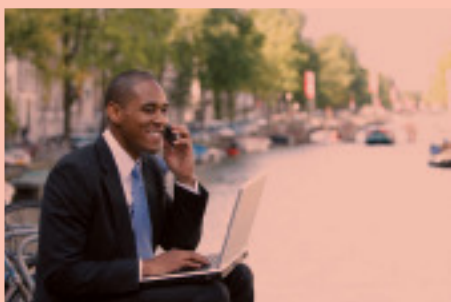
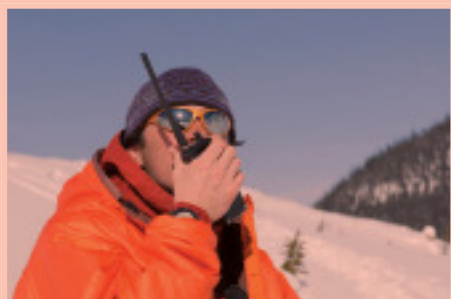




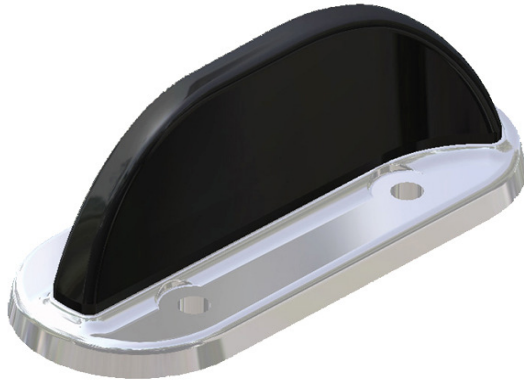
Product Data Sheet

Wideband Transit Antenna with GPS

C/Note	Doc Issue	Date	Approval
01019	4	28.10.14	J.J.

GSM-R

Transit Antenna with GPS



TRNBG-7-27

Standard four hole rail fixing

Suitable for overground & underground trains

Waterproof N connector

The TRNB(G) antenna series is designed specifically for use on trains, trams and buses underground or over ground. Operating wideband across all frequencies from 698MHz to 6000MHz the TRNB(G) range is versatile and future proof.

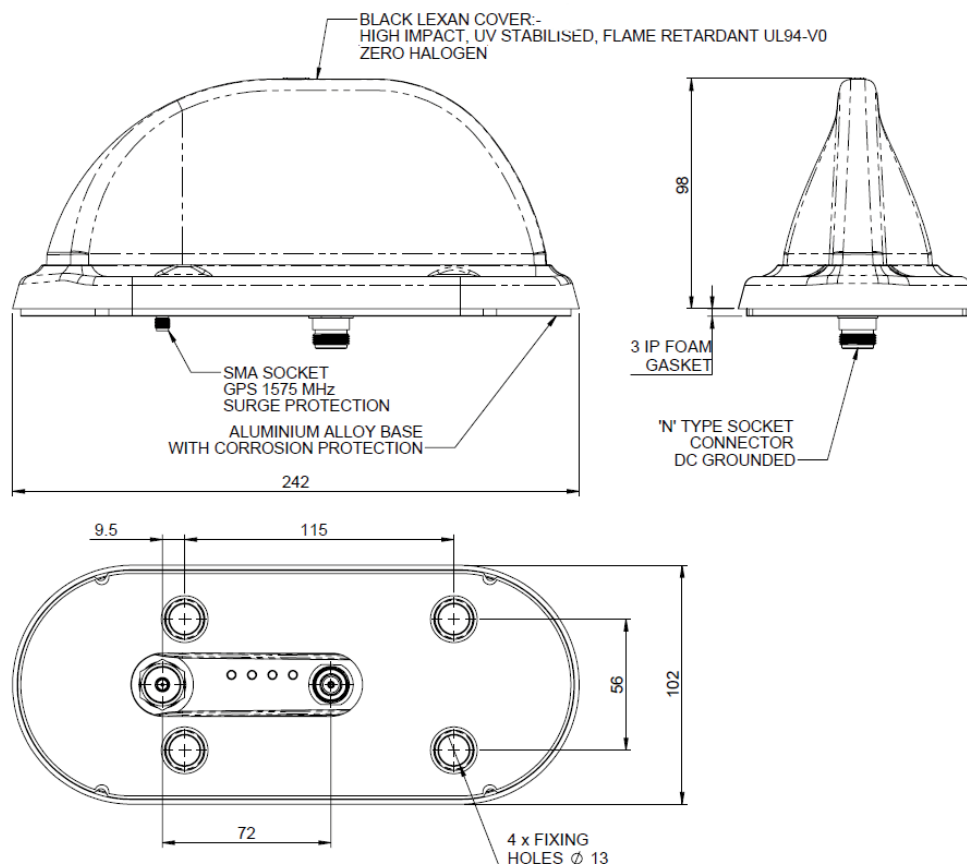
The TRNB(G)-7-27 series covers GSMR, 700MHz LTE, 800MHz TETRA and trunking bands along with all Cellular and GSM frequencies, 2.4 & 5.8GHz WLAN, 2.6 GHz LTE and WIMAX all in one housing.

