



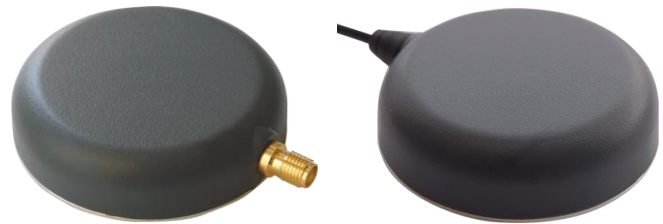
When precision matters...™

TW2012 GPS Brickwall Filtered Antenna

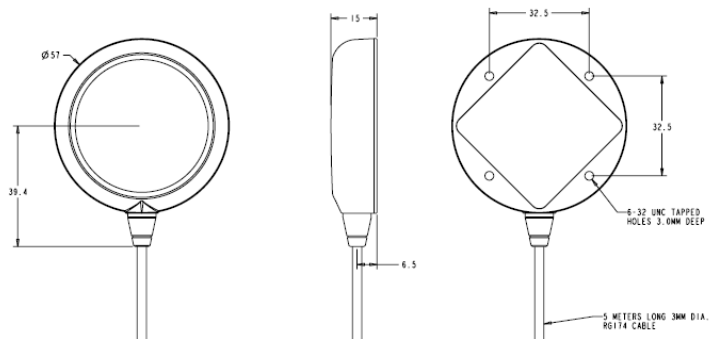
The TW2012 by Tallysman Wireless is a professional grade, dual-filtered magnet mount, GPS L1 antenna, specially designed for precision positioning and timing applications in environments characterized by high L-Band RF fields.

The TW2012 features a precisely tuned ceramic patch element, a tight SAW pre-filter, a first LNA gain stage, a mid-section SAW filter and a final gain stage. It covers the GPS L1 and SBAS (WAAS/EGNOS/MSAS) frequency band (1572.5 to 1578 MHz), and it offers unparalleled out-of-band signal rejection and excellent axial ratio for improved signal reception and multipath rejection.

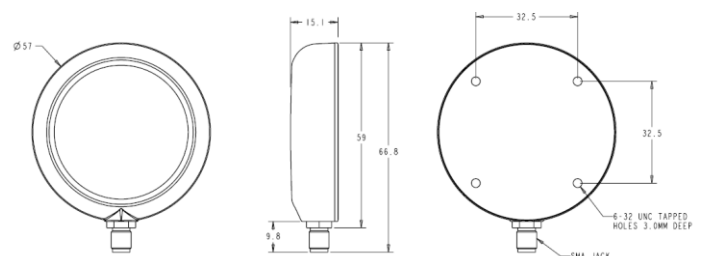
The TW2012 is housed in a compact, industrial-grade weather-proof, magnet mount enclosure.



Dimensions (mm) p/n 32-2012-0



Dimensions (mm) p/n 32-2012-7



Applications

- Anti-Jamming & Mission Critical GPS
- Military & Security
- Precision Agriculture, Mining & Construction
- Avionics
- Law Enforcement & Public Safety
- Fleet Management & Asset Tracking

Features

- Narrow pass-band SAW pre-filter
- 3 dB Noise Figure (including pre-filter)
- Axial ratio: <4dB at Zenith
- High LNA gain: 27 dB typ.
- Low current: 10 mA typ.
- ESD circuit protection: 15 KV
- Wide voltage input range: +2.5 to 16 VDC

Benefits

- Great out-of-band signal rejection
- Ideal for high level RF environments
- Great multipath rejection
- Increase system accuracy
- Great signal to noise ratio
- Weather proof IP67 housing
- RoHS compliant



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Specifications Vcc = 3V, over full bandwidth, T=25°C

Antenna

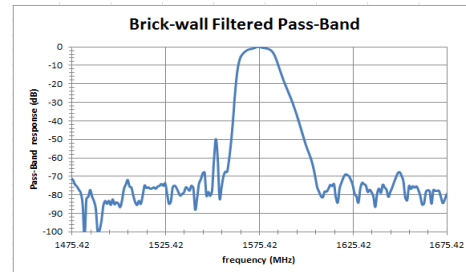
Architecture
Antenna Gain (100mm ground plane)
Axial Ratio

Custom single-feed ceramic patch
5 dBic at 90° on 100mm Ground Plane
4 dB at 90°, 6dB at 20°

Electrical

Architecture
Frequency Bandwidth
Polarization
LNA Gain (including SAW pre-filter)
Out-of-Band Rejection
VSWR (at LNA output)
Noise Figure
Supply Voltage Range
Supply Current
ESD Circuit protection

SAW Pre-Filter, 1st LNA, mid section SAW filter, output LNA
1572.5 to 1578 MHz
RHCP
27 dB typ. at 90° (at 1575.42 MHz)
*Refer to graph
<1.5:1
3 dB typ.
+2.5 to 16 VDC nominal
10 mA typ at 25°C.
15 KV air discharge



Mechanicals & Environmental

Mechanical Size
Cable
Operating Temp. Range
Enclosure
Weight
Attachment Method
Environmental
Shock
Vibration
Warranty

57 mm dia. x 15 mm H
RG174
-40 to +85 °C
Radome: ASA Plastic, Base: Zamak white metal
150 g
Magnet or permanent (pre-tapped 4 x 6-32UNC)
IP67 and RoHS compliant
Vertical axis: 50 G, other axes: 30 G
3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G
One year – parts and labour

Ordering Information

TW2012 – 5 metre cable, SMA Male 32-2012-0
TW2012 – Bulkhead SMA Female 32-2012-7

* As a result of a growing product portfolio, Tallysman has rationalized its part number system. No changes have been made to the mechanical or electrical properties of these products. Where administratively possible, please use the following Part Numbers.

TW2012 – GPS L1 antenna 33-2012-xx-yyyy

Where xx = connector type and yyyy = cable length in mm

Please refer to the Ordering Guide (<http://www.tallysman.com/orderingguide.php>) for the current and complete list of available connectors.

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