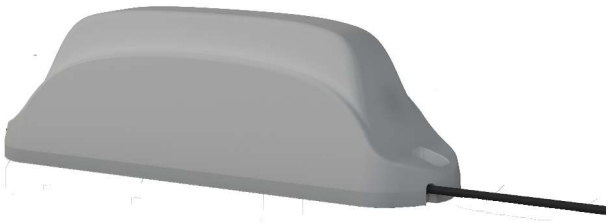
SiSo LTE IOT Antenna

LPA-7-42-[X]



- Highly efficient antenna covering 698-960/1710-4200MHz
- Wall, panel or mast mount
- Ensure reliable connectivity for IOT devices

The LPA-7-42 series is a range of highly efficient omni-directional multi-band antennas for IOT devices suitable for external or internal installation.

The design of the antenna enables simple wall mounting using the supplied screws and wall plugs, adhesive pad mounting or mast mounting using the supplied cable ties.

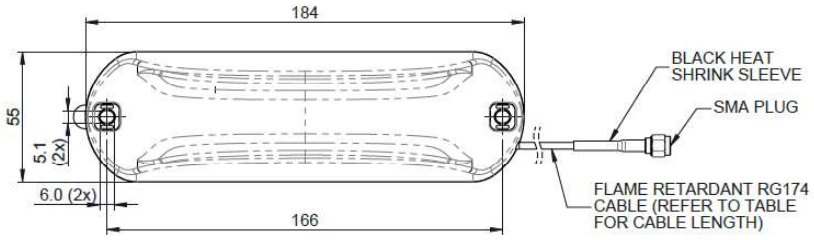
The omni-directional radiation pattern allows easy placement and flexible installation.

These antennas are an ideal solution for use in industrial and domestic environments with cellular modems/routers for IoT and Machine to Machine (M2M) wireless connectivity applications. The high performance of the antenna helps maximise first time connection rates and minimise revisits and communciatons issues after installation thereby reducing lifetime costs.

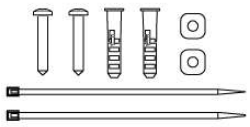
The antennas are fitted with integrated flame retardant RG174 cable and a variety of connectors. Panel mount versions (Part number LPAP-7-42-[X]) and versions fitted with low loss cable for longer cable runs (Part number LPAL-7-42-[X]) are also available.

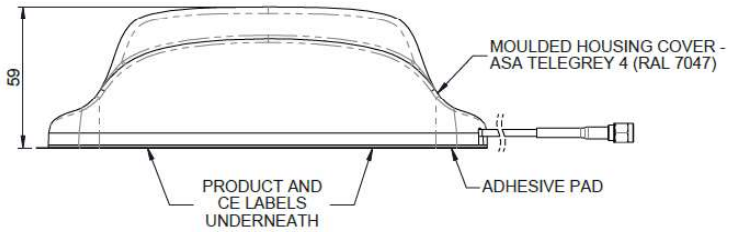
Technical Drawing

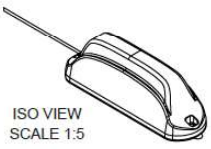
LPA-7-42-2SP Shown



SUPPLIED LOOSE PART :
(2x) No.8 X 25mm PAN HEAD POZI SCREW
(2x) No.8 RAWL PLUG
(2x) SQUARE SEALING WASHER
(2x) PLASTIC CABLE TIE







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LPA-7-42-[X]

