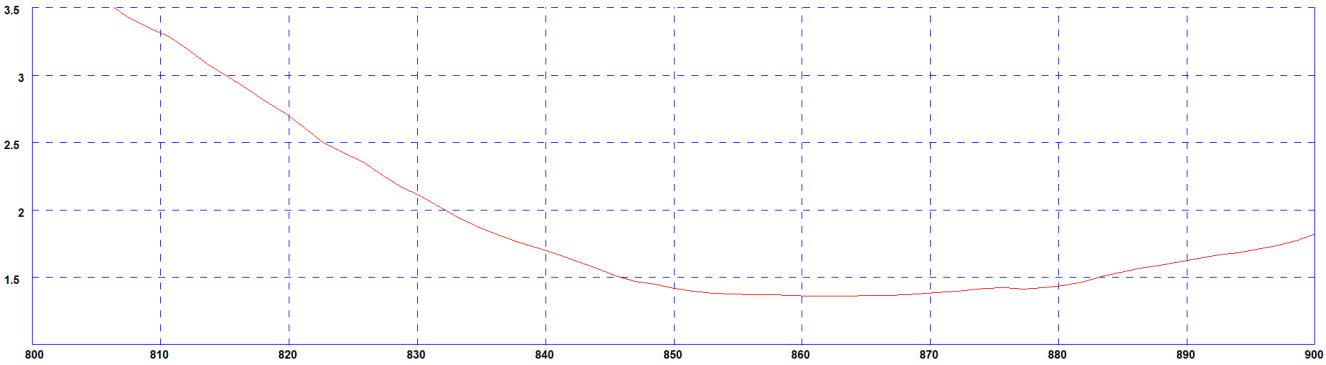
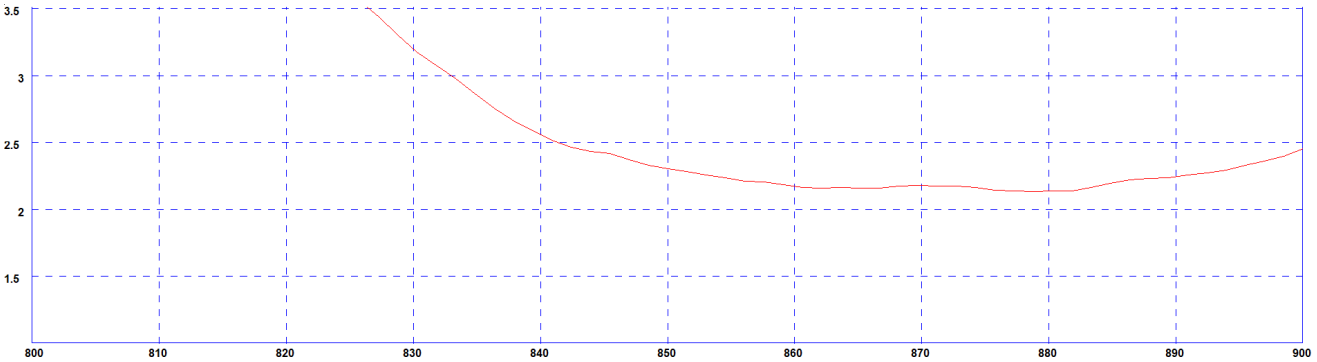
VSWR

Typical VSWR - Edge of Groundplane *



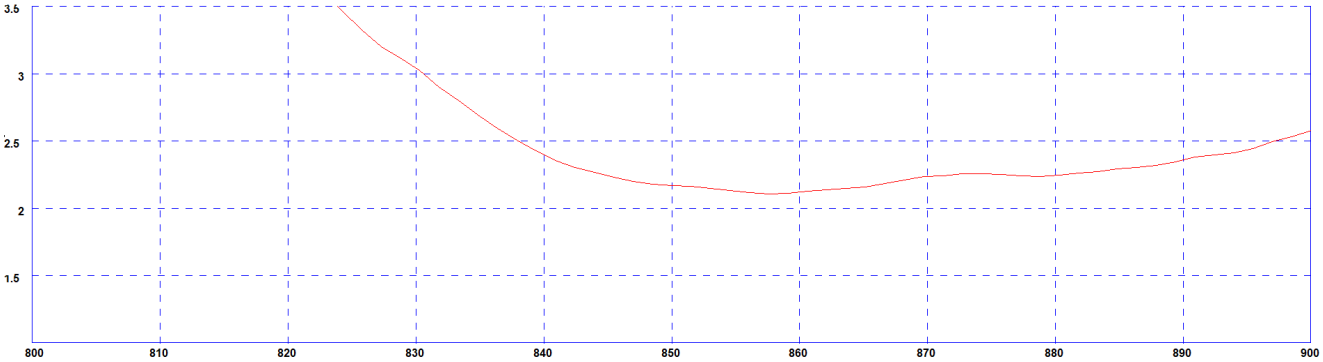
*VSWR measured at the edge of 600x600mm (2'x2') ground plane with with 0.6m (2') of RG178 cable

