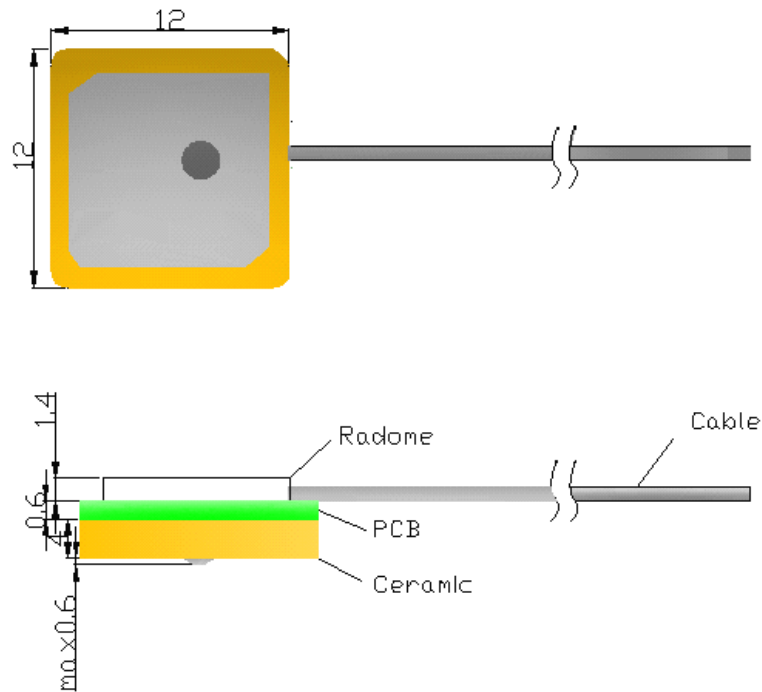


## GPS Internal Active Antenna

Part Number: VTGPSIA12-1



### 1. Dimension (Unit: mm)



### 2. Electrical Characteristics

#### 2.1 Dielectric Antenna

Form 1

No	Item	Specifications	Post Environmental Toleranc
1	Center Frequency (MHz)	1575.42 MHz	±3 MHz
2	Band Width (MHz)	±5 MHz	±1 MHz
3	V.S.W.R (in BW )	1.5 : 1	—
4	Gain (Zenith)	3 dB	±0.5 dB
5	Polarization	RHCP	—
6	Impedance	50 Ω	—

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## 2.2 LNA/Filter

Form 2

No	Item	Specifications	Post Environmental Toleranc
1	LNA Gain	28±2 dB	±2.5 dB
2	Noise Figure	1.5 dB	—
3	Filter Out Band Attenuation	14dB Min f0+50MHz 18dB Min f0-50MHz 30dB Min f0+100MHz 42dB Min f0-100MHz	±1.0 dB
4	DC Voltage	2.7~3.6V	
5	DC Current	10±1mA	

## 2.3 Mechanical

Form 3

No	Item	Specifications
1	Cable	RF1.13 /other optional
2	Connector	IPEX/other optional
3	Plastic Housing	—
4	Mounting	Internal

## 3 . Reliability

Condition:

Temperature: 40±5 °C

Load: DC= 2.7~3.6V

Quantity: pcs

Sustained Time: 480h

## 4. Environmental Specifications

Condition: Post Environmental Tolerance (Refer to the form 1~2)

Temperature range 25±3°C

Relative Humidity range 55~75%RH

Operating Temperature range -40 ~+85 °C

Storage Temperature range -40 ~+100 °C

### 4.1 Moisture Proof

The device should satisfy the electrical characteristics specified in form 1~2 after exposed to the

# V.TORCH

temperature  $40\pm 2$  and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condition.

## 4.2 Vibration Resist

The device should satisfy the electrical characteristics specified in form 1~2 after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X , Y and Z directions.

## 4.3 Drop Shock

The device should satisfy the electrical characteristics specified in form 1~2 after dropping onto the hard wooden board from the height of 30cm for 3 times each facet of the 3 dimensions of the device.

## 4.4 High Temperature Endurance

The device should satisfy the electrical characteristics specified in form 1~2 after exposed to temperature  $80\pm 5$  for  $24\pm 2$  hours and 1~2 hours recovery time under normal temperature.

## 4.5 Low Temperature Endurance

The device should also satisfy the electrical characteristics specified in form 1~2 after exposed to the temperature  $-40 \pm 5$  for  $24\pm 2$  hours and to 2 hours recovery time under normal temperature.

## 4.6 Temperature Cycle Test

The device should also satisfy the electrical characteristics specified in form 1~2 after exposed to the low temperature  $-25$  and high temperature  $+85$  for  $30\pm 2$  min each by 5 cycles and 1 to 2 hours recovery time under normal temperature