LTE MIMO Antenna

Low Profile MIMO Antenna

WB 44

Rugged low profile design

2x Wideband LTE/cellular elements

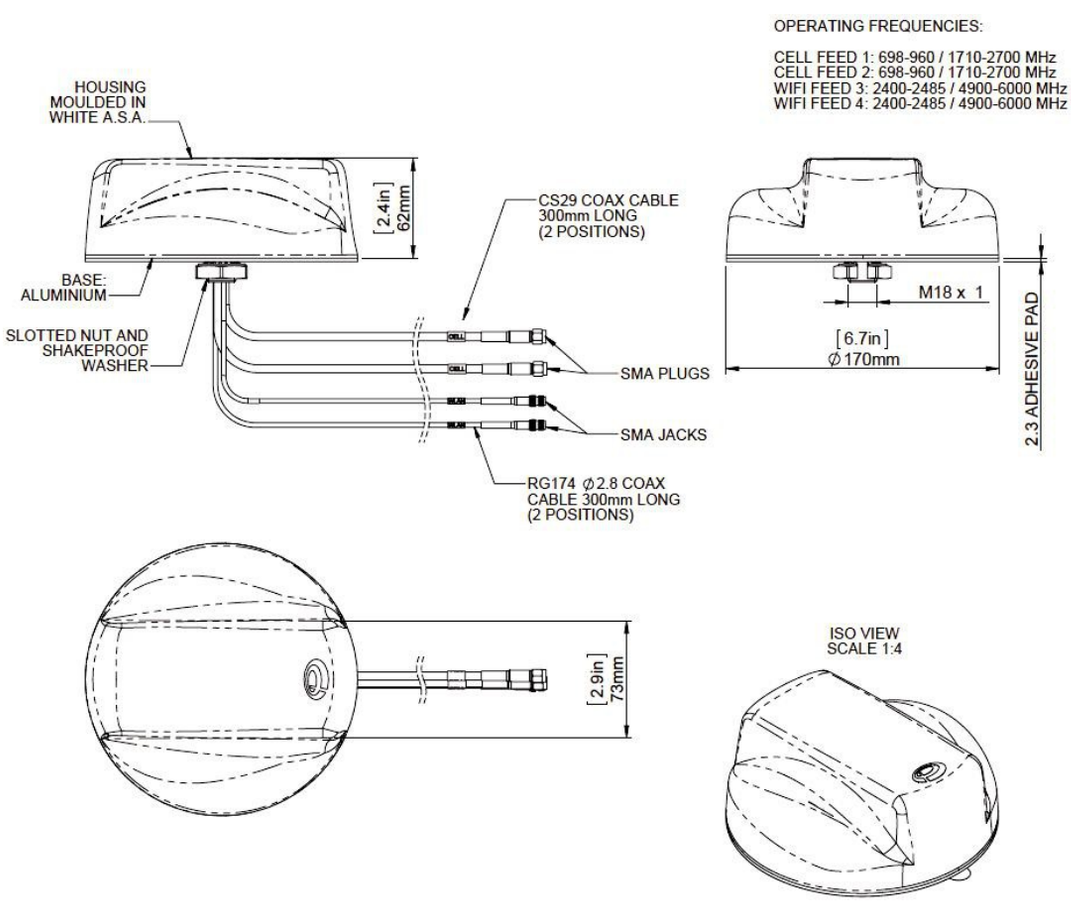
2x 2.4 & 4.9-6GHz WiFi/WIMAX Elements

The Wittenberg WB44 low profile MIMO antenna range has been designed to support the new generation of vehicular LTE routers.

The antenna enclosure contains four isolated high performance antenna elements; two ultra-wideband elements covering 698-2700MHz support MIMO/diversity at cellular/LTE frequencies and two dual band elements covering 2.3-2.7 & 4.9-6GHz support MIMO/diversity operation for WiFi and WiMAX.

