

SiSo ROOFTOP ANTENNA

RAIL ROOFTOP ANTENNA WITH OPTIONAL GPS

The SiSo Rooftop Antenna series has been designed specifically for use on trains, trams and buses.

The SiSo range covers 698-960/1710-6000MHz with optional GPS/GNSS with a 26dB LNA. The radiating element is DC grounded and, in versions with a GPS module it is protected by an integrated gas discharge surge arrestor. Housed in a high impact, flame retardant polycarbonate housing, the SiSo series is weatherproof and environmentally sealed to IP67, ensuring that the antenna's performance is never compromised.

Technical Features

- Cellular 700-6000MHz. Covers all LTE, Wi-Fi & WiMAX frequencies used worldwide including GSM-R
- UHF versions covering 380-430MHz OR 450-470MHz are also available on request
- Optional active GPS/GLONASS antenna with built in surge arrestor
- Compliant with rail standards EN45545, EN50155, EN61373 & EN50121
- Rugged flame retardant housing with Polycarbonate 1000 PEI & Aluminium base
- DC grounded antenna
- Industry standard 4 hole mount
- Rated IP67 (When installed according to the installation instructions)

Applications

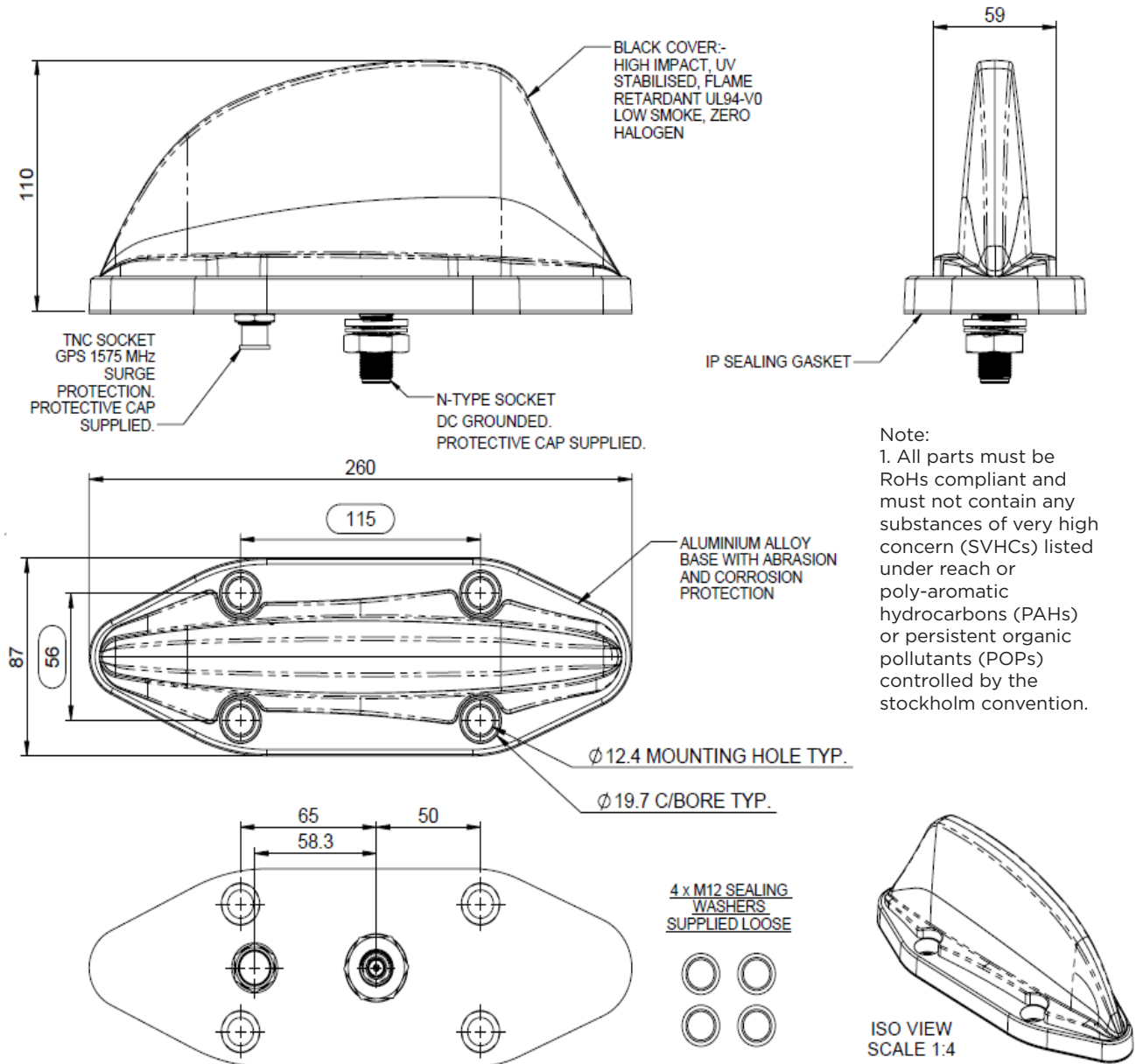
- High speed trains & locomotives
- Trams
- Buses / coaches
- Mass transit systems
- Heavy duty machinery (quarry trucks etc.)