The TRNB(G) has a DC grounded radiating element, in versions with a GPS module it is protected by a gas discharge surge arrester.

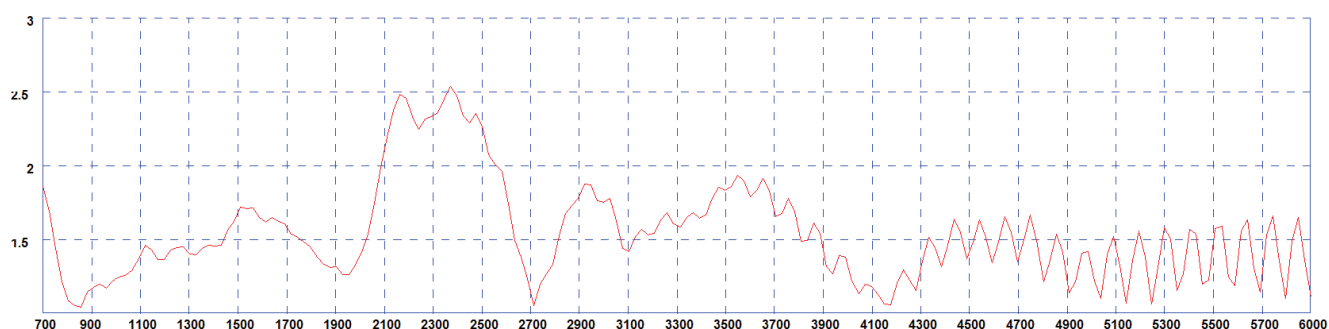
Housed in a high impact, flame retardant LEXAN housing, the TRNB(G) series is weatherproof ensuring that the antenna's performance is never compromised.

The TRNB(G) series of antennas have also been designed to meet various applicable European and International industry traction standards including EN50155:2007, EN61373 : 1999 & EN50121:2006.

