



# TW3032 GPS Brickwall Filtered Antenna

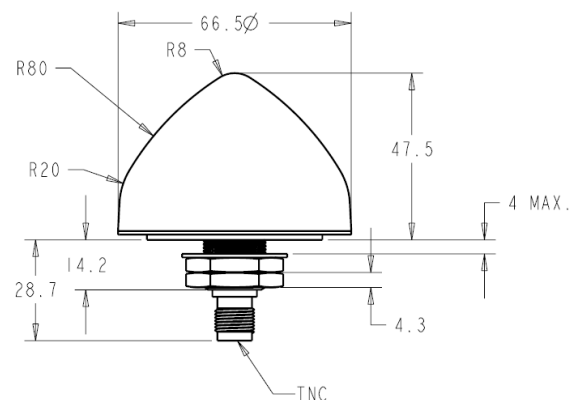
The TW3032 by Tallysman Wireless is a professional grade, dual-filtered permanent mount GPS L1 antenna, specially designed for precision positioning and timing applications in environments characterized by high L-Band RF fields.

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 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, it comes with a TNC female connector and a L-bracket for pole mount is available.



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: +3.0 to 10 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                      | Custom single-feed ceramic patch    |
| Antenna Gain (100mm ground plane) | 5 dBiC at 90° on 100mm Ground Plane |
| Axial Ratio                       | 4 dB at 90°, 6dB at 20°             |

### Electrical

|                                     |   |
|-------------------------------------|---|
| Architecture                        | SAW Pre-Filter, 1 <sup>st</sup> LNA, mid section SAW filter, output LNA |
| Frequency Bandwidth                 | 1572.5 to 1578 MHz  |
| Polarization                        | RHCP  |
| LNA Gain (including SAW pre-filter) | 26 dB min. at 90° (at 1575.42 MHz)                                      |
| Out-of-Band Rejection               | *Refer to table below   |
| VSWR (at LNA output)                | <1.5:1  |
| Noise Figure                        | 3 dB typ.   |
| Supply Voltage Range                | +3.0 to 10 VDC nominal  |
| Supply Current                      | 10 mA typ.  |
| ESD Circuit protection              | 15 KV air discharge   |

### Mechanicals & Environmental

|                       |  |
|-----------------------|--|
| Mechanical Size       | 66.5 mm dia. x 47.5 mm H   |
| Connector / Cable     | TNC female bulkhead / Custom cable assembly available              |
| Operating Temp. Range | -40 to +85 °C  |
| Enclosure             | Radome: Dark Gray or White ASA Plastic,<br>Base: Zamak White Metal |
| Weight                | 150 g  |
| Attachment Method     | L-Bracket option: P/N# 23-0040-0                                   |
| Environmental         | IP67 and RoHS compliant  |
| Shock                 | Vertical axis: 50 G, other axes: 30 G                              |
| Vibration             | 3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G                    |
| Warranty              | One year – parts and labour  |

### Ordering Information

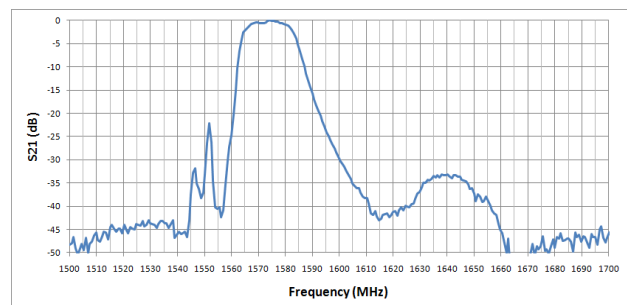
|                                   |              |
|-----------------------------------|--------------|
| TW3032 – dark gray, TNC connector | 32-3032-0-00 |
| TW3032 – white, TNC connector     | 32-3032-0-01 |

Please contact Tallysman Wireless additional information

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Pre-Filter Out-of-Band Rejection



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