

TW2708



Embedded Multi-Constellation Antenna

Frequency Coverage: GPS L1 | GALILEO E1 | BEIDOU B1 | GLONASS G1

The TW2708 employs Calian's patented Accutenna® technology covering the BeiDou B1, Galileo E1, GPS-L1, GLONASS-G1 and SBAS (WAAS, QZSS, EGNOS & MSAS) frequency band (1559 to 1606 MHz).

It is especially designed for precision industrial, agricultural, safety and security OEM applications. It provides truly circular response over its entire bandwidth thereby producing superior multipath signal rejection.

The 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 TW2708 is available with a variety of connectors and custom cable lengths. It is highly recommended to take advantage of Calian's custom tuning service to ensure optimal performance of this antenna in your housing and with your ground plane.



Applications

- High-accuracy & mission-critical global positioning
- Precision agriculture, mining, and construction
- Law enforcement and public safety
- Avionics
- Law enforcement and public safety
- Fleet management and asset tracking

Features

- Covers B1 / E1 / L1 / G1 Frequencies
- Great axial ratio: 1 typ., 3 dB max
- Low noise LNA: ≤2.5 dB
- High-rejection SAW filter
- LNA gain (26 dB typ.)
- Low current (12 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 and REACH compliant

About Calian: With global headquarters and manufacturing in Ottawa, Canada, Calian is a leading manufacturer of high-precision antennas and components for Global Navigation Satellite System (GNSS) applications. Calian's mission is to support the needs of a new generation of positioning systems by delivering unprecedented antenna precision at competitive prices. Learn more at www.calian.com

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Antenna - Measured with a 100 mm ground plane

Technology Dual-feed RHCP ceramic patch

		Gain dBic typ. at Zenith	Axial Ratio dB at Zenith
GNSS			
GPS / QZSS	L1	4.75	≤ 2
	L2	-	-
	L5	-	-
GLONASS	G1	4.75	≤ 2
	G2	-	-
	G3	-	-
Galileo	E1	4.75	≤ 2
	E5A	-	-
	E5B	-	-
	E6	-	-
BeiDou	B1	4.75	≤ 2
	B2b	-	-
	B2a	-	-
	B3	-	-
IRNSS / NavIC	L5	-	-
QZSS	L6	-	-
L-Band Services (1525 MHz - 1559 MHz)		-	-
Satellite Communications			
Iridium		-	-
Globalstar		-	-
Other			
Axial Ratio at 10°	-	Efficiency	-
PC Variation	-		

Mechanicals

Size	56 mm (dia.) x 7.8 mm (h.)
Weight	38 g
Radome	-
Mount	-
Available Connectors	Please refer to ordering guide

Environmental

Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to 95 °C
Vibration	MIL-STD-810D Method 514.3-1
Shock	Vertical axis: 50 G, other axes: 30 G
Salt Fog	-
IP Rating	-
Compliance	IPC-A-610, FCC, RED / CE Mark, RoHS, REACH

Warranty:

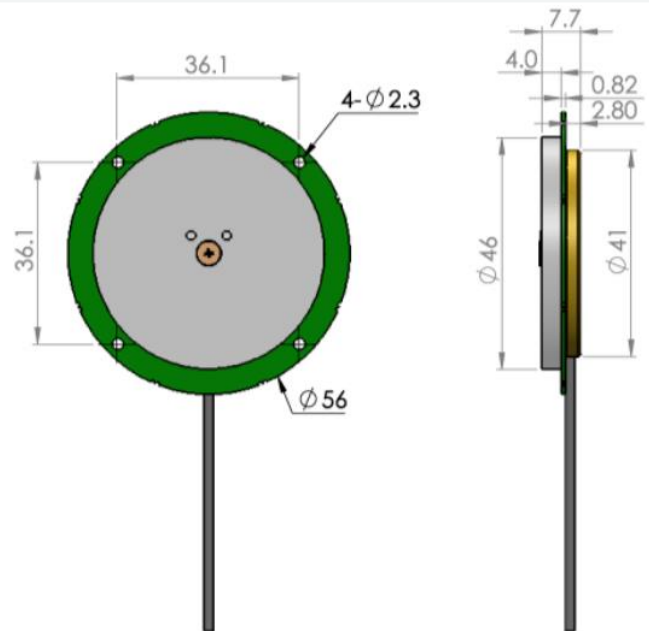
Parts and Labour	1-year standard warranty
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Low Noise Amplifier (LNA) - Measured at 3V and 25°C

Upper Band	Lower Band
Frequency Bandwidth	
1559 - 1606 MHz	-
Out-of-band Rejection	
> 40 dB @ < 1500 MHz > 20 dB @ < 1540 MHz > 45 dB @ > 1640 MHz	-

Architecture	Pre-filtered
Gain	26 dB typ.
Noise Figure	2.5 dB typ.
VSWR	< 1.5:1 typ., 1.8:1 max
Supply Voltage Range	2.5 to 16 VDC nominal, up to 50mV p-p ripple
Supply Current	12 mA typ.
ESD Circuit Protection	15 kV air discharge
P 1dB Output	-
Group Delay	-
PCO	-

Mechanical Diagram - Units in 'mm'



Ordering Information

Part Number 33-2708-xx-yyyy

Where xx = type of connector yyyy = cable length in mm and zz = reserved for Calian's use

Please refer to our **Ordering Guide** to review available radomes and connectors at:
<https://www.tallysman.com/resource/tallysman-ordering-guide/>