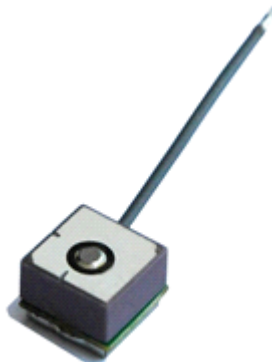
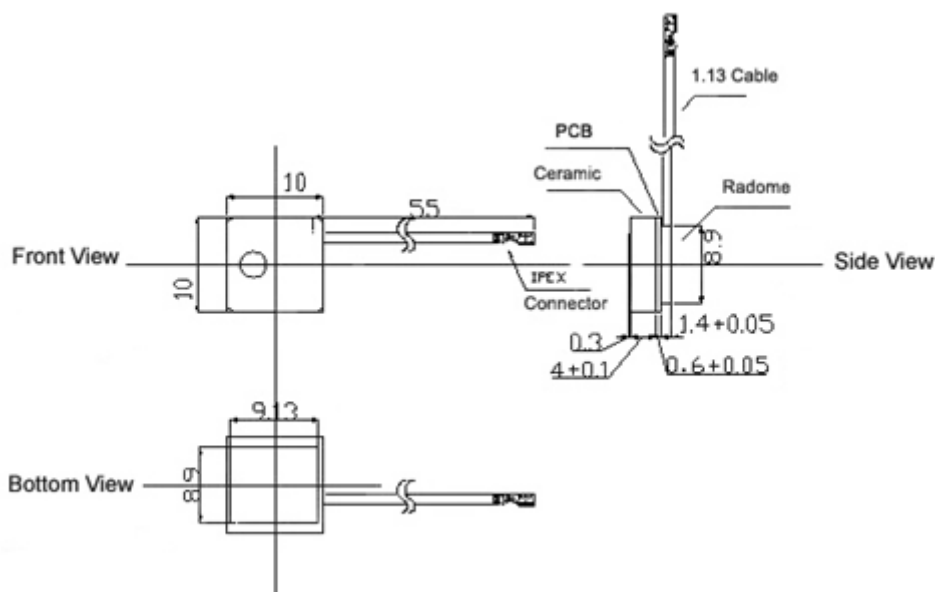


GPS Internal Active Antenna

Part Number: VTGPSIA-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) | 10 MHz | ±1 MHz |
| 3 | V.S.W.R (in BW) | 1.5 : 1 | — |
| 4 | Gain (Zenith) | 0 dB | |
| 5 | Polarization | RHCP | — |
| 6 | Impedance | 50 Ω | — |

2.2 LNA

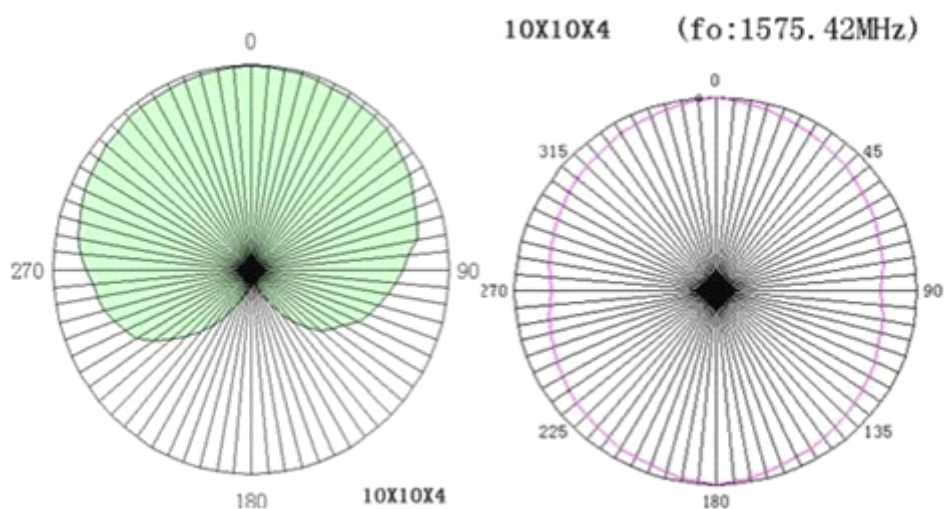
Form 2

| No. | Item | Specifications | Post Environmental Tolerance |
|-----|--------------|----------------|------------------------------|
| 1 | LNA Gain | 16±1 dB | ±1dB |
| 2 | Noise Figure | 1.5dB | — |
| | V.S.W.R | 1.5:1 | |
| 3 | DC Voltage | 2.7~3.3V | |
| 4 | DC Current | 5~15mA | |

3.2 Mechanical

Form 3

| No. | Item | Specification |
|-----|-----------|---------------|
| 1 | Cable | RF1.13/ 55mm |
| 2 | Connector | IPEX |
| 3 | Dimension | 10*10*6.5mm |



3. Reliability

Condition: Temperature: 40±5°C
 Load: DC=5V±0.5 V
 Quantity: 2000pcs
 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°C~+85°C
 Storage Temperature range -40°C~+100°C

4.1 Moisture Proof

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