Technical Drawing

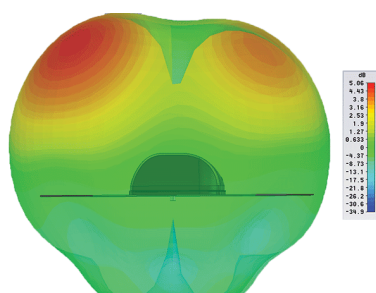


Typical VSWR*

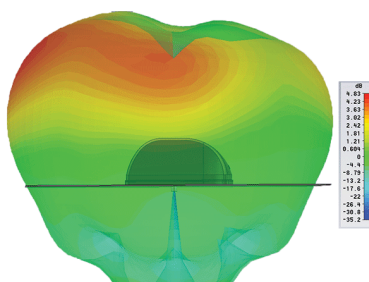


* Measured on a 600 x 600mm (2' x 2') ground plane with 0.5m of CS29 cable

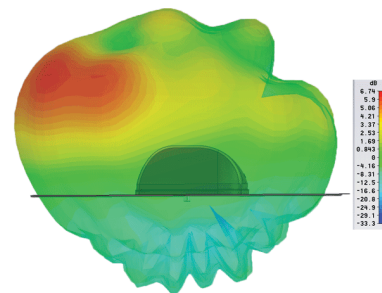
Typical 3D Pattern - 700MHz



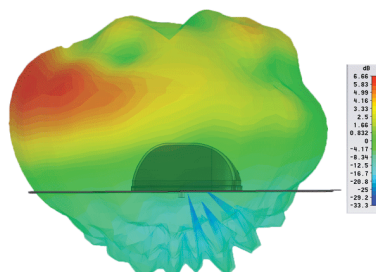
Typical 3D Pattern - 900MHz



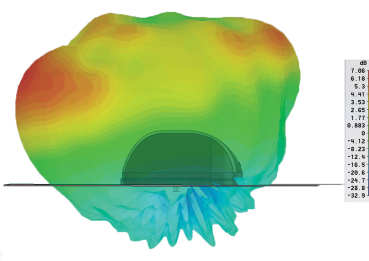
Typical 3D Pattern - 1800MHz



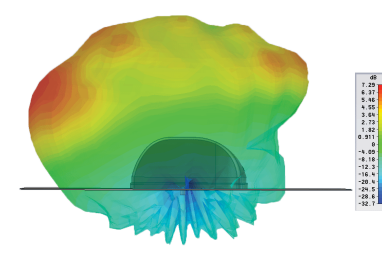
Typical 3D Pattern 2100MHz



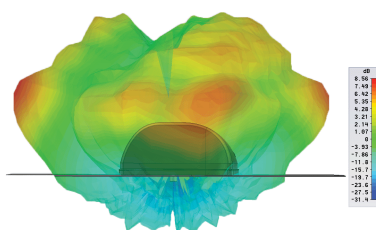
Typical 3D Pattern 2400MHz



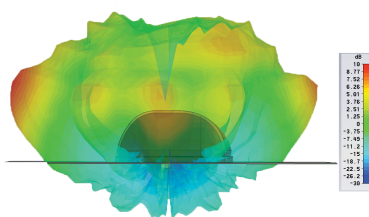
Typical 3D Pattern 2600MHz



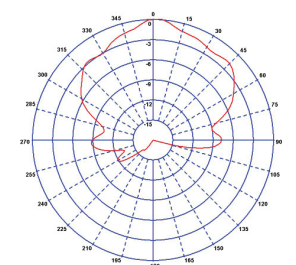
Typical 3D Pattern 5400MHz



Typical 3D Pattern 5800MHz



Typical E-Plane Pattern - (GPS) 1575MHz



3D patterns simulated on a 600 x 600 (2' x 2') ground plane without cable

GSM-R

Transit Antenna with GPS

Part No.		TRNBG-7-27
Electrical Data		
Frequency Range (MHz)		698-960 / 1700-6000 MHz
Peak Gain: Isotropic*	698-960	5dBi
	1710-2700	7dBi
	4.9-6GHz	10dBi
Polarisation		Vertical
Typical VSWR		< 2.5:1
Pattern		Omni-directional
Impedance		50Ω
Max Input Power (W)		60
GPS Data		
Frequency Range (MHz)		1575
Impedance		50Ω
LNA Gain		26dB ± 3
Polarisation		Righthand Circular
Operating Voltage		3-5V DC
Current (Typical)		15mA
GPS Antenna EMC Compliance		EN 301-489-1, EN 301-489-19 & ETS 300-487 / EN 50121-3-2:2006
Mechanical Data		
Dimensions (mm)	Height	98 (3.86")
	Width	102 (4.01")
	Length	242 (9.52")
Environmental Specification		
Operating Temp (°C)		-40° / +80°C (-40° / +176°F)
Radome Material		LEXAN EXL 9330
Radome Flame Retardance Rating		V0 (UL 94)
Radome Outdoor Use Rating		f1 (UL 746c)
Base Material		Cast Aluminium - Alclad 1000 coated
Mounting Data		
Fixing		4 × mounting holes to suit M12 bolts
Termination Data		
Termination	Comms	N (female) - DC grounded
	GPS	SMA (female) - surge protected
Specification Compliance Data		
Compliance Information		Certificated to EN50155:2007, EN61373 : 1999, EN50124-1 (3KV) & EN50121:2006

* Measured on a 600 x 600mm (2' x 2') ground plane without cable.

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Waiver: The data given above is indicative of the performance of the product/s under particular conditions and does not imply a guarantee of performance. These specifications are subject to change without notice.

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