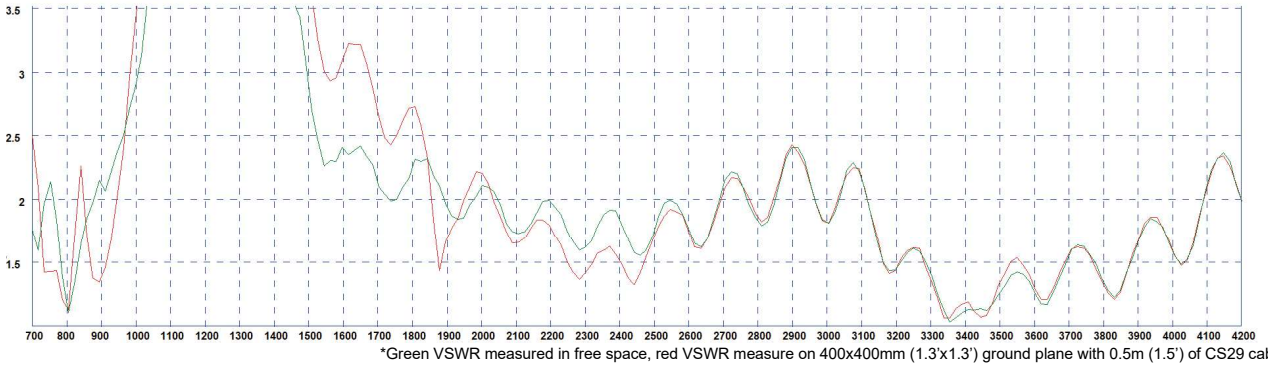
PANORAMA ANTENNAS

Product Data

Part No.		LPA-7-42-2SP	LPA-7-42-2RFDJ
Electrical Data			
Frequency Range (MHz)		698-960 / 1710-4200	
Peak Realised Gain: Isotropic+	698-960MHz	2dBi	
	1710-4200 MHz	6dBi	
Typical VSWR		<2.5:1	
Polarisation		Vertical	
Pattern		Omni-directional	
Impedance		50Ω	
Max Input Power (W)		10	
Mechanical Data			
Dimensions (mm)	Length	184 (7.24”)	
	Width	55 (2.16”)	
	Height	59 (2.32”)	
Operating Temp (°C)		-40° / +85°C (-40° / 185°F)	
Material		ASA	
Colour		Telegray RAL 7047	
Relative Humidity		95%	
Ingress Protection		IP65	
Regulatory Compliance		RoHS 2 (exemption 6.c applied) | REACH	
Mounting Data			
Fixing		Wall /panel - screw / adhesive / cable tie pole mount	
Mounting Screw Diameter (mm)		4 (0.16”)	
Cable Data			
Type		FR RG174 (UN ECE R118 and EN45545-2 Compliant)	
Diameter (mm)		2.8 (0.1”)	
Length (m)		2 (6’ 6”)	2 (6’ 6”)
Voltage Withstand		500 V DC	
Jacket Spark		2000 V RMS	
Termination		SMA (m)	Right Angle FAKRA D Jack

Electrical Data

Typical VSWR*



*Green VSWR measured in free space, red VSWR measure on 400x400mm (1.3’x1.3’) ground plane with 0.5m (1.5’) of CS29 cable.

+Peak gain simulated in CST microwave studio in free space excluding cable loss.

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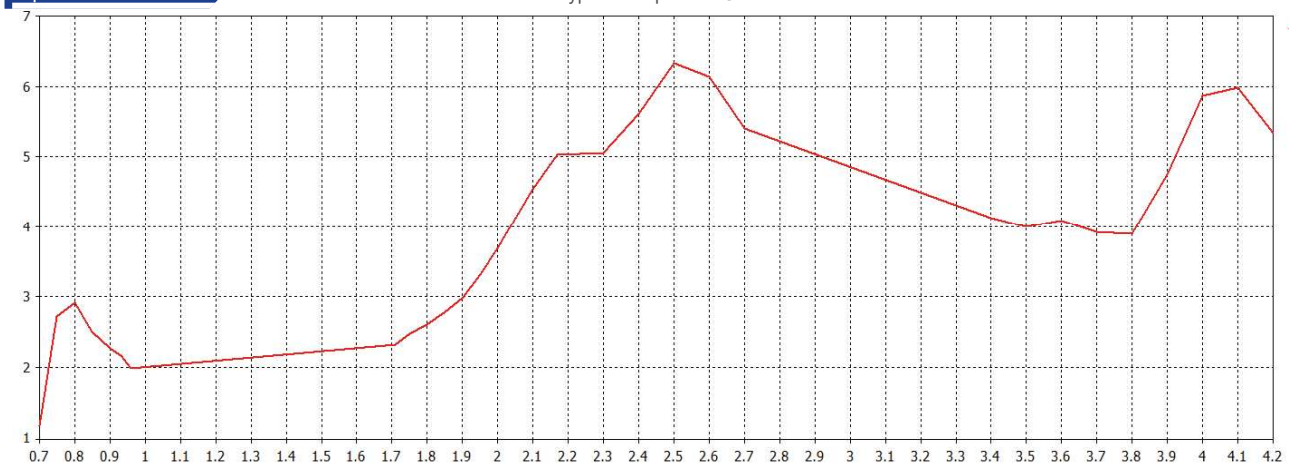
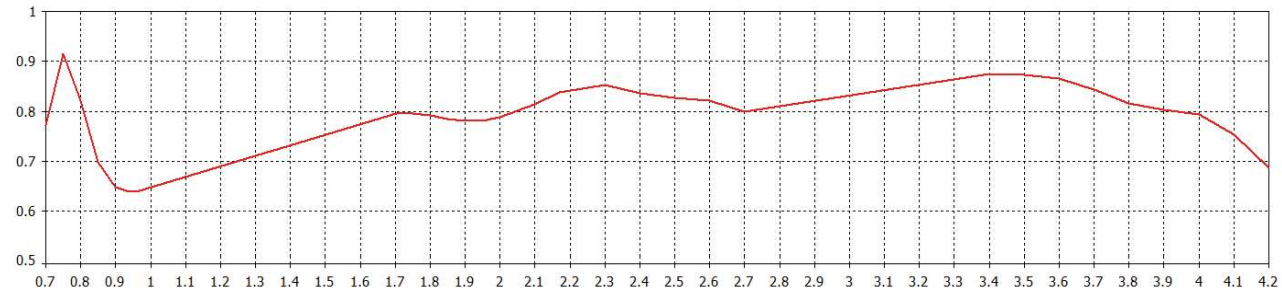
Electrical Data Free Space

