



TW3042 GPS Brickwall Pre-Filtered Antenna

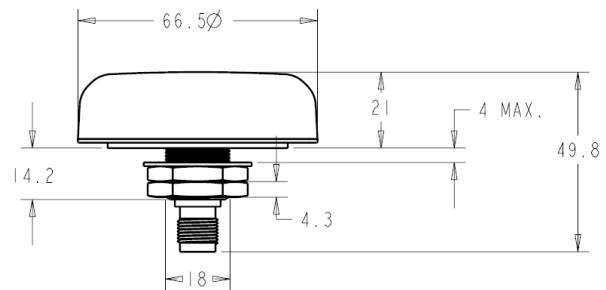
The TW3042 by Tallysman Wireless is a professional grade, high gain, pre-filtered permanent mount, GPS L1 antenna, specially designed for precision positioning and timing applications in environments characterized by high L-Band RF fields.

The TW3042 features a precisely tuned ceramic patch element, a tight band-pass SAW pre-filter, a first LNA gain stage, an in line SAW filter, followed by a two stage amplifier. 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 TW3042 is housed in a permanent mount industrial-grade weather-proof enclosure that is available in dark gray or white and comes with a TNC Jack (female) connector. An L-bracket for pole mount is available.



TW3042 Dimensions (mm)



Applications

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

Features

- Narrow pass-band SAW pre-filter
- 3.3 dB Noise Figure (including pre-filter)
- Axial ratio: <4dB at Zenith
- High LNA gain: 42 dB typ.
- Low current: 20 mA typ.
- ESD circuit protection: 15 KV
- Wide voltage input range: +2.7V to 10V DC

Benefits

- Great out-of-band signal rejection
- Ideal for high level RF environments
- Great multipath rejection
- Long cable runs
- Great signal to noise ratio
- Weather proof IP67 housing
- RoHS compliant



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Specifications

Measurement conditions: 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 at 1575.42MHz	4 dB at 90°, 6dB at 20°

Electrical

Architecture	SAW Pre-Filter, 1 st LNA, in-line SAW filter, two stage LNA
Frequency Bandwidth	1572.5 to 1578 MHz
Polarization	RHCP
LNA Gain (including SAW pre-filter)	40 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	3.3 dB typ.
Supply Voltage Range	+2.7 to 10 VDC nominal
Supply Current	25 mA Max.
ESD Circuit protection	15 KV air discharge

Mechanicals & Environmental

Mechanical Size	57 mm dia. x 15 mm H
Connectors	Bulkhead SMA female, or SMA male on flying lead - other connectors optional
Cable	RG174 / 5 metres, custom lengths optional
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

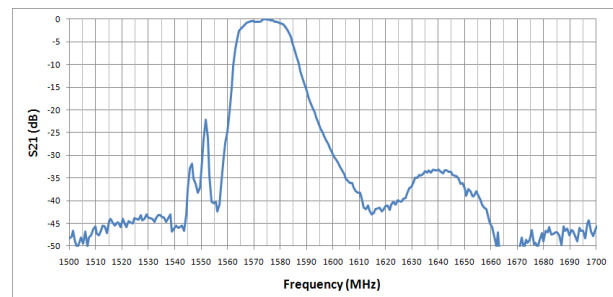
Ordering Information

TW3042 GPS L1 Antenna, 32-3042-x-y
Connector: x=1 TNC, x=2 N type
Color : y=0 Dark Grey y=1 White

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Pre-Filter Pass-Band



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