



Product Data Sheet

WS-LTE

Low profile MiMo LTE & cellular antenna
with GPS



LTE MIMO Antenna

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WS-LTE

Rugged low profile design

2x Wideband LTE/cellular elements

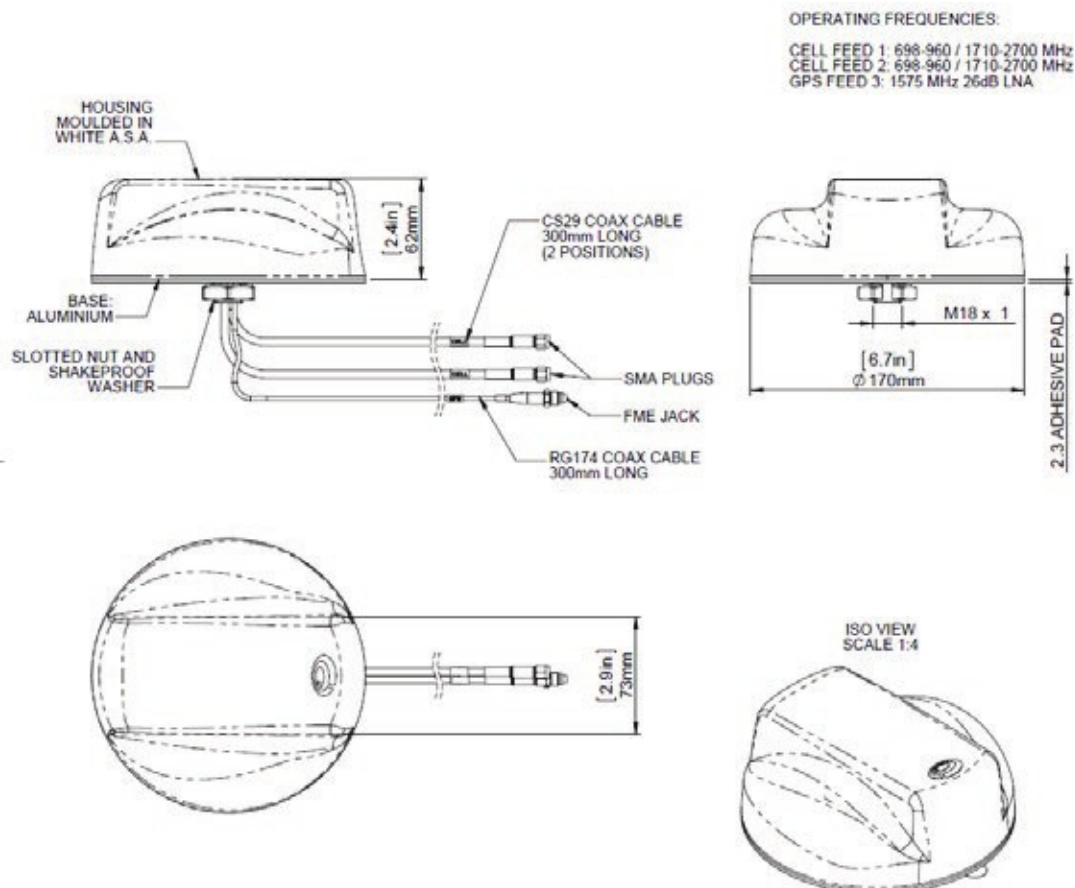
Integrated GPS antenna

The WS-LTE low profile MIMO antenna range has been designed to support the new generation of vehicular LTE routers.

The antenna enclosure contains three isolated high performance antenna elements; two ultra-wideband elements covering 698-2700MHz support MiMo/diversity at cellular/LTE frequencies and a high performance GPS antenna with an integrated 26dB gain LNA and high quality filtering to combat noise.

The antenna does not require a metallic ground plane, and maintains a high level of performance even when mounted on a non-metallic surface.