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



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			WB 44
Electrical Data			
Frequency Range (MHz)		Elements 1 & 2	698-960 / 1700-2700
		Elements 3 & 4	2.3-2.7 / 4.9-6GHz
Operational Bands		Elements 1 & 2	LTE / Cellular
		Elements 3 & 4	WIFI / WIMAX
Peak Gain: Isotropic		Elements 1 & 2 -698-960	2.3dBi
		Elements 1 & 2 -1700-2700	5dBi
		Elements 3 & 4	2dBi
VSWR		Elements 1 & 2	< 2.5:1
		Elements 3 & 4	< 2:1
Isolation (in free space)		Elements 1 & 2	> 15dB
		Elements 3 & 4	> 20dB
Polarisation			Vertical
Impedance			50Ω
Max Input Power (W)			50
Mechanical Data			
Dimensions	Height		2.4” (62mm)
	Diameter		6.7” (170mm)
Operating Temp			-22°/ 176°F (-30° / +80°C)
Material			A.S.A & diecast aluminium
Colour			Black
Mounting Data			
Mounting type			Panel mount
Max panel thickness			0.236”(6mm)
Mounting hole			3/4” (19mm)
Cable Data			
Cell / LTE Cables x2	Type		CS29 (double shielded RG58)
	Diameter		0.2”(5mm)
	Length		1’ (0.3m)
	Termination		SMA (male)
WIFI / WiMAX Cables x2	Type		RG174
	Diameter		0.11” (2.8mm)
	Length		1’ (0.3m)
	Termination		SMA (female)

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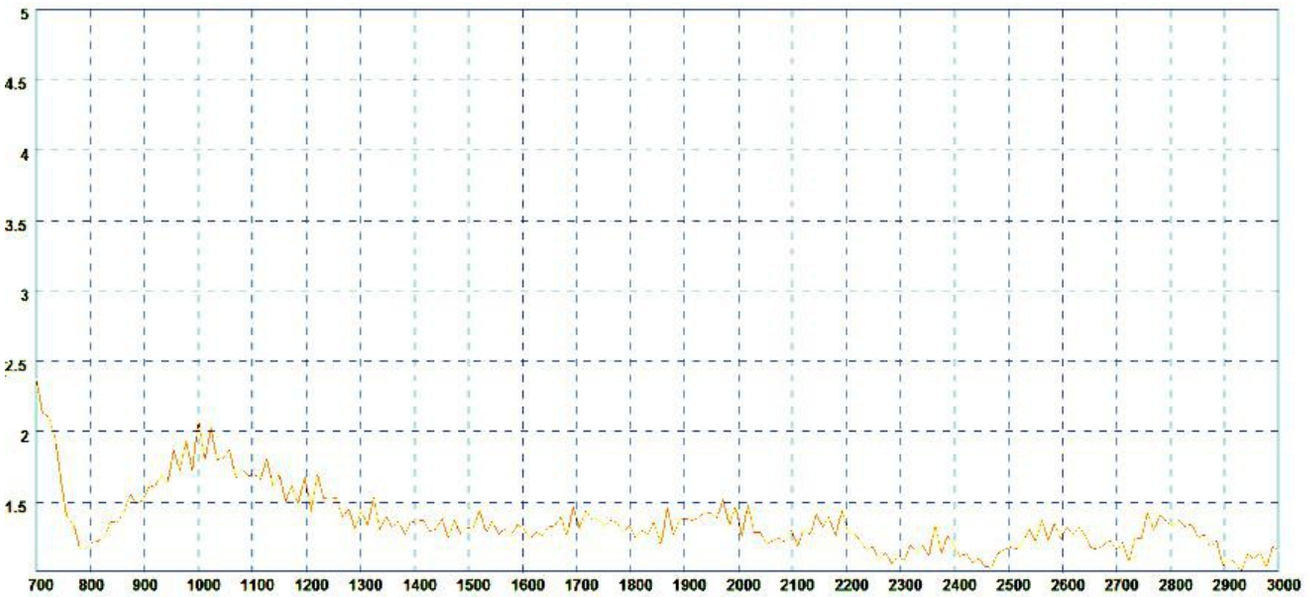
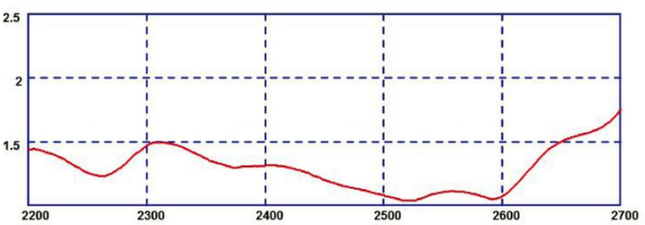
Typical VSWR cellular / LTE elements*