Typical VSWR Centre of Groundplane *



*VSWR measured in the centre of 600x600mm (2'x2') ground plane with with 0.6m (2') of RG178 cable

Typical VSWR - Free Space *



*VSWR measured in free space with 0.6m (2') of RG178 cable

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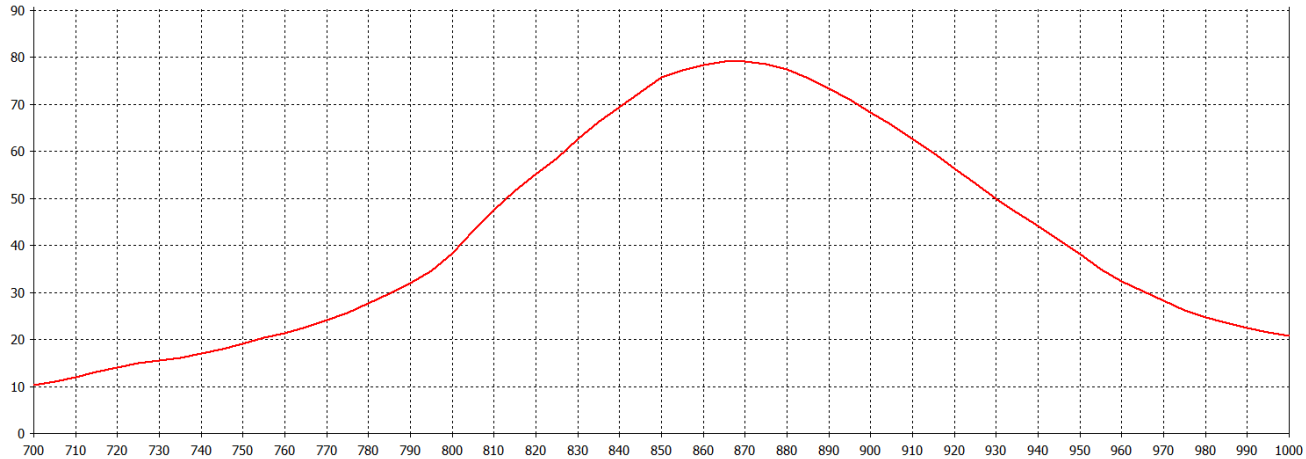
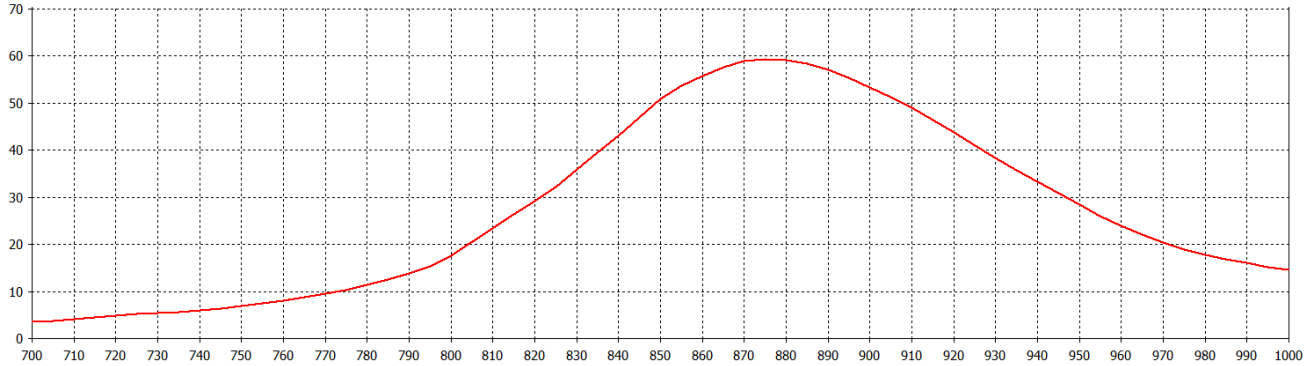
Efficiency