Technical Drawing



LTE MIMO Antenna

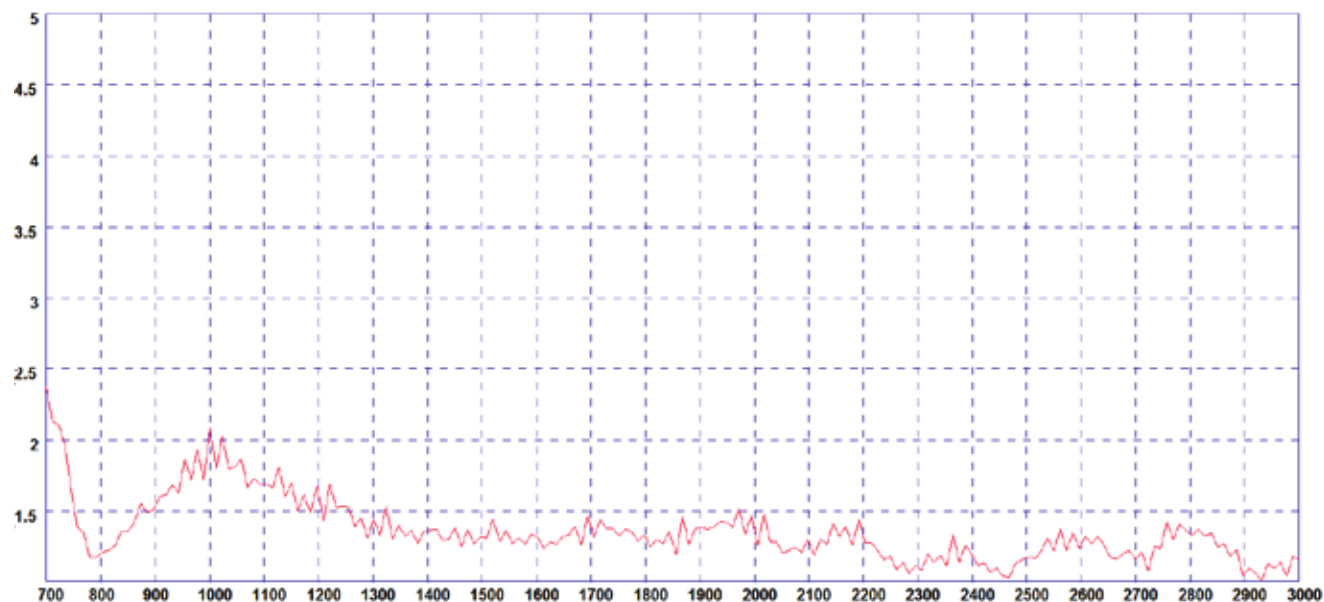
Low Profile MIMO Antenna with GPS

Part No.		
WS-LTE		
Electrical Data		
Frequency Range (MHz)	Elements 1 & 2	698-960 / 1700-2700
Operational Bands	Elements 1 & 2	LTE / Cellular
Peak Gain: Isotropic	Elements 1 & 2 -698-960	2.3dBi
	Elements 1 & 2 -1700-2700	5dBi
VSWR	Elements 1 & 2	< 2.5:1
Isolation (in free space)	Elements 1 & 2	> 15dB
Polarisation		Vertical
Impedance		50Ω
Max Input Power (W)		50
GPS Data		
Frequency Range (MHz)		1575
VSWR		<2.0:1 ± 4MHz
Gain: LNA		26dB
Polarisation		Right Hand Circular
Operating Voltage		3 - 7V DC (fed via coax)
Current		Typical 14mA
Mechanical Data		
Dimensions	Height	2.4" (82mm)
	Diameter	6.7" (176mm)
Operating Temp		-22°/ 176°F (-30° / +80°C)
Material		A.S.A & diecast aluminium
Colour		White
Mounting Data		
Mounting type		Panel mount
Max panel thickness		0.236"(6mm)
Mounting hole		3/4" (19mm)
Cable Data		
GPS Cable	Type	RG174
	Diameter	0.11" (2.8mm)
	Length	1' (0.3m)
	Termination	FME (female)
Cell / LTE Cables x2	Type	CS29 (double shielded RG58)
	Diameter	0.2"(5mm)
	Length	1' (0.3m)
	Termination	SMA (male)

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Typical VSWR cellular / LTE elements*



* VSWR measured in free space with 4.5m (15') of CS29 cable.

