

GPS Active Antenna Module - Adhesive Mount

APAMP-113

RoHS/RoHS II compliant

Lead in copper alloy exemption (6c); and Lead in glass exemption (7c-1)



38.0 X 34.0 X 12mm

MSL level: Not Applicable

FEATURES:

- High Reliability/Sensitivity
- Compact Size
- Easy to install (adhesive base tape)
- ROHS Compliant

TYPICAL APPLICATIONS:

- Automotive Navigation
- Automotive Monitoring
- Personal Tracking

STANDARD SPECIFICATIONS:

Antenna

| Parameters | Min. | Typ. | Max. | Units | Note |
|--------------------------|---------|---------|---------|--------------------|------------------------------------|
| Center Frequency | 1574.40 | 1575.42 | 1576.44 | MHz | |
| Bandwidth | 10.0 | | | MHz | |
| VSWR at Center Frequency | | | 1.5:1 | | |
| Polarization Model | RHCP | | | | (Right Hand Circular Polarization) |
| Impedance | | 50 | | Ω | |
| Gain | | 5 | | dBic | (Based on 70x 70mm ground plane) |
| Operating Temperature | -40 | | +80 | $^{\circ}\text{C}$ | |
| Storage Temperature | -45 | | +85 | $^{\circ}\text{C}$ | |

Low Noise Amplifier (LNA)

| Parameters | Min. | Typ. | Max. | Units | Note |
|--|---------|---------|---------|-------|---|
| Center Frequency | 1574.40 | 1575.42 | 1576.44 | MHz | |
| DC Voltage | 3.0 | | 5.0 | V | |
| Gain | 25 | 28 | 31 | dB | (+25 $^{\circ}\text{C}$ \pm 10 $^{\circ}\text{C}$) |
| Out-of-band Rejection (Absolute Value) | 19 | | | dB | (Fo+100MHZ) |
| | 21 | | | dB | (Fo-100MHZ) |
| Output VSWR | | | 2.0 | | |
| Noise Figure | | | 1.8 | | |
| DC current | | 7.5 | 9.5 | mA | (At 3.0V) |

Overall (Complete module including RF connector)

| Parameters | Min. | Typ. | Max. | Units | Note |
|------------------|---------|---------|----------|----------|--------------------|
| Center Frequency | 1574.40 | 1575.42 | 1576.44 | MHz | |
| Gain | 25 | 28 | 31 | dBic | |
| Output VSWR | | | 2.0 | | |
| Impedance | | 50 | | Ω | |
| ESD Protection | | | ± 8 | kV | (Direct discharge) |
| | | | ± 15 | kV | (Air discharge) |

GPS Active Antenna Module

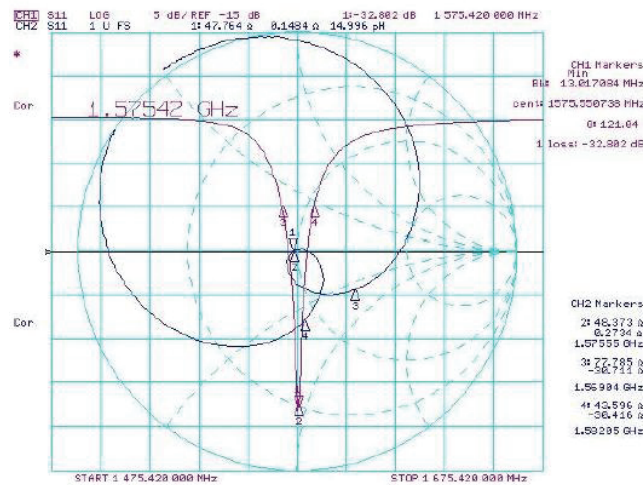
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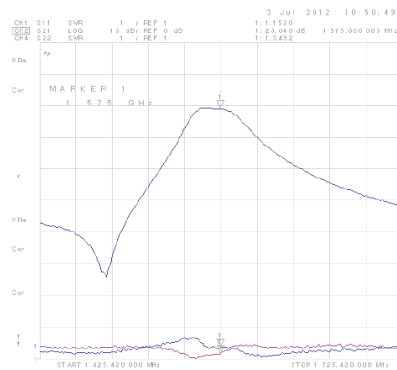
ANTENNA'S IMPEDANCE AND RETURN-LOSS CHARACTERISTICS



S11: Input VSWR

Test condition: 25x25mm ground

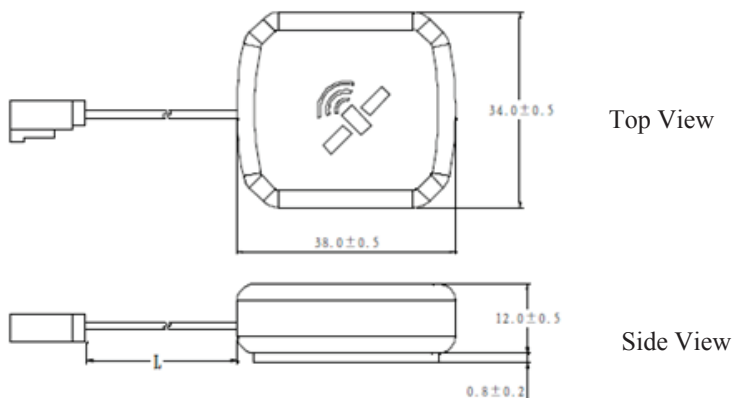
LNA REFLECTION PROFILE



S21: LNA Gain

Test condition: DC 5.0V
S21=29.04dB

OUTLINE DRAWING:



| Parameters | Description |
|----------------------|--------------------|
| L (Cable Length) | 250±10cm |
| Antenna | Dielectric Ceramic |
| RF Cable | RG174 |
| RF Cable Attenuation | 1.3dB/m |
| PCB | FR4 |
| RF Connector | FAKRA-C |
| Shielding | Tinplate |
| Thickness | 12.8mm |
| Mounting Type | Adhesive Tape |

Unit:mm

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PRODUCT IMAGE:



PACKAGING:

Each 475 x 215 x 215 mm size carton includes 100 pieces of antenna.



CAUTION:

- (1) Do not apply excess mechanical stress to the component body or terminations. Do not attempt to re-form or bend the components as this will cause damage to the component.
- (2) Do not expose the component to open flame.
- (3) This specification applies to the functionality of the component as a single unit. Please insure the component is thoroughly evaluated in the application circuit.

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