



## **Robust Miniature Active GPS L1 Antenna** (Model: GPSA22-1M-xxx)

### **Features**

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- ❖ **Moisture Proof**
- ❖ **Vibration Proof**
- ❖ **Drop Proof**
- ❖ **High & Low Temperature Endurance**
- ❖ **Weather Proof**



### **Description**

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#### **Moisture Proof**

The moisture test exposed the device to 40°C temperatures at relative humidity 90% ~ 95% for 100 hours. The device took 2 hours recovery time in room temperature conditions.

#### **Vibration Proof**

The vibration test applied the vibration of 10 ~ 50 Hz with amplitude of 1.5mm for 2 hours, respectively in X, Y, and Z directions. The device did not exhibit any performance defects.

#### **Drop Proof**

The device was dropped on hard wooden board from 300mm for 3 times, respective on each surface. The device did not exhibit any performance defects.

#### **High Temperature Endurance**

The device was placed at 80°C condition for 24 hours. The device took 2 hours recovery time in room temperature conditions.

#### **Low Temperature Endurance**

The device was placed at -40°C temperatures for 24 hours. The device took 2 hours recovery time in room temperature conditions.

#### **Temperature Cycle Endurance**

The device was placed at low temperature -30°C for 30 minutes, following high temperature 60°C for 30 minutes, each by 5 cycles. The device took 2 hours recovery time in room temperature conditions.

#### **Weather Proof**

The device was placed in 1 meter deep water for 12 hours. The device was 100% waterproof.



## Specifications

## GPSA22-1M-xxx

### General Specifications

<b>Frequency Range</b>	1575.42 +/- 3MHz
<b>Bandwidth</b>	± 5MHz
<b>Gain</b>	5 dBic (Zenith)
<b>VSWR</b>	≤ 1.5
<b>Nominal Impedance</b>	50 Ohms
<b>Axial Ratio</b>	3 dB (max)
<b>Polarisation</b>	RHCP
<b>LNA Gain</b>	28 ± 2 dB
<b>Noise Figure</b>	1.5 dB
<b>Filter Out Band Attenuation</b>	12 dB min. f0+50MHz 16 dB min. f0-50MHz
<b>DC Voltage</b>	2.2 ~ 5 Volts
<b>DC Current</b>	5 ~ 15 mA

### Mechanical Specifications

<b>Connector</b>	SMA/SMB/MCX/FAKRA or others on request
<b>Cable</b>	RG-174
<b>Dimensions</b>	2.7" x 2.2" (68 x 55 mm)
<b>Plastic Housing</b>	Black only
<b>Mounting Method</b>	Screw

### Environmental Specifications

<b>Vibration</b>	10Hz to 55Hz with 1.5mm amplitude for 2 hours
<b>Restriction of Hazardous Material</b>	ROHS Compliant
<b>Operating Temperature Range</b>	-40°C to +85°C
<b>Storage Temperature Range</b>	-40°C to +100°C
<b>Relative Humidity Range</b>	40% to 95%
<b>Ingress Protection Rating</b>	IP67