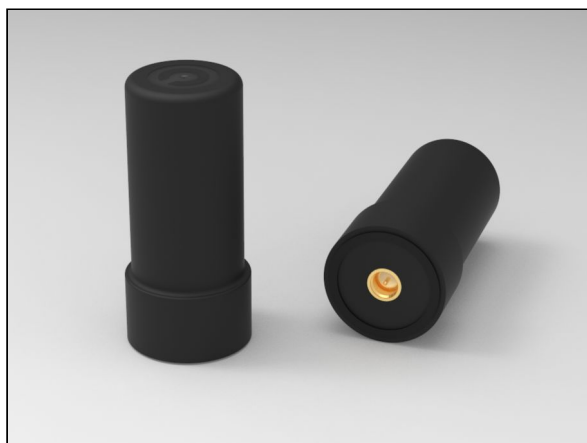


Datasheet - In Production

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.

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

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

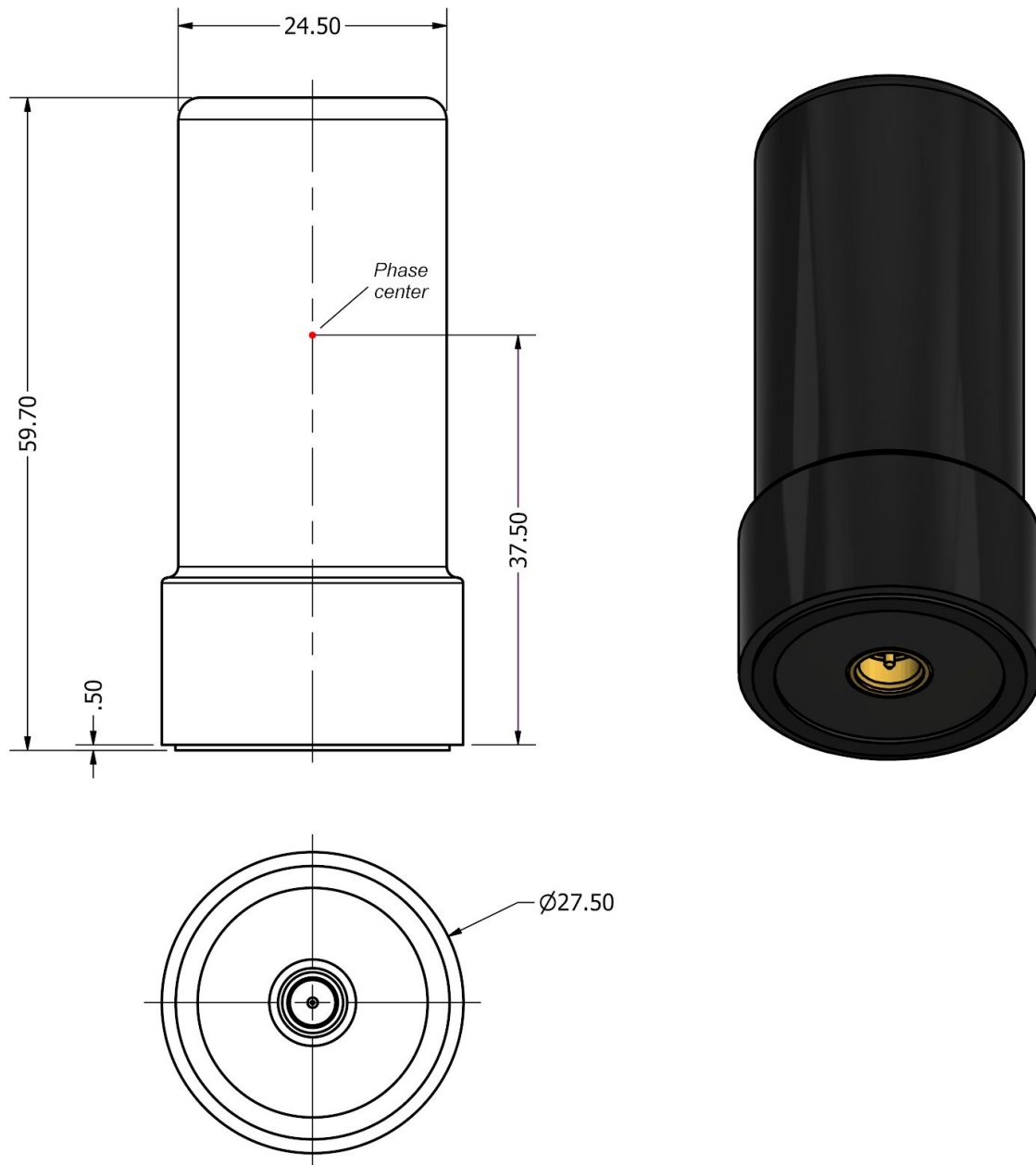
Stresses above those listed as “absolute maximum ratings” may cause permanent damage to the device. This is a stress rating only and functional operation of the device under these conditions is not implied. Exposure to maximum rating conditions for extended periods may affect device reliability.

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
14-Sept-2020	1.1	Phase center location added on the mechanical drawings

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