

Features

- Multiband L1/L2 active antenna
- High LNA gain (39dB)
- 3.3 to 12V/50mA power supply
- SMA male connector

Applications

- RTK Base or mobile Rover
- GPS devices
- Precise navigation
- Vehicle mounted GPS

Description

The DA233 is an affordable and highly efficient multi-band GNSS helical active antenna.

The device allows concurrent reception of GPS / GLONASS / BeiDou & Galileo signals to improve signal availability.

The minimum 2dBi peak gain is amplified using a 39dB LNA gain to ensure the best signal quality in any situation.

The SMA male connector together with the rubber joint sealing make them reliable, robust and waterproof.

Table 1. Device summary

| Order ref code | Temperature range [°C] | Product size [mm] |
|----------------|------------------------|-------------------|
| 0925 | -40 to +70 | 60 x 27.5 |

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1. Specifications

Table 2. DA233 mechanical and electrical specifications

| Item | | Specifications |
|-----------------|---------------------------|--|
| Antenna | GNSS bands | GPS L1/L2 GLONASS G1/G2 BeiDou B1/B2/B3 Galileo E1/E2/E5a/E5b/E6 |
| | Polarization | RHCP |
| | Axial Ratio | $\leq 3.0\text{dB}$ |
| | V.S.W.R. | $\leq 2\text{dB}$ |
| | Peak Gain | $\geq 2.0\text{dBi}$ |
| | Impedance | 50Ω |
| | Horizontal Coverage Angle | 360° |
| LNA | Gain | L-upper band $39.0 \pm 2.0\text{dB}$ L-lower band $38.0 \pm 3.0\text{dB}$ |
| | Noise Figure | $\leq 1.5\text{dB}$ |
| | Passband Fluctuation | $\pm 1.0\text{dB}$ |
| | Supply Voltage | 3.3~12V DC |
| | Current Consumption | $\leq 50\text{mA}$ |
| | V.S.W.R. | $\leq 2.0\text{dB}$ |
| Mechanical | Connector | SMA Male |
| | Dimension | 27.5x60mm |
| Environnemental | Operating Temperature | $-40^\circ\text{C}/+70^\circ\text{C}$ |
| | Relative Humidity | Up to 95% |
| | Environmentally Friendly | ROHS Compliant |

2. Absolute maximum ratings

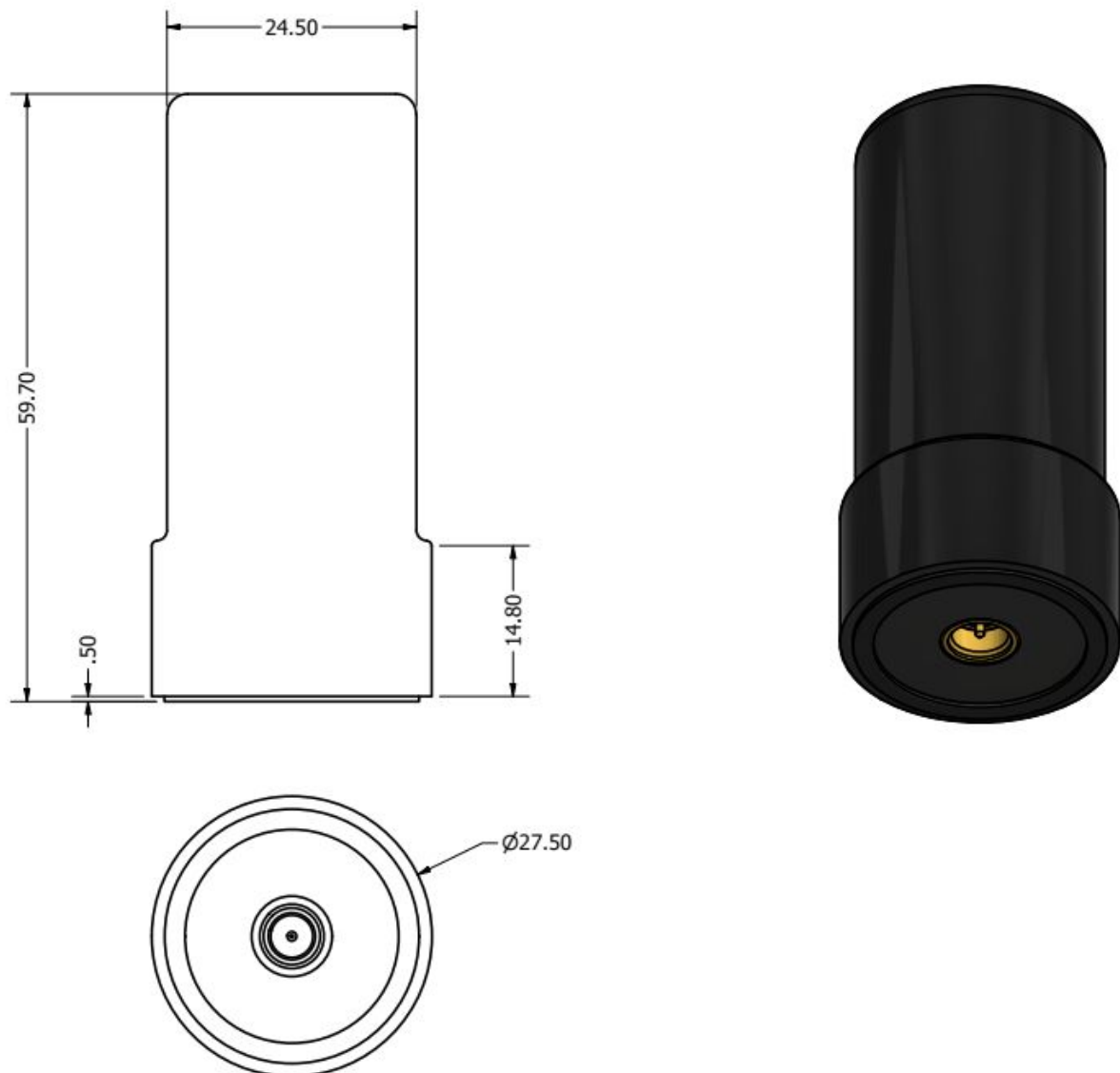
Stresses above those listed as “absolute maximum ratings” may cause permanent damage to the device. This is a stress rating only and functional operation of the device under these conditions is not implied. Exposure to maximum rating conditions for extended periods may affect device reliability.

Table 3. DA233 absolute maximum ratings

| Symbol | Parameter | Maximum value | Unit |
|--------|------------------------|---------------|------|
| Vant | Antenna voltage supply | 3.3 to +12 | V |
| Iant | Antenna current supply | 50 | mA |
| Hant | Relative humidity | 95 | % |
| Tant | Operating temperature | -40 to +70 | °C |

5. Mechanical drawings

Figure 1. DA233 mechanical drawings



6. Revision history

Table 4. Document revision history

| Date | Revision | Changes |
|-------------|----------|----------------------------------|
| 13-Aug-2019 | 1.0 | DrotekDoc_0925 / Initial release |

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