Ordering Information

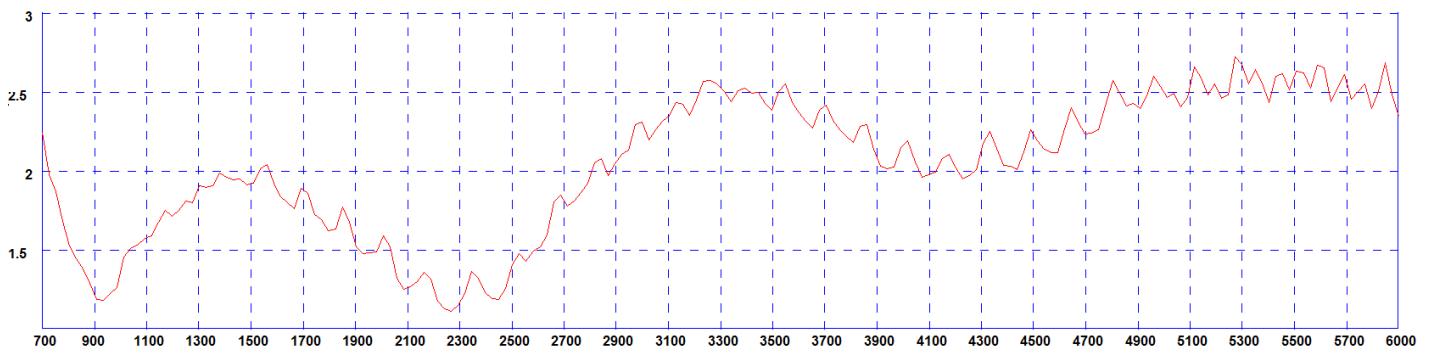
SiSo Rooftop Antenna with GPS	1-2823594-1
SiSo Rooftop Antenna without GPS	1-2823593-1