Typical Efficiency - Edge of Groundplane *



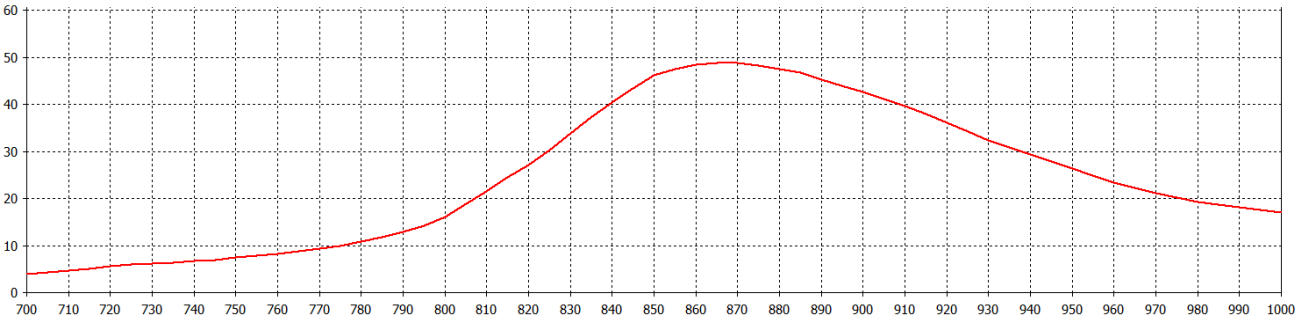
*Efficiency measured at the edge of 600x600mm (2'x2') ground plane with with 0.6m (2') of RG178 cable

Typical Efficiency Centre of Groundplane *



*Efficiency measured in the centre of 600x600mm (2'x2') ground plane with with 0.6m (2') of RG178 cable

Typical Efficiency - Free Space *



*Efficiency measured in free space with 0.6m (2') of RG178 cable

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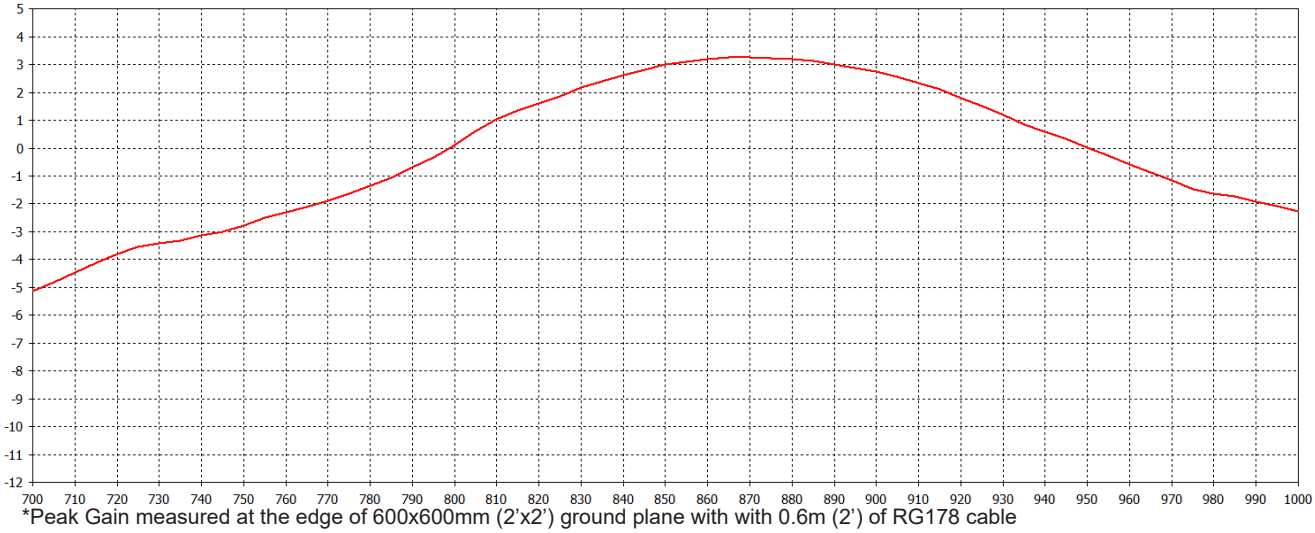
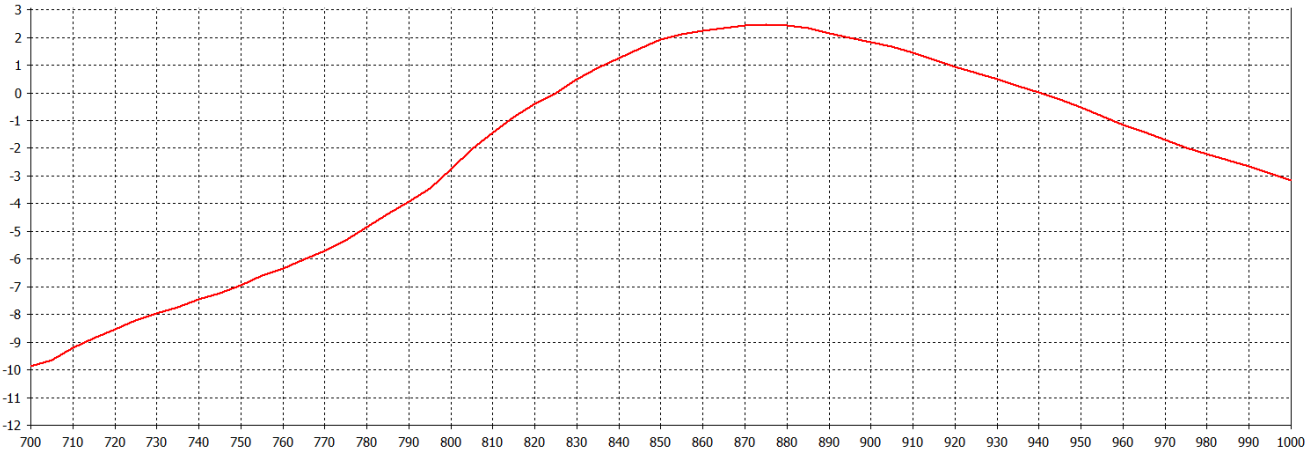
Typical Swept Peak Gain - Edge of Groundplane *



