

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 arrester. 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

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 arrester
- 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

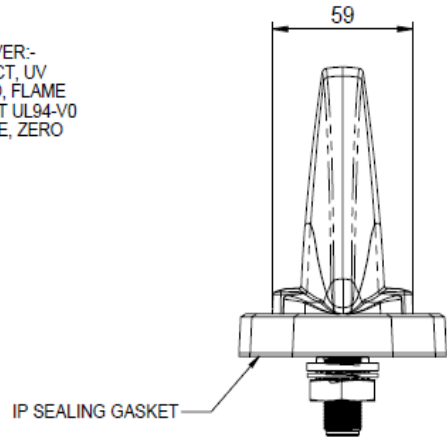
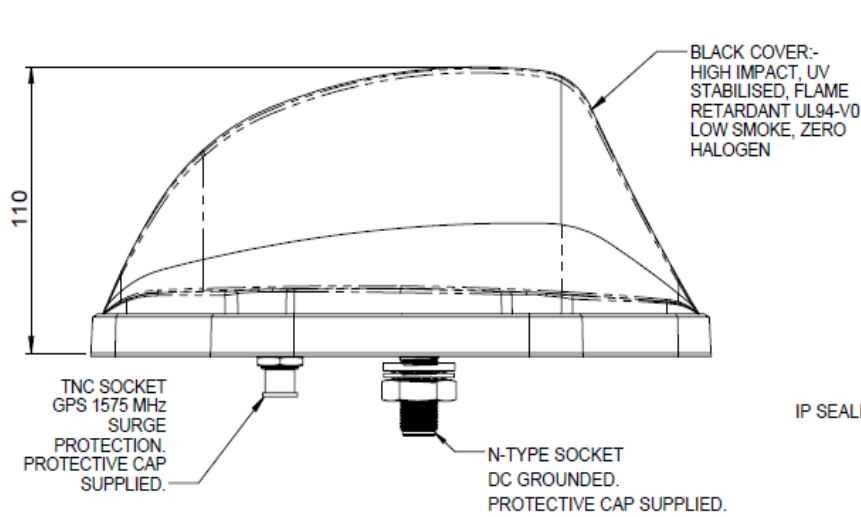
- High speed trains & locomotives
- Trams
- Buses / coaches
- Mass transit systems
- Heavy duty machinery (quarry trucks etc.)

Ordering Information

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

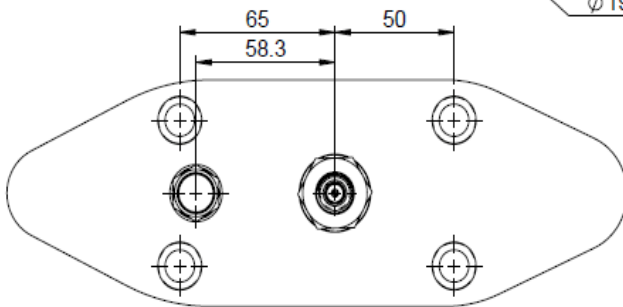
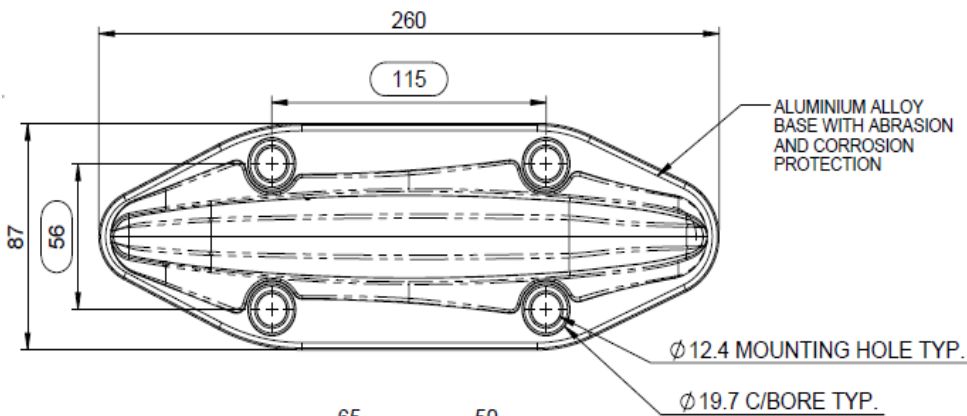
SiSo ROOFTOP ANTENNA

Rail Rooftop Antenna

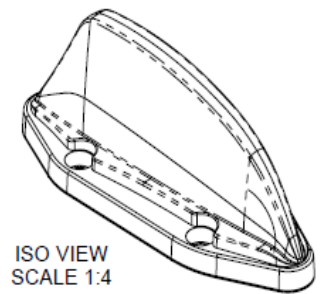


NOTES:

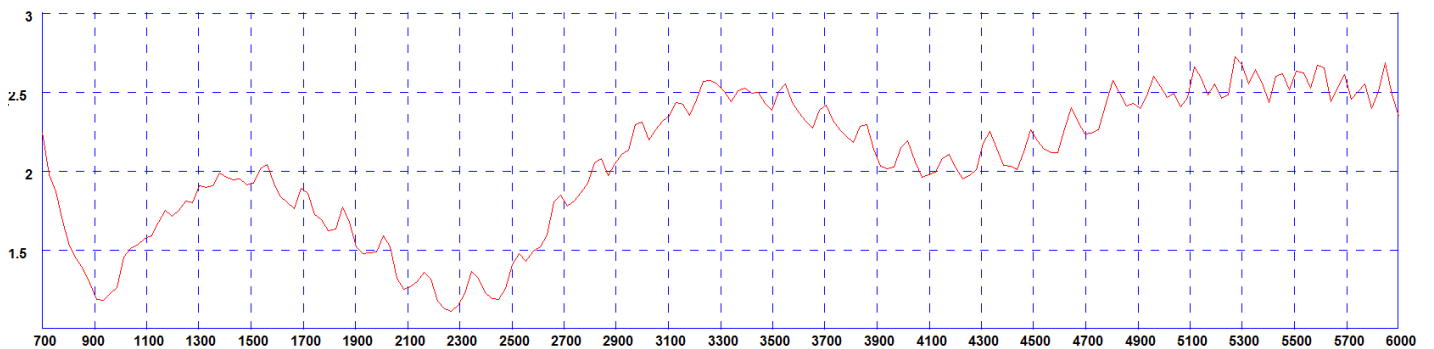
1. SAMPLES MUST BE APPROVED BY PANORAMA ANTENNAS Q.C. BEFORE COMMENCING PRODUCTION.
2. ALL PARTS MUST BE RoHS COMPLIANT AND MUST NOT CONTAIN ANY SUBSTANCES OF VERY HIGH CONCERN (SVHCs) LISTED UNDER REACH OR POLY-AROMATIC HYDROCARBONS (PAHs), OR PERSISTENT ORGANIC POLLUTANTS (POPs) CONTROLLED BY THE STOCKHOLM CONVENTION.



