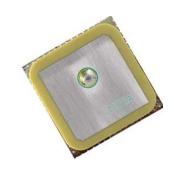
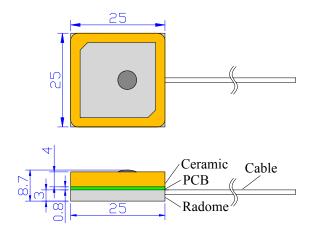


GPS Internal Active Antenna

Model: VTGPSIA-3



1. Dimension (Unit: mm)



2. Electrical Characteristics



3.1 Dielectric Antenna

Form 1

| No. | Item | Specifications | Post Environmental Tolerance |
|-----|------------------------|----------------|------------------------------|
| 1 | Center Frequency (MHz) | 1575.42 MHz | ±3 MHz |
| 2 | Band Width (MHz) | ±5 MHz | ± 1MHz |
| 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 | _ |

3.2 LNA/Filter

Form 2

| No. | Item | Specifications | Post Environmental Tolerance |
|-----|-----------------------------|------------------------------------------------------------------------------------|------------------------------|
| 1 | LNA Gain | 28±3 dB | ±2.5 dB |
| 2 | Noise Figure | 1.5dB | _ |
| 3 | Filter Out Band Attenuation | 14dB Min f0+50MHz 18dB Min f0-50MHz 30dB Min f0+100MHz 42dB Min f0-100MHz | ±1.0dB |
| 4 | DC Voltage | 2.7~5V | |
| 5 | DC Current | 8~14mA | |

3.3 Mechanical

Form 3

| No. | Item | Specification | |
|-----|-----------------|---------------------------------------|--|
| 1 | Cable | RF 1.13/ RG 178/RG 174 | |
| 2 | Connector | IPEX/MMCX | |
| 3 | Plastic Housing | Gray or Black or Brown | |
| 4 | Mounting | Internal | |
| 5 | Weight | 0.015kg (Without Connector and Cable) | |



4 Reliability

Condition: Temperature: 40±5°C

Load: DC=5V±0.5 V Quantity: 2000pcs Sustained Time: 480h

5 Environmental Specifications

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

Temperature range $25 \pm 3^{\circ}$ C

Relative Humidity range 55~75%RH Operating Temperature range -40°C~+85°C Storage Temperature range -40°C~+100°C

5.1 Moisture Proof

The device should satisfy the electrical characteristics specified in form $1\sim2$ after exposed to the temperature 40 ± 2 °C and the relative humidity $90\sim95\%$ RH for 96 hours and $1\sim2$ hours recovery time under normal condition.

5.2 Vibration Resist

The device should satisfy the electrical characteristics specified in form $1\sim2$ after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X, Y and Z directions.

5.3 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.

5.4 High Temperature Endurance

The device should satisfy the electrical characteristics specified in form $1\sim2$ after exposed to temperature $80\pm5\,^{\circ}\mathrm{C}$ for 24 ± 2 hours and $1\sim2$ hours recovery time under normal temperature.

5.5 Low Temperature Endurance

The device should also satisfy the electrical characteristics specified in form $1\sim2$ 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.

5.6 Temperature Cycle Test

The device should also satisfy the electrical characteristics specified in form $1\sim2$ after exposed to the low temperature -25°C and high temperature +85°C for 30 ± 2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.