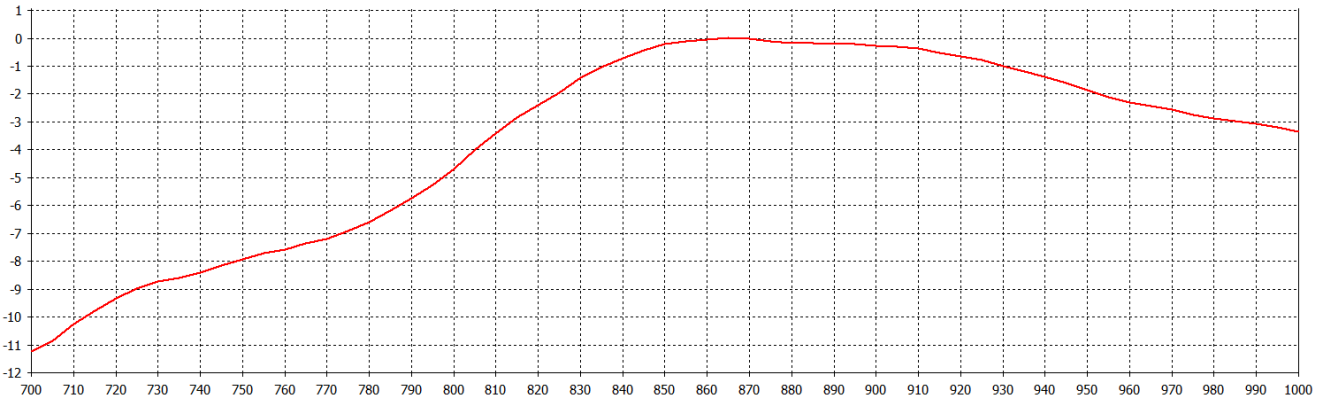
*Peak Gain measured at the edge of 600x600mm (2'x2') ground plane with with 0.6m (2') of RG178 cable

Typical Swept Peak Gain Centre of Groundplane *



*Peak Gain measured in the centre of 600x600mm (2'x2') ground plane with with 0.6m (2') of RG178 cable