SiSo ROOFTOP ANTENNA

Rail Rooftop Antenna



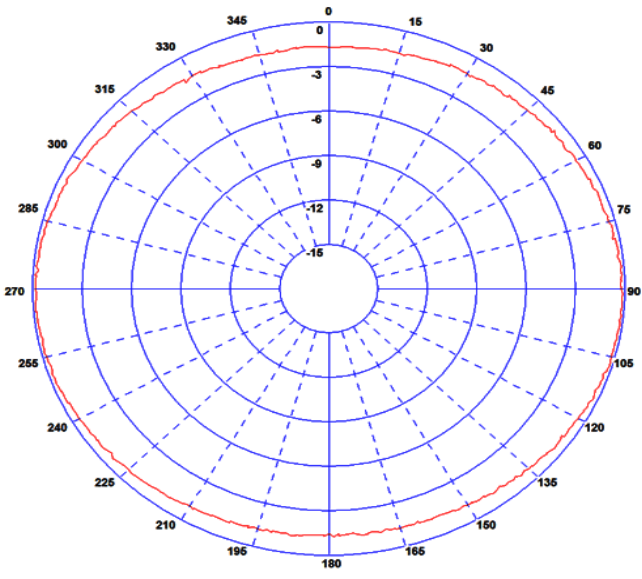
Typical VSWR*



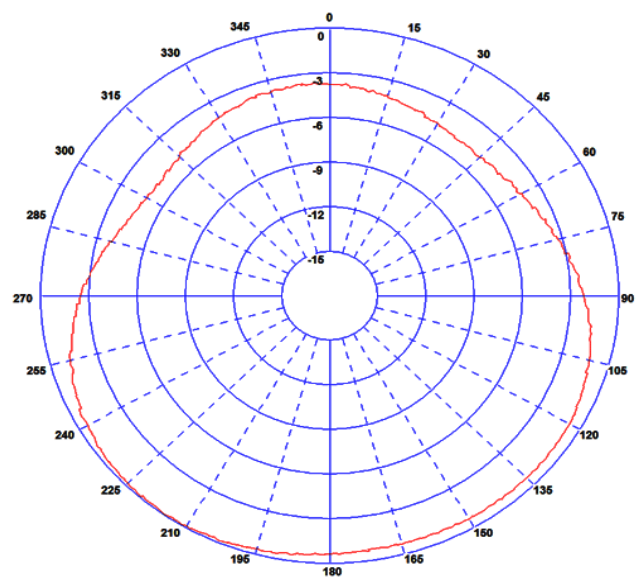
SiSo ROOFTOP ANTENNA

Rail Rooftop Antenna

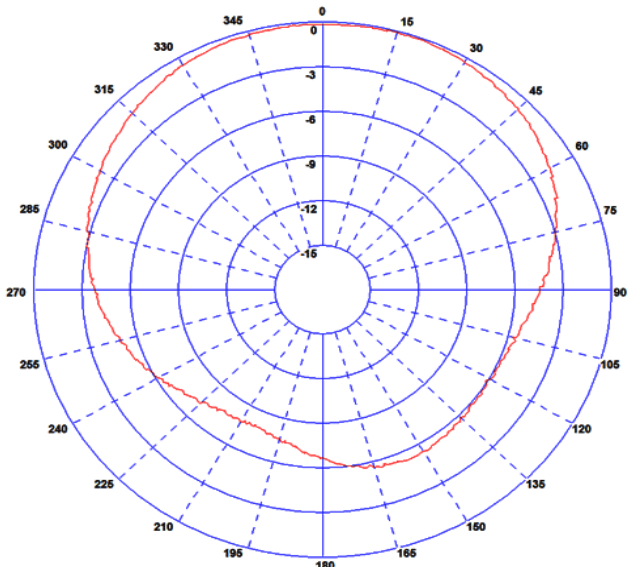
Typical 3D pattern - 700MHz



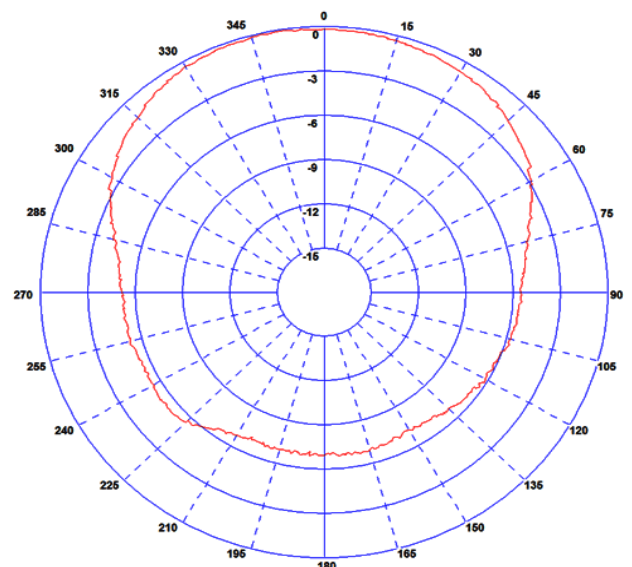
Typical 3D pattern - 800MHz



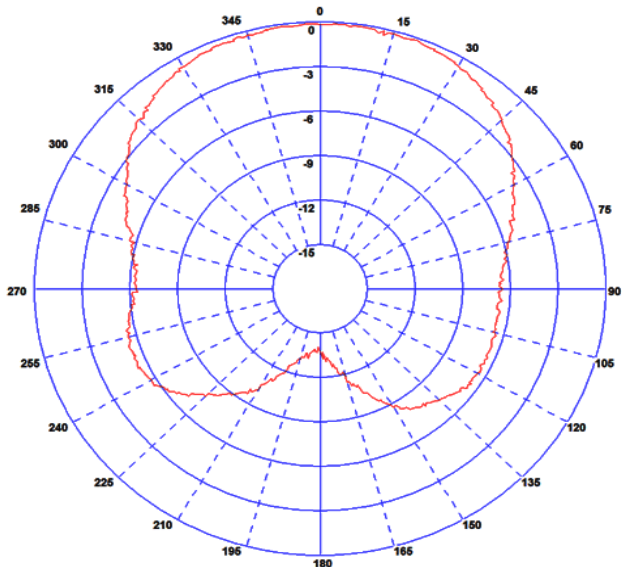
Typical 3D pattern - 900MHz



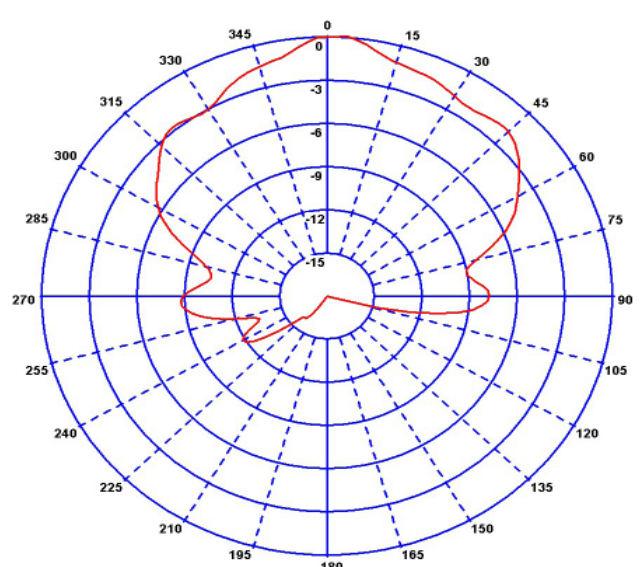
Typical 3D pattern - 1800MHz



Typical 3D pattern - 2100MHz



Typical 3D pattern (GPS) - 1575MHz



Patterns measured on a 600 x 600mm (2' x 2') ground plane with 1m (3') of low loss cable)

SiSo ROOFTOP ANTENNA

Rail Rooftop Antenna

SiSo Rooftop Antenna with GPS

Electrical Data

Frequency Range (MHz)	698-960 / 1710-6000 MHz	
Peak Gain Isotropic**	698-960MHz	5dBi
	1710-2700MHz	7dBi
	4900-6000MHz	10dBi
Polarisation	Vertical	
Typical VSWR*	<2.5:1	
Pattern	Omni-directional	
Impedance	50 Ω	
Max Input Power (W)	60	

GPS Data

Frequency Range (MHz)	1560-1612	
Impedance	50 Ω	
LNA Gain	26dB ± 3	
Polarisation	Right Hand Circular	
Operating Voltage	3-5V DC	
Current (Typical)	15mA	
GPS Antenna EMC Compliance	EN 301 489-1 V1.81 & EN 301 489-3 V1.6.1 EN 50121-3-2:2015	

Mechanical Data

Dimensions	Height (N/inc pad)	110mm (4.33")
	Width	87mm (3.42")
	Length	260mm (10.23")

Environmental Specification

Operating Temp	-40°C / +80°C (-40°F / +176 °F)	
Radome Material	Polycarbonate 1000	
Radome Flame Retardance Rating	V0 (UL94)	
Base Material	Cast Aluminium	
Sealing	IP67 (When installed according to the installation instructions)	

Approvals Data

Regulatory Approvals	EN50155:2007 (Dry heat & Cooling) EN61373:2010 / EN50155:2007 (Shock & Vibration) EN45545:2013 (Fire & Smoke)	
----------------------	---	--

Mounting Data

Fixing	4x mounting holes to suit M12 bolts	
--------	-------------------------------------	--

Termination Data

Termination	Comms	2 x N (female) - DC grounded
	GPS	TNC (female) - surge protected

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

* Measured on a 600 x 600mm (2' x 2') ground plane with 1m (3') of low loss cable.

1-1773876-4 CC 0316

© 2016 TE Connectivity Ltd. family of companies. All Rights Reserved.
TE, TE Connectivity, TE connectivity (logo) are trademarks. Other product or company names mentioned herein may be trademarks of their respective owners.

