



When precision matters...™

TW3032 GPS Brickwall Filtered Antenna

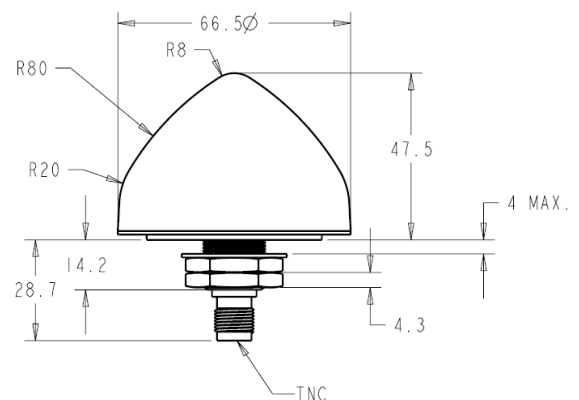
The TW3032 by Tallysman Wireless is a professional grade, dual-filtered permanent mount GPS L1 antenna, specially designed for precision positioning and timing applications in environments characterized by high L-Band RF fields.

The TW3032 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, Galileo E1 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 TW3032 is housed in a compact, industrial-grade weather-proof, domed shaped enclosure. Its radome is available in dark gray or white and two options for pole mounting are available an L-bracket (P/N#23-0040-0) or a pipe mount (P/N#23-0065-0)



TW3032 Dimensions (mm)



Applications

- Anti-Jamming GPS
- Mission Critical GPS Timing
- Military & Security
- Network Timing and Synchronisation

Features

- Narrow pass-band SAW pre-filter
- LNA Noise Figure: <1dB
- Axial ratio: <4dB at Zenith
- High LNA gain: 26 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 V_{cc} = 3V, over full bandwidth, T=25°C

Antenna

Architecture
Antenna Gain (100mm ground plane)
Axial Ratio

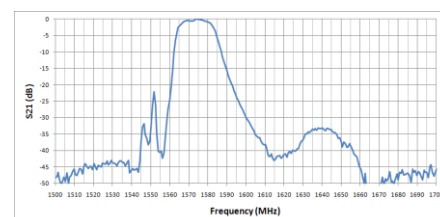
Custom single-feed ceramic patch
5 dBi at 90° on 100mm Ground Plane
4 dBi at 90°, 6dB at 20°

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
26 dB min. at 90° (at 1575.42 MHz)
*Refer to graph below
<1.5:1
3 dB typ.
+2.5 to 16 VDC nominal
10 mA typ.
15 KV air discharge

Pre-Filter Out-of-Band Rejection



Mechanicals & Environmental

Mechanical Size
Operating Temp. Range
Enclosure

66.5 mm dia. x 47.5 mm H
-40 to +85 °C
Radome: Dark Gray or White
Base: Zamak White Metal
150 g
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

Weight
Environmental
Shock
Vibration
Warranty

Ordering Information

Legacy Part Number:

TW3032 – dark gray, TNC connector

32-3032-xx-yy

Connector:

xx = 00 TNC

xx = 01 N Type (premium applies)

Radome Colour

yy = 00 Dark grey conical yy = 01 White conical

* As a result of a growing product port, 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.

TW3012 – Pre-Filtered GPS L1 antenna 33-3012-xx-yy-zzzz

Where xx = connector type, yy = type and colour of radome and zzzz = cable length in mm (where applicable)

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

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