Typical Swept Peak Gain - Free Space *



*Peak Gain measured in free space with 0.6m (2') of RG178 cable

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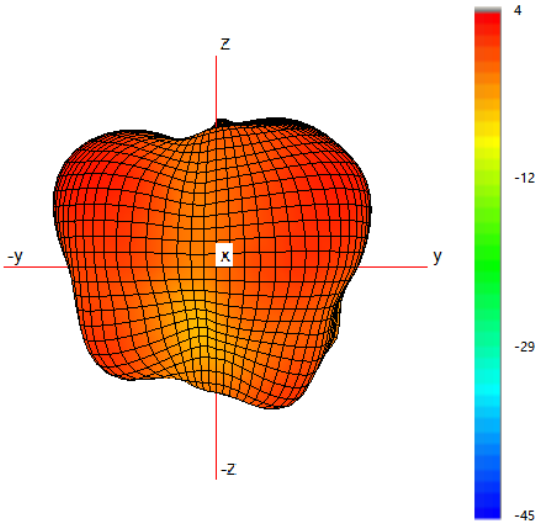
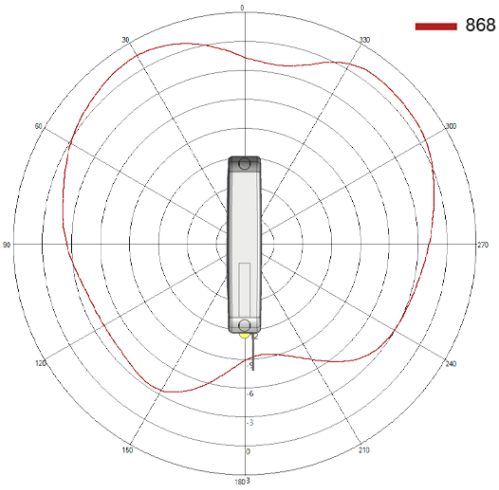
3D Pattern Data on Ground Plane - Edge

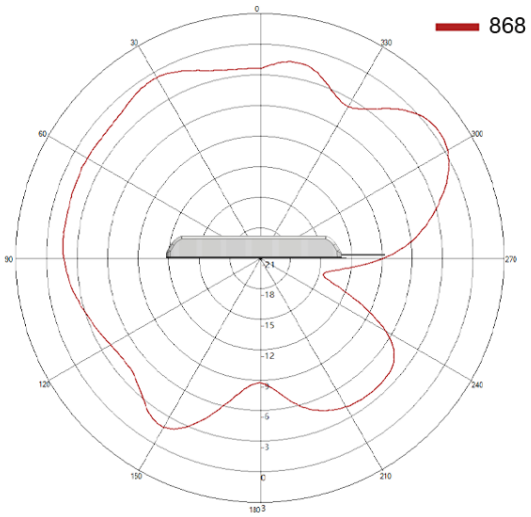
Typical 3D Pattern - 868MHz



Typical H Plane Pattern - 868MHz



Typical E Plane Pattern - 868MHz



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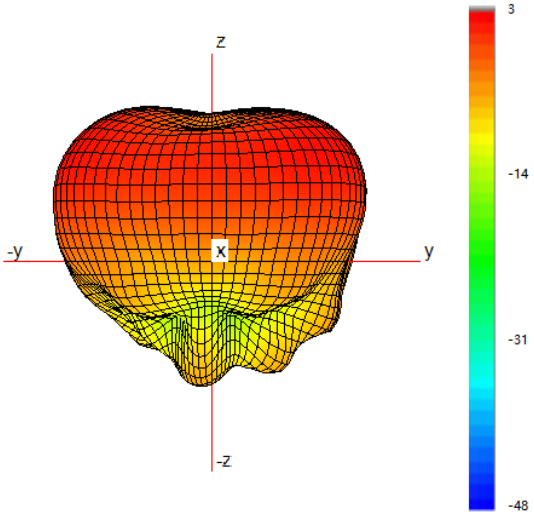
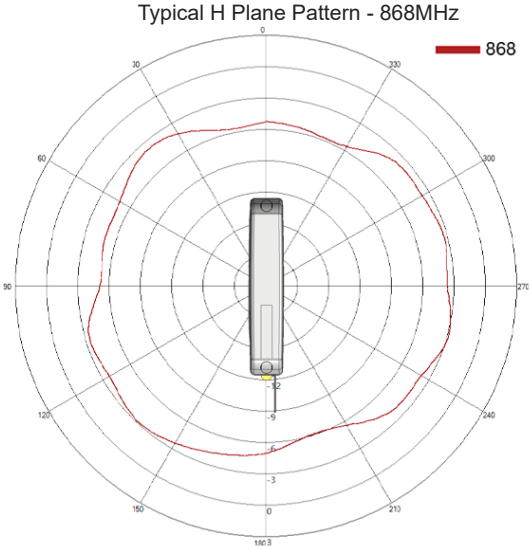
3D Pattern Data on Ground Plane - Centre

