

TW2408



Embedded GPS-L1/GLONASS-G1 Antenna

Frequency Coverage: GPS L1 | GLONASS G1

The TW2408 employs Calian's patented Accutenna® technology covering the GPS-L1, GLONASS-G1 and SBAS (WAAS, EGNOS & MSAS) frequency bands (1574 to 1606 MHz). It is especially designed for precision industrial, agricultural, safety and security OEM applications.

It provides truly circular response over its entire bandwidth thereby producing superior multipath signal rejection.

The TW2408 features a dual-feed wideband patch element, with a two stage low-noise amplifier, comprised of one input LNA per feed, a mid section SAW to filter the combined output, and a final output gain stage. This configuration provides excellent axial ratio that is constant across the full frequency band.

The TW2408 comes in a compact circular form factor with a built-in 56 mm diameter ground plane.



Applications

- High-accuracy & mission-critical global positioning
- Precision agriculture, mining, and construction
- Law enforcement and public safety
- Avionics
- Law enforcement and public safety
- Fleet management and asset tracking

Features

- Great axial ratio: < 3 dB over full bandwidth
- High-rejection SAW filter
- High-gain (26 dB typ.)
- Low current: 12 mA typ.
- ESD circuit protection (15 kV)
- Wide voltage input range: 2.5 to 16 VDC

Benefits

- Excellent multipath signal rejection
- Increased system accuracy
- Excellent signal reception
- Great out-of-band signal rejection
- Compact form factor
- RoHS and REACH compliant

About Calian: With global headquarters and manufacturing in Ottawa, Canada, Calian is a leading manufacturer of high-precision antennas and components for Global Navigation Satellite System (GNSS) applications. Calian's mission is to support the needs of a new generation of positioning systems by delivering unprecedented antenna precision at competitive prices. Learn more at www.calian.com

Revision: 202407

Contact us:
info@tallysman.com
T: +1 613 591-3131

Embedded GPS-L1/GLONASS-G1 Antenna

Frequency Coverage: GPS L1 | GLONASS G1

Antenna - Measured with a 100 mm ground plane

Technology Dual-feed RHCP ceramic patch

| | | Gain dBic typ. at Zenith | Axial Ratio dB at Zenith |
|---------------------------------------|-----|-----------------------------|-----------------------------|
| GNSS | | | |
| GPS / QZSS | L1 | 4.25 | ≤ 1 |
| | L2 | - | - |
| | L5 | - | - |
| GLONASS | G1 | 4.25 | ≤ 1 |
| | G2 | - | - |
| | G3 | - | - |
| Galileo | E1 | - | - |
| | E5A | - | - |
| | E5B | - | - |
| | E6 | - | - |
| BeiDou | B1 | - | - |
| | B2b | - | - |
| | B2a | - | - |
| | B3 | - | - |
| IRNSS / NavIC | L5 | - | - |
| QZSS | L6 | - | - |
| L-Band Services (1525 MHz - 1559 MHz) | | - | - |
| Satellite Communications | | | |
| Iridium | | - | - |
| Globalstar | | - | - |
| Other | | | |
| Axial Ratio at 10° | - | Efficiency | - |
| PC Variation | - | | |

Mechanicals

| | |
|----------------------|--------------------------------|
| Size | 56 mm (dia.) x 7.8 mm (h.) |
| Weight | 38 g |
| Radome | - |
| Mount | - |
| Available Connectors | Please refer to ordering guide |

Environmental

| | |
|-----------------------|--|
| Operating Temperature | -40 °C to +85 °C |
| Storage Temperature | -55 °C to 95 °C |
| Vibration | MIL-STD-810D Method 514.3-1 |
| Shock | Vertical axis: 50 G, other axes: 30 G |
| Salt Fog | - |
| IP Rating | - |
| Compliance | IPC-A-610, FCC, RED / CE Mark, RoHS, REACH |

Warranty:

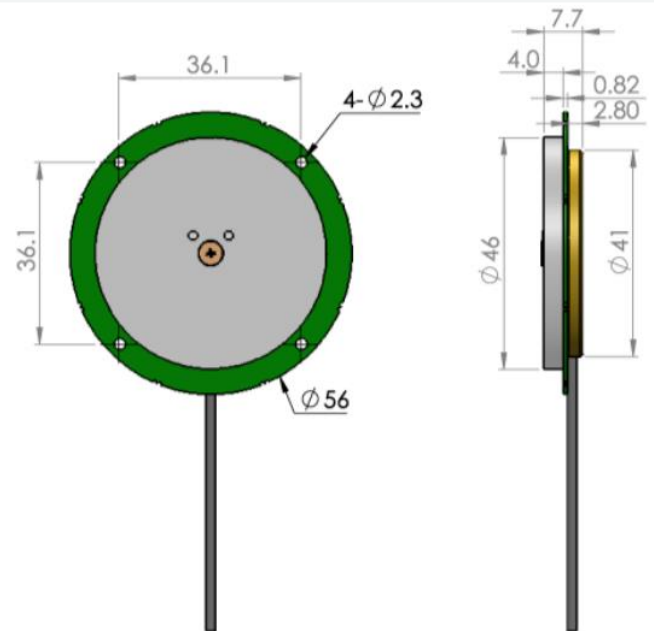
| | |
|------------------|--------------------------|
| Parts and Labour | 1-year standard warranty |
|------------------|--------------------------|

Low Noise Amplifier (LNA) - Measured at 3V and 25°C

| Upper Band | Lower Band |
|--|------------|
| Frequency Bandwidth | |
| 1575 - 1606 MHz | - |
| Out-of-band Rejection | |
| > 50 dB @ < 1500 MHz > 50 dB @ < 1550 MHz > 70 dB @ > 1640 MHz | - |

| | |
|------------------------|--|
| Architecture | Pre-filtered |
| Gain | 26 dB typ. |
| Noise Figure | 3 dB typ. |
| VSWR | < 1.5:1 typ., 1.8:1 max |
| Supply Voltage Range | 2.5 to 16 VDC nominal, up to 50mV p-p ripple |
| Supply Current | 12 mA typ. |
| ESD Circuit Protection | 15 kV air discharge |
| P 1dB Output | - |
| Group Delay | - |
| PCO | - |

Mechanical Diagram - Units in 'mm'



Ordering Information

Part Number 33-2408-xx-yyyy-zz

Where xx = type of connector yyyy = cable length in mm and zz = reserved for Calian's use

Please refer to our **Ordering Guide** to review available radomes and connectors at:
<https://www.tallysman.com/resource/tallysman-ordering-guide/>