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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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TW3040/ TW3042 Permanent Mount GPS L1 Antenna

The TW3040/TW3042 is a professional grade, permanent mount GPS L1 antenna, specially designed for professional precision timing applications.

The TW3040/TW3042 features a custom high performance, wide band patch element, a 40dB gain LNA stage and a high rejection out-of-band SAW filter. The TW3042 is equipped with a sharp SAW pre-filter to provide strong protection from out-of-band signals. It provides ± 10 MHz bandwidth centred on 1575.42 MHz and covers the GPS L1, Galileo E1 and SBAS (WAAS/EGNOS/MSAS) signals, and it provides great axial ratio, excellent circular polarized signal reception, great multipath rejection and great out-of-band signal rejection.

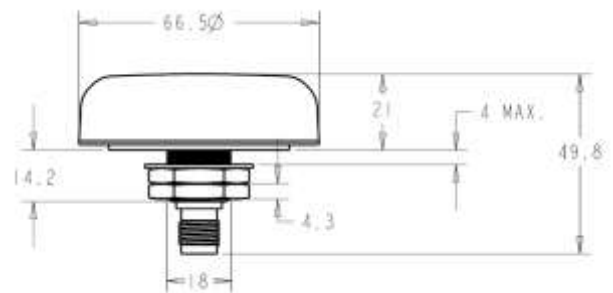
The TW3040/TW3042 is housed in a permanent mount industrial-grade weather-proof enclosure and two options for pole mounting are available an L-bracket (P/N#23-0040-0) or a pipe mount (P/N#23-0065-0).

Applications

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



TW3040/TW3042 Dimensions (mm)
Flat Radome shown. Conical Radome also available



Features

- Great axial ratio
- Low noise LNA: 1 dB
- High rejection SAW filter
- High gain: 40 dB typ.
- Low current: 15 mA typ.
- ESD circuit protection: 15 KV
- Wide voltage input range: +2.5 to 16 VDC
- Weather proof housing: IP67

Benefits

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



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Specifications V_{cc} = 3V, over full bandwidth, T=25°C

Antenna

Antenna Element Gain (100mm ground plane)	4 dBiC at 90°
Axial Ratio (over full bandwidth)	4 dB at 90°

Electrical

Architecture	3 stage LNA circuit + a mid section SAW filter. (Pre-filter option available)		
Frequency Bandwidth	1575 MHz ± 10 MHz		
Polarization	RHCP		
Gain	TW3040: 40 dB min. TW3042: 39 dB min		
Out-of-Band Rejection	<1560 MHz	TW3040	TW3042
	>1600 MHz	>42 dB	>50 dB
	>1620 MHz	>31 dB	>50 dB
VSWR (at LNA input)	>45 dB	>70 dB	
Noise Figure	<1.5:1 typ. 1.8:1 max.		
Supply Voltage Range	1 dB typ. (TW3040) 3 dB (TW3042)		
Supply Current	+2.5 to 16 VDC nominal (12VDC recommended maximum)		
ESD Circuit Protection	15 mA typ.		
	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: Dark Gray or White EXL9330
	Base: Zamak White Metal
Weight	150 g
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
Salt Spray	MIL-STD-810F Section 509.4

Ordering Information

TW3040 – GPS L1 antenna	33-3040-xx-yy-zzzz
TW3042 – GPS L1 antenna w/pre-filter	33-3042-xx-yy-zzzz

Where xx = connector type, yy = type 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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