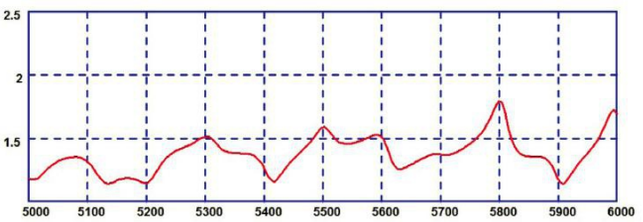


* VSWR measured in free space with 4.5m (15') of CS29 cable.

Typical VSWR WIFI elements 2.4GHz*

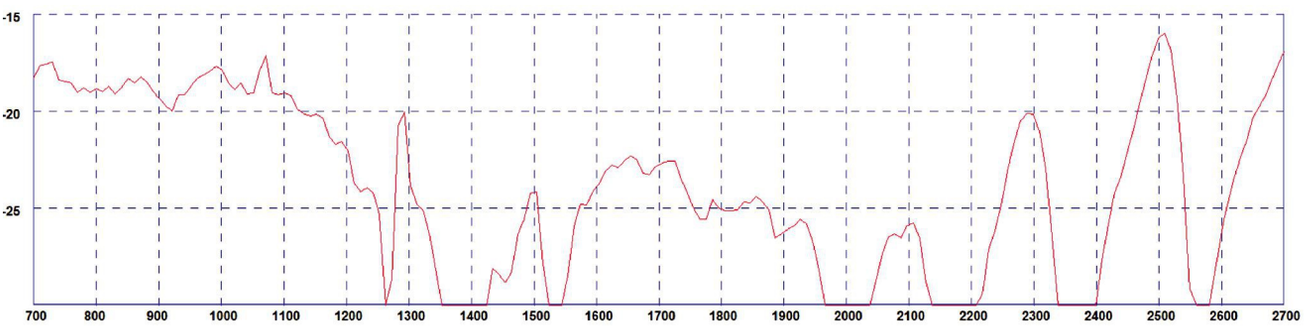


Typical VSWR WIFI elements 5GHz*



* VSWR measured with 5m (17') of cable.

Typical Isolation cellular / LTE elements*



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

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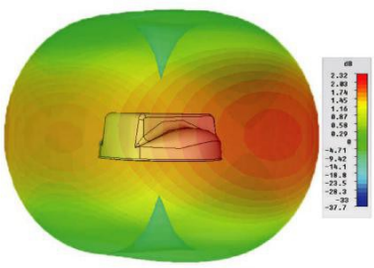
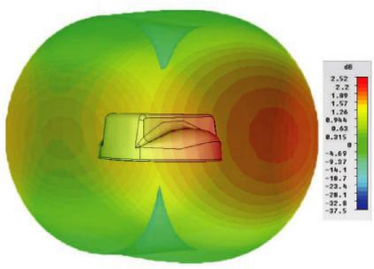
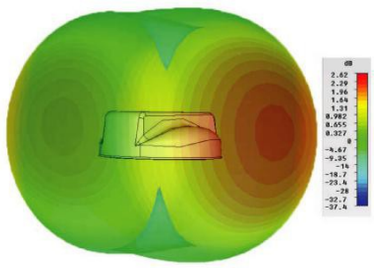
Typical 3D Pattern - Elements 1&2 700MHz