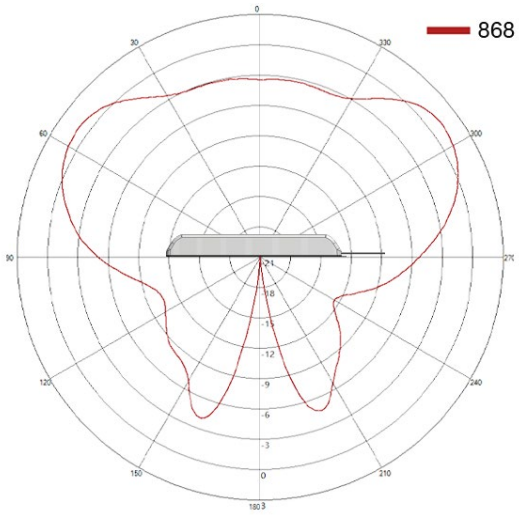
Typical 3D Pattern - 868MHz



Typical H Plane Pattern - 868MHz



Typical E Plane Pattern - 868MHz



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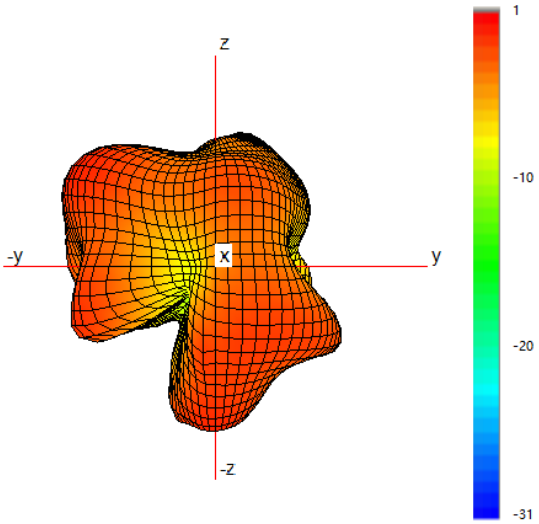
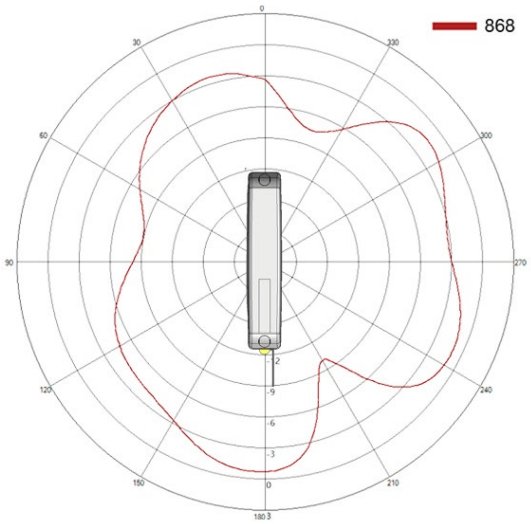
3D Pattern Data in Free Space

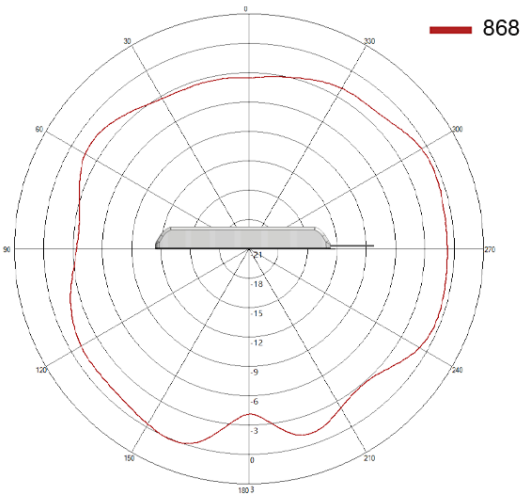
Typical 3D Pattern - 868MHz



Typical H Plane Pattern - 868MHz



Typical E Plane Pattern - 868MHz



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