4 x M12 SEALING
WASHERS
SUPPLIED LOOSE



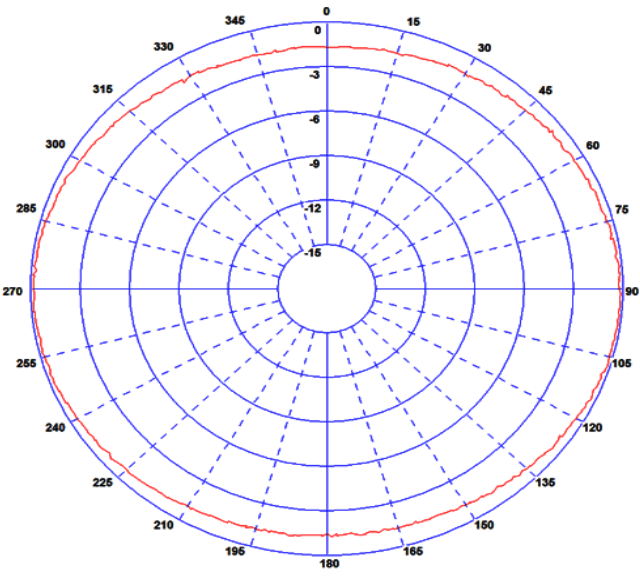
Typical VSWR*



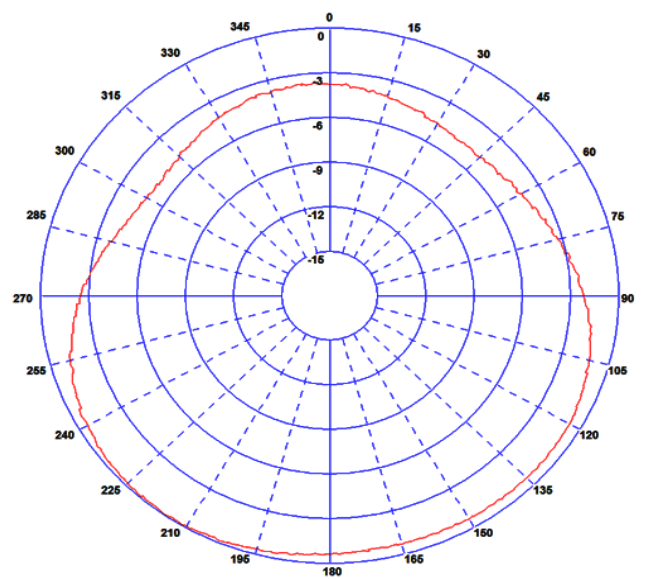
SiSo ROOFTOP ANTENNA

Rail Rooftop Antenna

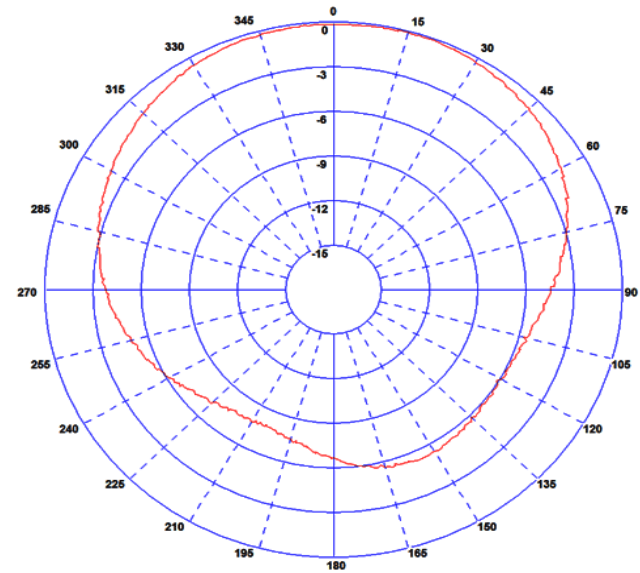
Typical 3D pattern - 700MHz



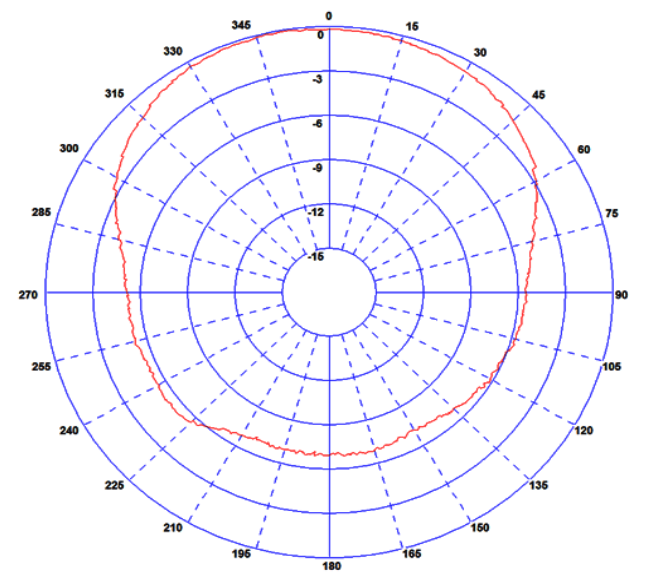
Typical 3D pattern - 800MHz



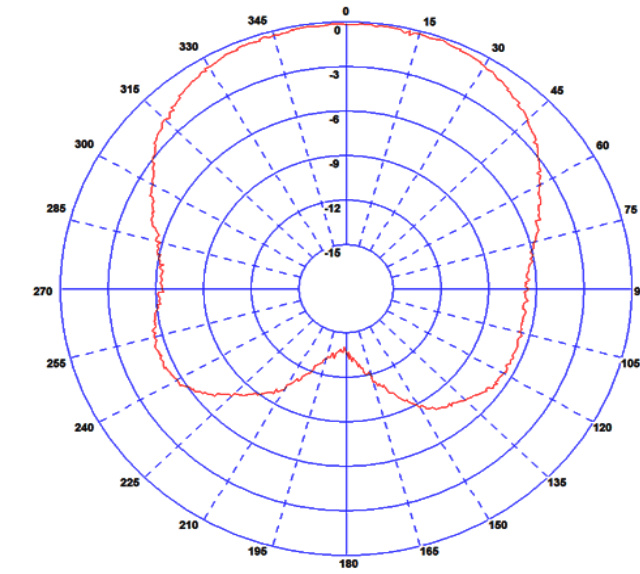
Typical 3D pattern - 900MHz



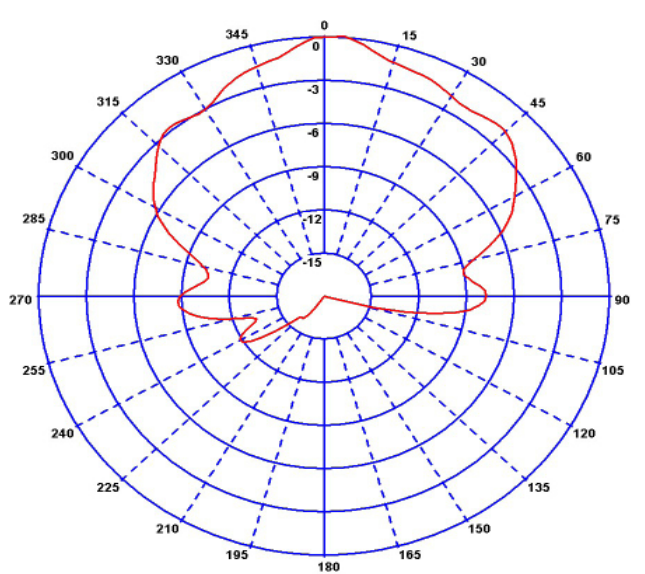
Typical 3D pattern - 1800MHz



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)

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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

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