

A Tallysman *Accutenna*® TW2706 / TW2708 Embedded Multi-Constellation Antenna

The TW2706 / TW2708 employs Tallysman's unique *Accutenna* technology covering the BeiDou B1, Galileo E1, GPS L1, GLONASS L1 and SBAS (WAAS, QZSS, EGNOS & MSAS) frequency band (1557 to 1606 MHz).). It is especially designed for precision industrial, agricultural and military OEM applications. It provides truly circular response over its entire bandwidth thereby producing superior multipath signal rejection.

The TW2706 / TW2708 features a dual-feed wideband patch element, with one LNA per feed, a mid section Combiner and SAW filter, and a final output gain stage. A tight pre-filter is available with part number TW2708 to protect against saturation by high level sub-harmonics and L-Band signals

The TW2706 / TW2708 is available with a variety of connectors and custom cable lengths.

It is highly recommended to take advantage of Tallysman's custom tuning service to ensure optimal performance of this antenna in your housing and with your ground plane.

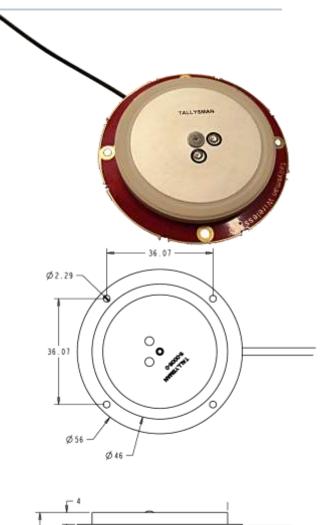
Note: This antenna is electronically identical to the TW2705/TW2707

Applications

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

Features

- Covers B1 / E1 /L1 / G1 Frequencies
- Great axial ratio: 1 typ., 3 dB max
- Low noise LNA: ≤1 dB
- High rejection SAW filter
- LNA gain: 28 dB typ.
- Low current: 15 mA typ.
- Wide voltage input range: 2.5 to 16 VDC



Benefits

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



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

Antenna

Architecture Dual, Quadrature Feeds

2 dB Bandwidth 49 MHz Antenna Gain (with 100mm ground plane) 4.75 dBic

Axial Ratio at Zenith over full bandwidth <2 dB typ, ≤3 dB max

Electrical

Architecture One LNA per feed line, mid section SAW filter

Filtered LNA Frequency Bandwidth 1557 to 1606 MHz

Polarization RHCP LNA Gain 28 dB min.

Gain flatness +/- 2 dB, 1557 to 1606 MHz

Out-of-Band Rejection <1500 MHz >40 dB <1540 MHz >20 dB >1640 MHz >45 dB

VSWR (at LNA output) <1.5:1 typ. 1.8:1 max

Noise Figure ≤1 dB typ.

Supply Voltage Range (over coaxial cable) +2.5 to 16 VDC nominal (12VDC recommended maximum)

Supply Current 15 mA typ., 22mA max. (@85°C)

ESD Circuit Protection 15 KV air discharge

Mechanicals & Environmental

56 mm dia. x 7.8 mm H Mechanical Size

RG174 Cable -40 to +85°C Operating Temp. Range

Weight 35 g Attachment Method

Adhesive or screw mount Environmental RoHS compliant

Shock

Vertical axis: 50 G, other axes: 30 G 3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3 G Vibration

Ordering Information

TW2706 - Multi-Constellation antenna, 33-2706-xx-yyyy TW2708 - Multi-Constellation antenna with tight pre-filter 33-2708-xx-yyyy

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

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 connectors.

Tallysman Wireless Inc

36 Steacie Drive

Ottawa ON K2K 2A9 Canada

Tel +1 613 591 3131 Fax 613 591 3121 sales@tallysman.com

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