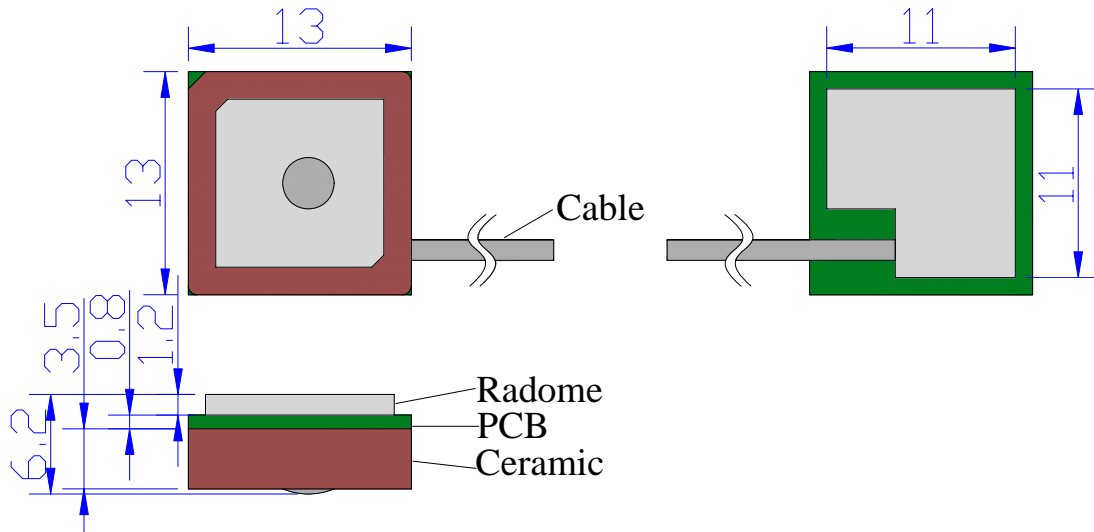


# GPS Internal Active Antenna

Part Number: VTGPSIA13-1



## 1. Dimension (Unit: mm)



## 2 Electrical Characteristics

### 2.1 Dielectric Antenna

Form 1

No.	Item	Specifications	Post Environmental Tolerance
1	Center Frequency (MHz)	1575.42 MHz	±3 MHz
2	Band Width (MHz)	±4 MHz	±1 MHz
3	V.S.W.R (in BW)	1.5 : 1	—
4	Gain (Zenith)	0 dB	±0.5 dB
5	Polarization	RHCP	—
6	Impedance	50 Ω	—

### 2.2 LNA/Filter

Form 2

No.	Item	Specifications	Post Environmental Tolerance
1	LNA Gain	20±2 dB	±2.5 dB
2	Noise Figure	1.5 dB	—
3	Filter Out Band Attenuation	30dB Min f0+40MHz 30dB Min f0-40MHz 40dB Min f0+100MHz 35dB Min f0-100MHz	±1.0 dB
4	DC Voltage	3.3 V	
5	DC Current	9 mA	

### 2.3 Mechanical

#### Form 3

No.	Item	Specification
1	Cable	RF1.13 or others
2	Connector	IPEX or others
3	Mounting	Internal

### 3 Reliability

Condition: Temperature: 40±5℃

Load: DC=5V±0.5 V

Quantity: 2000pcs

Sustained Time: 480h

### 4 Environmental Specifications

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

Condition: Temperature range 25±3℃

Relative Humidity range 55~75%RH

Operating Temperature range -40℃~+85℃

Storage Temperature range -40℃~+100℃

#### 4.1 Moisture Proof

The device should satisfy the electrical characteristics specified in form 1~2 after exposed to the temperature 40±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  $80\pm 5^{\circ}\text{C}$  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  $-40^{\circ}\text{C}\pm 5^{\circ}\text{C}$  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  $-25^{\circ}\text{C}$  and high temperature  $+85^{\circ}\text{C}$  for  $30\pm 2$  min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.