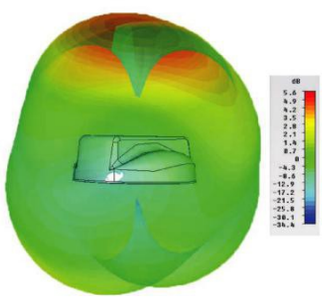
Typical 3D Pattern - Elements 1&2 800MHz



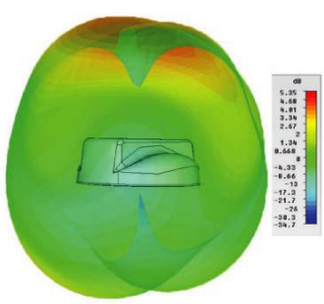
Typical 3D Pattern - Elements 1&2 900MHz



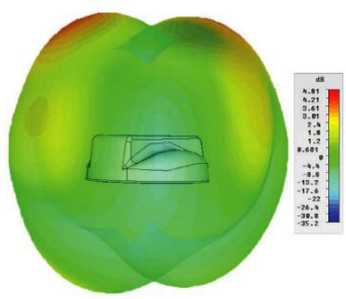
Typical 3D Pattern - Elements 1&2 1800MHz



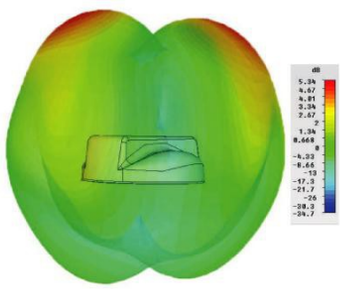
Typical 3D Pattern - Elements 1&2 1900MHz



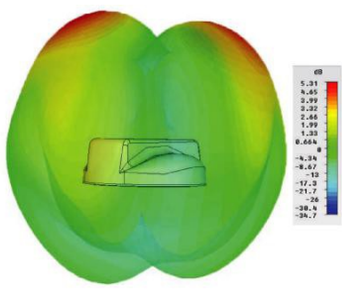
Typical 3D Pattern - Elements 1&2 2100MHz



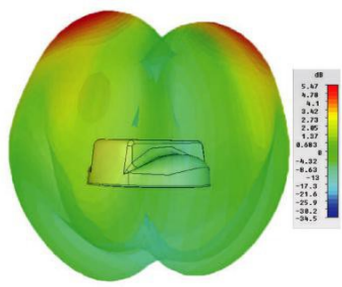
Typical 3D Pattern - Elements 1&2 2400MHz



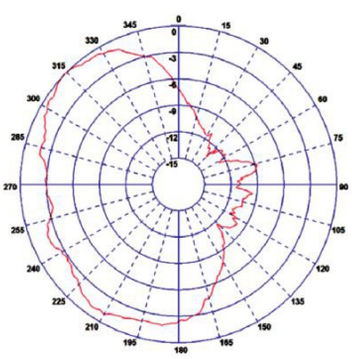
Typical 3D Pattern - Elements 1&2 2500MHz



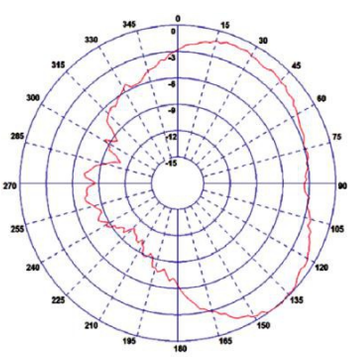
Typical 3D Pattern - Elements 1&2 2600MHz



Typical H-Plane - Element 3 2450 MHz



Typical H-Plane - Element 4 2450MHz



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