Typical Swept Peak Gain*



*Swept peak gain simulated in CST Microwave Studio in free space excluding cable loss

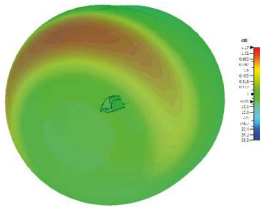
Typical Efficiency*



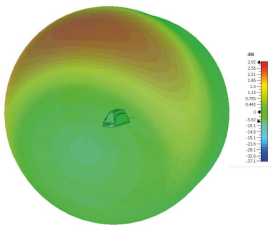
*Typical efficiency simulated in CST Microwave Studio in free space excluding cable loss

3D Patterns Free Space

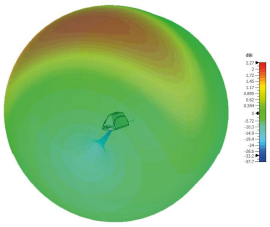
Typical 3D Plot (700 MHz)



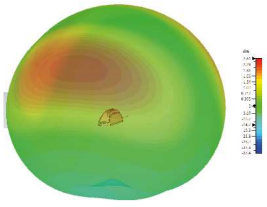
Typical 3D Plot (800 MHz)



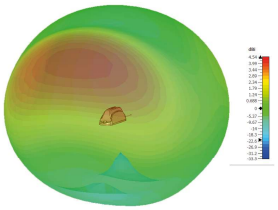
Typical 3D Plot (900 MHz)



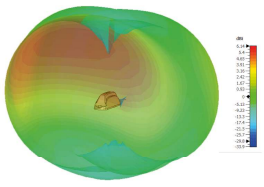
Typical 3D Plot (1800 MHz)



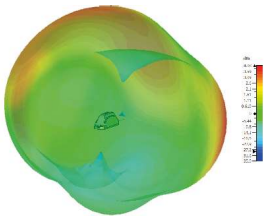
Typical 3D Plot (2000 MHz)



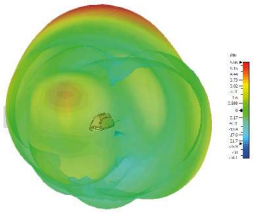
Typical 3D Plot (2600 MHz)



Typical 3D Plot (3600 MHz)



Typical 3D Plot (4000 MHz)



ǂ 3D patterns simulated in CST Microwave Studio in free space excluding cable loss

