



A Tallysman Accutenna® TW3865 / TW3867 GPS L1/L2 + GLONASS G1/G2 + BeiDou B1 + Galileo E1

The TW3865 and TW3867 employ Tallysman's unique *Accutenna* technology providing dual band GPS L1 & L2, GLONASS G1 & G2, BeiDou B1, and Galileo E1 coverage and is especially designed for precision dual frequency positioning.

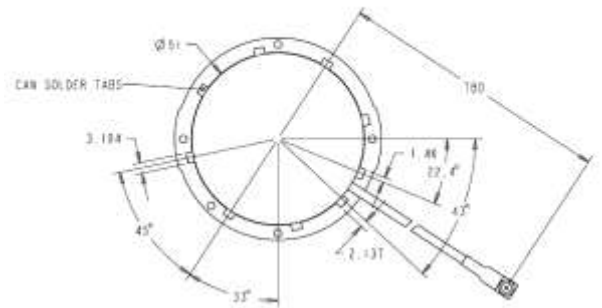
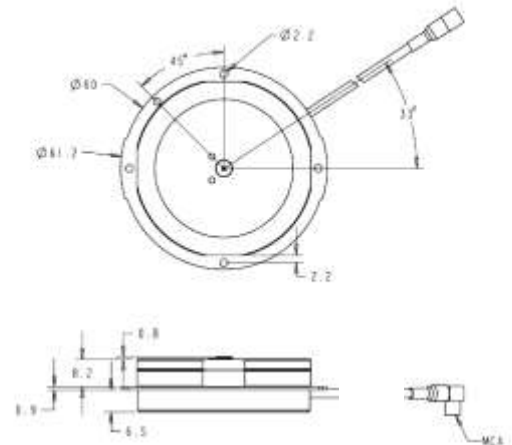
The antennas feature a precision tuned, circular dual feed, stacked patch element. The signals from the two orthogonal feeds are combined in a hybrid combiner, amplified in a wide-band LNA, then band-split for narrow filtering in each band and further amplified prior to recombination at the output.

The TW3867 has a strong pre-filter to mitigate inter-modulated signal interference from LTE and other cellular bands.

Both antennas offer excellent axial ratio and a tightly grouped phase center.

They cover GPS L2 (1227.6MHz), GLONASS G2 (1248MHz centre), GPS L1/WAAS/EGNOS/MSAS (1575.42MHz), GLONASS G1 (1602MHz, centre), BeiDou B1 (1561 MHz, 1589 MHz), and Galileo E1 (

The OEM antennas are supplied with a standard 60mm diameter circular ground plane, with a coaxial cable terminated with your choice of connector (right angle MCX is shown in the drawing). Mounting holes are provided for attachment to larger ground planes. Custom tuning and ground plane options may be available, depending on purchase level commitment.



Applications

- Precision GPS position
- Dual Frequency RTK receivers
- Military & Security
- Network Timing and Synchronization

Features

- Very low Noise Preamplifier
- Axial ratio: <2dB typ.; <1 dB at Zenith
- Tight Phase Center Variation
- LNA Gain 28 dB typ.
- Low current: 24 mA typ.
- ESD circuit protection: 15 KV
- Invariant performance from: +2.5 to 12VDC

Benefits

- Ideal for dual frequency RTK and PPP surveying systems
- Great multipath rejection
- Increased system accuracy
- Great signal to noise ratio
- RoHS and REACH compliant



TW3865 / TW3867 GPS L1/L2 + GLONASS G1/G2 + BeiDou B1 + Galileo E1

Specifications (Measured a Vcc = 3V, and Temperature=25°C)

Antenna

Patch Architecture

L2 Gain (100mm ground plane), 1227.6-1246MHz

L1 Gain (100mm ground plane), 1557MHz-1606MHz

Axial Ratio, over full bandwidth, both L1 & L2

1dB Bandwidth,

Polarization

Circular, Dual Feed, Dual Stacked Patch

3 dBic Min at Zenith on 100mm Ground Plane

4.5 dBic Min at Zenith on 100mm Ground Plane

<2dB typical; 1dB max. at Zenith, <3dB at horizon

L2: 1227MHz-1250MHz L1: 1557MHz-1606MHz

RHCP,

Electrical

Bandwidth

Overall LNA Gain

Gain Variation with Temperature.

LNA Noise Figure

VSWR (at LNA output)

Supply Voltage Range

EMI Immunity

Supply Current

ESD Circuit protection

Out-of-Band Rejection

L2: 1213MHz-1261MHz (Filter bandwidth) L1: 1557 MHz-1606MHz (Filter bandwidth)

28dB typ, 25 dB min, each of L1 and L2 Bands,

3dB max over operational temperature range

1.5dB typ at 25°C (TW3865) 2.5dB typ at 25°C (TW3867)

<1.5:1 typ. 1.8:1 max.

+2.5 to 16VDC nominal, up to 50mV p-p ripple

50V/Meter, excepting L1 +/-100MHz and L2 +/- 100MHz

24mA typ. at 25°C, 25mA max at 75°C.

15 KV air discharge.

L1

<1450 MHz >40 dB

<1520 MHz >30 dB

>1650 MHz >35 dB

L2

<1180 MHz >40 dB

<1190 MHz >30 dB

>1284 MHz >32 dB

Mechanicals & Environmental

Mechanical Size, Ground Plane

Operating Temperature Range

Weight

Attachment Method

Environmental

Shock

Vibration

Warranty

60mm diameter, 0.75mm thick, see mechanical drawing

-40°C to +85°C

70 g (excluding cable)

Through hole screws in ground plane

RoHS and REACH compliant

Vertical axis: 50 G, other axes: 30 G

3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G

One year – parts and labour

Ordering Information

TW3865 – GPS L1/L2 + GLONASS G1/G2 + BeiDou B1 + Galileo E1 antenna

33-3865-xx-yyyy-zz

TW3867 - GPS L1/L2 + GLONASS G1/G2 + BeiDou B1 + Galileo E1 antenna

33-3867-xx-yyyy-zz

Where xx = connector type, yyyy = cable length in mm and zz = assigned by Tallysman for custom tuning

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

Tallysman Wireless Inc

36 Steacie Drive

Ottawa ON K2K 2A9 Canada

Tel +1 613 591 3131

Fax 613 591 3121

sales@tallysman.com

The 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 3.6