Tallysman Wireless

When precision matters.™

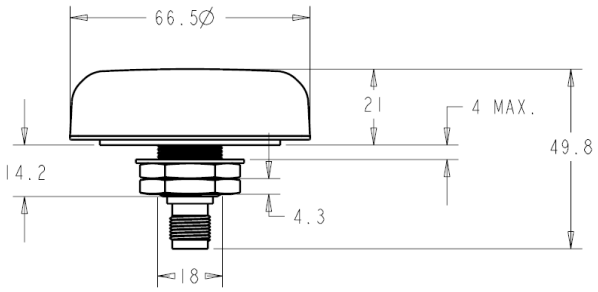
TW3012 GPS Brickwall Filtered Antenna

The TW3012 by Tallysman Wireless is a professional grade, highly filtered permanent mount, GPS L1 antenna, specially designed for precision positioning and timing applications in environments characterized by high L-Band RF fields.

The TW3012 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 TW3012 is housed in a permanent moun industrial-grade weather-proof enclosure and tw options for pole mounting are available an L-bracke (P/N#23-0040-0) or a pipe mount (P/N#23-0065-0).

TW3012 Dimensions (mm)
Flat Radome shown. Conical Radome also available.



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: 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

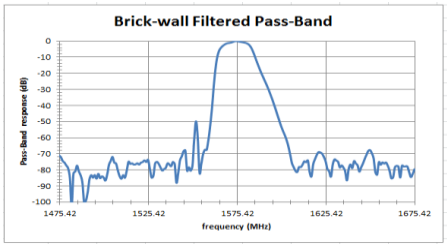
Vcc = 3V, over full bandwidth, T=25°C

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, 1st 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	+2.5 to 16 VDC nominal
Supply Current	10 mA typ.
ESD Circuit protection	15 KV air discharge



Mechanicals & Environmental

Mechanical Size	57 mm dia. x 15 mm H
Operating Temp. Range	-40 to +85 °C
Enclosure	Radome: ASA Plastic, Base: Zamak white metal
Weight	150 g
Attachment Method	Magnet or permanent (pre-tapped 4 x 6-32UNC)
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

Legacy Part Number:

TW3012 – Pre-Filtered GPS L1 antenna, 32-3010-xx-yy

Connector:	xx = 00 TNC	xx = 01 N Type (premium applies)	
Radome Colour	yy = 00 Dark grey conical	yy = 01 White conical	yy = 10 Dark grey
low profile	yy = 11 White low profile		

* 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.

TW3010 – GPS L1 antenna 33-3010-xx-yy-zzzz

Where xx = connector type, yy = type and colour of radome and zzzz = cable length (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.\

Tallysman Wireless Inc

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 Rev 2.2