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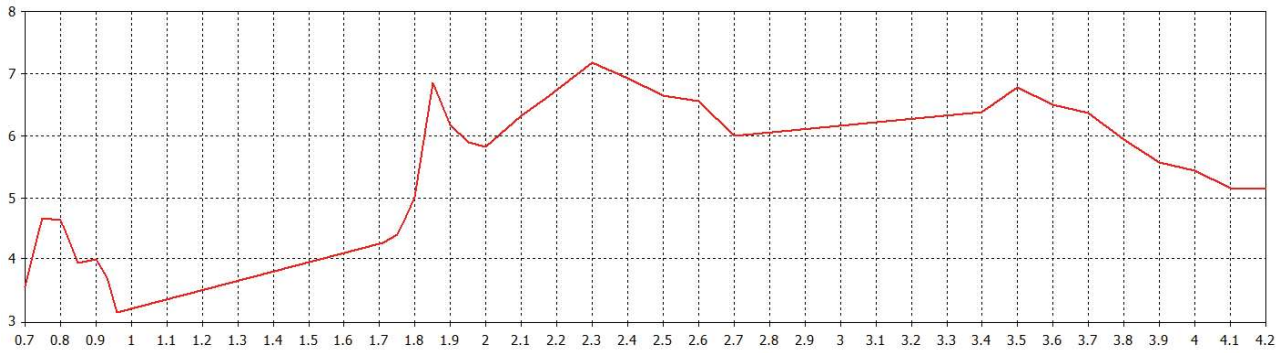
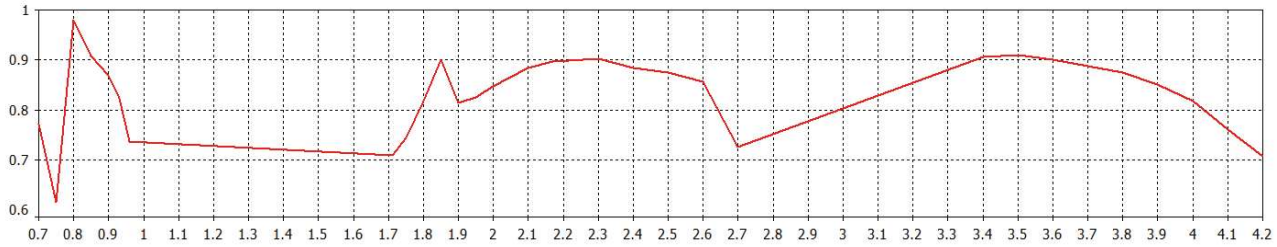
Electrical Data Ground Plane

Typical Swept Peak Gain*



*Swept peak gain simulated in CST Microwave Studio on 400x400mm (1.3' x1.3') ground plane excluding cable loss

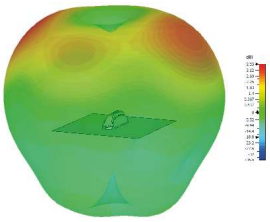
Typical Efficiency*



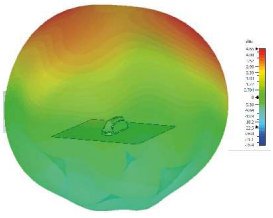
*Typical efficiency simulated in CST Microwave Studio on 400x400mm (1.3' x1.3') ground plane excluding cable loss

3D patterns Ground Plane

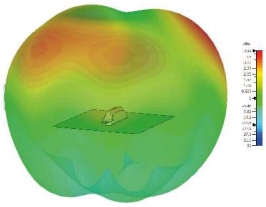
Typical 3D Plot (700 MHz)



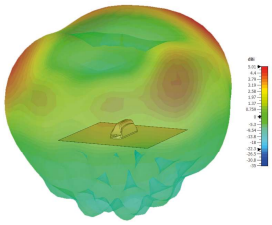
Typical 3D Plot (800 MHz)



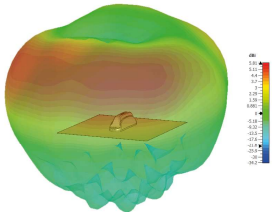
Typical 3D Plot (900 MHz)



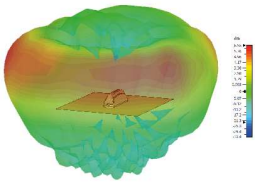
Typical 3D Plot (1800 MHz)



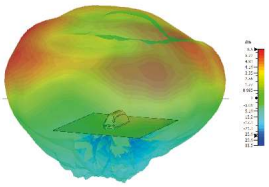
Typical 3D Plot (2000 MHz)



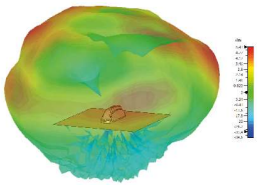
Typical 3D Plot (2600 MHz)



Typical 3D Plot (3600 MHz)



Typical 3D Plot (4000 MHz)



ǂ 3D patterns simulated in CST Microwave Studio on a 400x400mm (1.3' x1.3') ground plane excluding cable loss

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