Typical Isolation cellular / LTE elements*

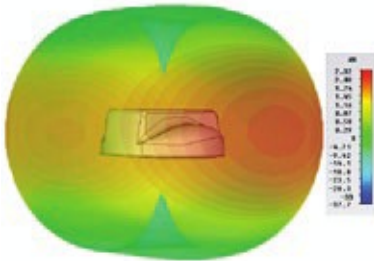


* Isolation measured in free space with 300mm (1') of cable.

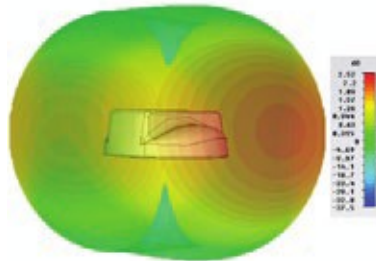
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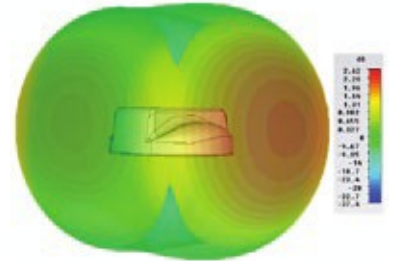
Typical 3D Pattern - Elements 1&2 700MHz



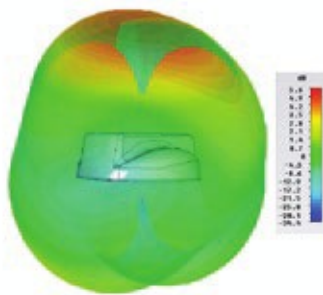
Typical 3D Pattern - Elements 1&2 800MHz



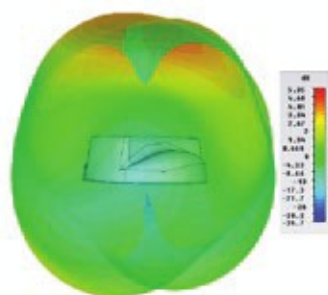
Typical 3D Pattern - Elements 1&2 900MHz



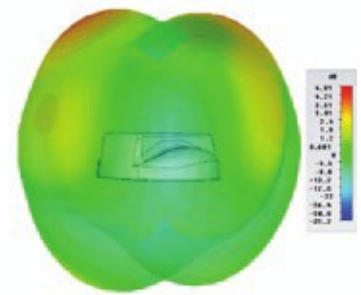
Typical 3D Pattern - Elements 1&2 1800MHz



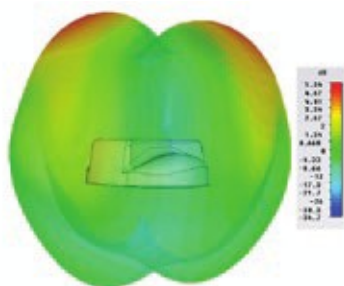
Typical 3D Pattern - Elements 1&2 1900MHz



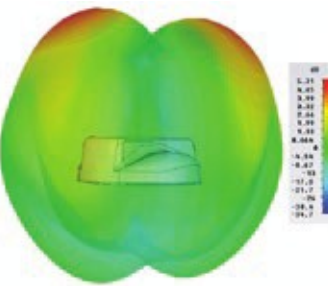
Typical 3D Pattern - Elements 1&2 2100MHz



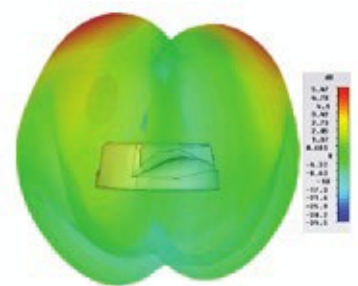
Typical 3D Pattern - Elements 1&2 2400MHz



Typical 3D Pattern - Elements 1&2 2500MHz



Typical 3D Pattern - Elements 1&2 2600MHz



N.B. All pattern and gain measurements taken in free space without additional ground plane.