



A Tallysman Accutenna® TW3150/52 High Gain / High Rejection Timing Antenna

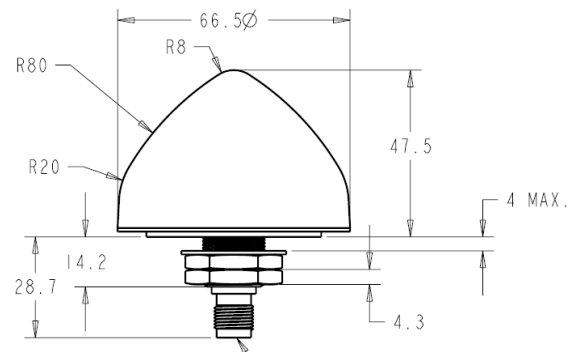
The TW3150/52 is a high-gain GPS antenna specifically designed for timing applications in high density cell / telecommunications tower applications where high levels of near-out-of-band interfering signals can be expected. This antenna features a 50dB LNA gain to handle long cable runs often associated with installation on telecommunications towers.

The TW3150/52 covers the GPS L1 and SBAS (WAAS, EGNOS & MSAS) frequency band and employs Tallysman's unique *Accutenna™* technology to provide excellent cross polarization rejection and greatly enhanced multipath rejection.

The TW3150 features a four (4) stage dual filtered LNA, while the TW3152 includes an additional SAW pre-filter to provide exceptional rejection of close out-of-band signals and additional protection against saturation by high level sub-harmonic and L-Band signals..

The TW3150/522 housing has a permanent mount, IP67 compliant metal base, and an extended temperature range plastic radome, and is specifically designed to withstand the most challenging environmental conditions.

Two options for pole mounting are available an L-bracket (P/N#23-0040-0) or a pipe mount (P/N#23-0065-0).



Applications

- Timing systems
- Long cable runs

Features

- Dual Feed Patch Antenna
- Low Loss SAW Pre-Filter
- Great axial ratio: 1 dB typ.
- Low noise LNA: 1.5dB typ (TW3150).
- Triple High rejection SAW filter (TW3152)
- High gain LNA: 50 dB typ.
- Low current: 25 mA typ.
- Wide voltage input range: 2.7 to 26 VDC
- IP67 weather proof housing

Benefits

- Great out of band rejection
- Excellent multipath rejection
- Excellent circular polarisation
- Excellent signal to noise ratio
- Increased system accuracy
- Ideal for harsh environments
- RoHS and REACH compliant



TW3150/52 High Gain / High Rejection Timing Antenna Specifications

Antenna

Architecture	Dual, Quadrature Feeds
1 dB Bandwidth	20 MHz
Antenna Gain (with 100mm ground plane)	4.5 dBic @ 90°
Axial Ratio (over full bandwidth)	<1 dB @zenith typ., 3 dB max.

Electrical

Filtered LNA Frequency Bandwidth	1575 MHz $\pm$ 10 MHz
Polarization	RHCP
LNA Gain 1575.42 $\pm$ 10 MHz	TW3150: 48 dB min., TW3152: 48dB min
Gain flatness	+/- 1.5dB, 1565.42 MHz to 1585.42 MHz
Group Delay (TW3150 w/o cable)	92nS @ 1573.42MHz
Group Delay (TW3152 w/o cable)	137nS @ 1573.42MHz
Out-of-Band Rejection	<1545 MHz >1610 MHz
VSWR (at LNA output)	<1.5:1, 2.0 max
Noise Figure	TW3150: 1.5dB typ.; TW3152: 3.8 dB typ
Supply Voltage Range (over coaxial cable)	2.7 to 26 VDC nominal
Supply Current	25 mA typ., 30mA max
ESD Circuit Protection	15 KV air discharge

Mechanicals & Environmental

Mechanical Size	66.5 mm dia. x 21 mm H
Operating Temp. Range	-40 to +85 °C
Enclosure	Radome: EXL9330, Base: Zamak White Metal (M18x1thread)
Weight	150 g
Attachment Method	Permanent 3/4" (19mm) through hole mount
Environmental	IP67, REACH, RED, 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
Salt Spray	MIL-STD-810F Section 509.4

Ordering Information

TW3152 – High Gain / High Rejection Timing Antenna	33-3152-xx-yy-zzzz
TW3150 – High Gain / High Rejection Timing Antenna	33-3150-xx-yy-zzzz

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

Please refer to the Ordering Guide (<http://www.tallysman.com/wp-content/uploads/Current-Ordering-Guide.pdf>) for the current and complete list of available radomes and connectors.



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Rev 1.4