TW3320/TW3322 Wideband GPS/GLONASS Antenna

The TW3320/TW3322 is a high performance antenna covering the GPS L1, GLONASS L1 and SBAS (WAAS, EGNOS & MSAS) frequency band (1575 to 1606 MHz). It features a patch element with 40% wider bandwidth than hitherto available in this format. Unlike its competitors, both GPS-L1 and GLONASS signals are included in the 1dB received power bandwidth.

The TW3320/TW3322 has a two stage Low Noise Amplifier with a mid-section SAW. An optional tight pre-filter is available with part number TW3322 to protect against saturation by high level sub-harmonics and L-Band signals.

The TW3320/3322 is housed in a permanent mount industrial-grade weather-proof enclosure. 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

Tallysman

- Cost Sensitive Mission Critical Positioning
- Military & Security
- Fleet Management & Asset Tracking

Features

- Low noise LNA: 1 dB typical (TW3320)
- High rejection mid-section SAW filter
- Available Pre-filter (TW3322)
- High gain: 28 dB typ.
- Wide voltage input range: 2.5 to 16 VDC
- IP67 weather proof housing
- Low Power: 9mA typ.

Benefits

14.2

• Bandwidth fully Includes GPS-L1 & GLONASS

TW3320/TW3322

Shown with Low Profile Radome. Conical

Radome also available

4.3

21

4 MAX.

49.8

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

TW3320/TW3322 Wideband GPS/GLONASS Antenna Specifications

Antenna

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Architecture 1 dB Bandwidth 10dB Return Loss Bandwidth Antenna Gain (with 100mm ground plane) Axial Ratio

Electrical

Architecture TW3320 TW3322 Filtered LNA Frequency Bandwidth Polarization Gain (1575.42 to 1606 MHz) Gain flatness Out-of-Band Rejection

VSWR (at LNA output) Noise Figure Supply Voltage Range (over coaxial cable) Supply Current ESD Circuit Protection

Mechanicals & Environmental

Mechanical Size Operating Temperature Range Enclosure Weight Environmental Shock Vibration Wideband Single Feed Patch 31 MHz 45MHz 4.5 dBic <4dB @ 1590MHz, 8 dB typical at band edges

LNA stage 1 -> SAW filter-> LNA stage 2 SAW Prefilter ->LNA stage 1 -> SAW filter-> LNA stage 2 1574 to 1606 MHz RHCP 28dB min., TW3320; 26dB, TW3322, +/- 2 dB, 1575 to 1606 MHz <1500 MHz >35 dB <1550 MHz >25 dB >1640 MHz >35 dB <1.5:1 1 dB typ., TW3320; 2.5dB typ., TW3322 +2.5 to 16 VDC nominal 9 mA typ 15 KV air discharge

66.5 mm dia. x 21 mm H 40 to +85 °C Radome: EXL9330, Base: Zamak White Metal 150 g IP67 and RoHS compliant Vertical axis: 50 G, other axes: 30 G 3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G

Ordering Information

 Legacy Part Numbers:
 32-3320-xx-yy

 TW3320 - GPS/Glonass Antenna
 32-3320-xx-yy

 TW3322 - GPS/Glonass Antenna with Pre-filter
 32-3322-xx-yy

 Connector:
 xx = 00 TNC
 xx = 01 N Type (premium applies)

 Radome Colour
 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. TW3320 – GPS/GLONASS antenna 33-3320-xx-yy-zzzz TW3322 – 33-3322-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.

Tallysman Wireless Inc

106 Schneider Road, Unit 3Ottawa ON K2K 1Y2 CanadaTel 613 591 3131Fax 613 591 3121sales@tallysman.comThe information provided herein is intended as a guide only and is subject to change without notice. This document is not to be regarded as a guarantee of performance. Tallysman Wireless Inc. hereby disclaims any or all warranties and liabilities of any kind.© 2010 Tallysman Wireless Inc. All rights reserved.Rev 3.2