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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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TW2010/TW2012 Magnet Mount GPS L1 Antenna

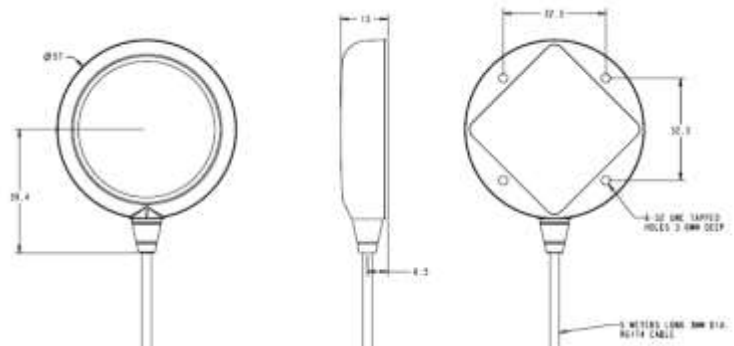
The TW2010/TW2012 by Tallysman Wireless is a professional grade, magnet mount, GPS L1 antenna, specially designed for industrial, agricultural and military precision positioning and timing applications.

The TW2010/TW2012 features a high performance custom tuned ceramic patch element, 15 KV ESD circuit protection, a high gain two-stage low noise amplifier (LNA) with a mid section high rejection SAW filter. The TW2012 also has a tight SAW pre-filter to provide unparalleled out-of-band signal rejection. It covers the GPS L1 and SBAS (WAAS/EGNOS/MSAS) frequency band (1572.5 to 1578 MHz), and it offers great circular polarized signal reception, multipath rejection and out of band signal rejection.

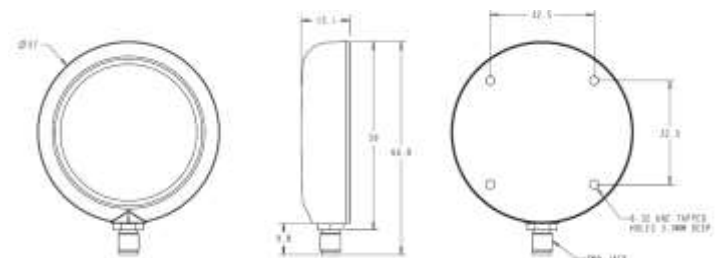
The TW2010 is housed in a compact, industrial-grade weather-proof, magnet mount enclosure.



Dimensions (mm)



Dimensions (mm)



Applications

- High Accuracy & Mission Critical GPS
- Precision Agriculture, Mining & Construction
- Military & Security
- Avionics
- Law Enforcement & Public Safety
- Fleet Management & Asset Tracking

Features

- Very low noise LNA: 1 dB
- Great axial ratio: <1dB at Zenith
- High rejection SAW filter
- High gain: 28 dB typ.
- Low current: 10 mA typ.
- ESD circuit protection: 15 KV
- Wide voltage input range: +2.5 to 16 VDC
- Weather proof housing: IP67

Benefits

- Great multipath rejection
- Increase system accuracy
- Excellent signal to noise ratio
- Great out of band signal rejection
- Ideal for harsh environments
- RoHS compliant



TW2010/TW2012 Magnet Mount GPS L1 Antenna

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

Antenna

Architecture	Custom single-feed ceramic patch
Antenna Gain (100mm ground plane)	4 dBic at 90°
Axial Ratio (over full bandwidth)	1dB at 90°, 6dB at 20°

Electrical

Architecture	Input LNA, mid section SAW filter, output LNA	
Frequency Bandwidth	1572.5 to 1578 MHz	
Polarization	RHCP	
Gain	28 dB min (TW2010) 25dB (TW2012).	
	TW2010	TW2012
Out-of-Band Rejection	<1560 MHz	>42 dB
	>1600 MHz	>50 dB
	>1620 MHz	>31 dB
		>55 dB
		>45 dB
		>70dB
VSWR (at LNA output)	<1.5:1 typ. 1.8:1 max.	
Noise Figure	1 dB typ. (TW2010) 3 dB (TW2012)	
Supply Voltage Range	+2.5 to 16 VDC nominal (12 VDC recommended max.)	
Supply Current	10 mA typ at 25°C.	
ESD Circuit protection	15 KV air discharge	

Mechanicals & Environmental

Mechanical Size	57 mm dia. x 15 mm H
Cable	RG174
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

Part Numbers:

TW2010 – GPS L1 antenna	33-2010-xx-yyyy
TW2012 – GPS L1 antenna w/pre-filter	33-2012-xx-yyyy

Where xx = connector type and yyyy = cable length in mm

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

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