

# GPS+GLONASS Active Antenna Module - Magnet Base

**APAMPG-130****ESD Sensitive**RoHS/RoHS II compliant  
Lead in copper alloy exemption (6c); and Lead in glass exemption (7c-I)

44.0 x 14.5mm

**MSL level: Not Applicable**

## FEATURES:

- High Reliability/ Sensitivity
- Compact Size
- Easy to Install (magnet base)
- ROHS Compliant

## TYPICAL APPLICATIONS:

- Automotive Navigation
- Automotive Monitoring
- Personal Tracking

## STANDARD SPECIFICATIONS:

### Antenna

| Parameters               | Min.    | Typ.    | Max.    | Units    | Note                               |
|--------------------------|---------|---------|---------|----------|------------------------------------|
| Frequency Range          | 1572.42 | 1575.42 | 1578.42 | MHz      | (For GPS)                          |
|                          | 1594    | 1602    | 1610    | MHz      | (For GLONASS)                      |
| Bandwidth                | 8.0     |         |         | MHz      | (For GPS)                          |
|                          | 16.0    |         |         | MHz      | (For GLONASS)                      |
| VSWR at Center Frequency |         |         | 1.5:1   |          |                                    |
| Polarization Model       | RHCP    |         |         |          | (Right Hand Circular Polarization) |
| Impedance                |         | 50      |         | $\Omega$ |                                    |
| Gain                     |         | 5       |         | dBi      | (Based on 70× 70mm ground plane)   |
| Operating Temperature    | -40     |         | +80     | °C       |                                    |
| Storage Temperature      | -45     |         | +85     | °C       |                                    |

### Low Noise Amplifier (LNA)

| Parameters         | Min. | Typ. | Max. | Units | Note                         |
|--------------------|------|------|------|-------|------------------------------|
| Frequency Range    | 1572 | 1595 | 1618 | MHz   |                              |
| DC Voltage         | 2.8  |      | 5.0  | V     |                              |
| Gain               |      | 30   |      | dB    | (without cable +25°C ± 10°C) |
| Output VSWR        |      |      | 2.0  |       |                              |
| Noise Figure       |      |      | 1.5  |       | (+25°C ± 10°C)               |
| DC current         |      | 13.5 |      | mA    | (At 3.0V)                    |
| Out-Band Rejection | 20   |      |      | dB    | (fo+100MHz)                  |
|                    | 25   |      |      | dB    | (fo-100MHz)                  |

### Overall (Complete Module including RF Connector)

| Parameters            | Min. | Typ. | Max. | Units    | Note |
|-----------------------|------|------|------|----------|------|
| Frequency Range       | 1572 | 1595 | 1618 | MHz      |      |
| Output V.W.S.R        |      |      | 2.0  |          |      |
| Impedance             |      | 50   |      | $\Omega$ |      |
| Peak Gain             |      |      | 30   | dBic     |      |
| Operating Temperature | -40  |      | +80  | °C       |      |
| Storage Temperature   | -45  |      | +85  | °C       |      |



# GPS+GLONASS Active Antenna Module - Magnet Base

APAMPG-130



ESD Sensitive

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

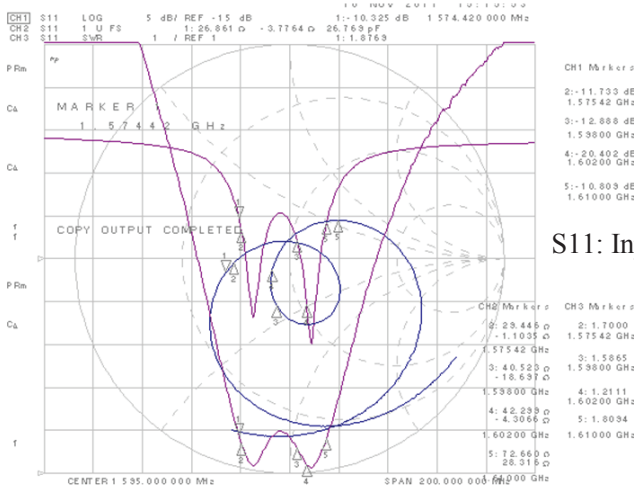
RoHS/RoHS II compliant



44.0 x 14.5mm

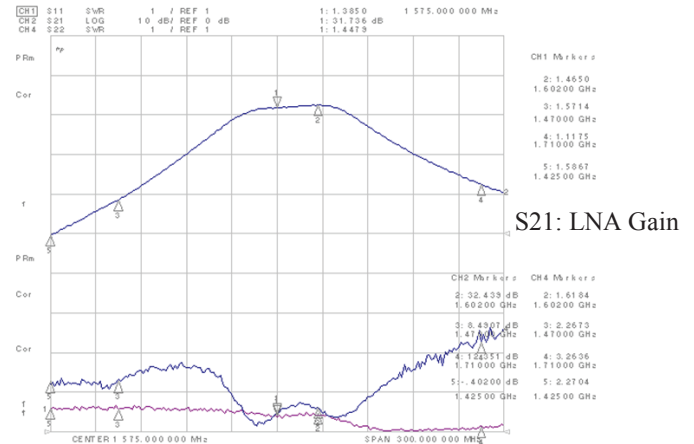
## TEST CONDITIONS & TEST SETUP:

### Antenna's Impedance and Return-Loss Characteristics



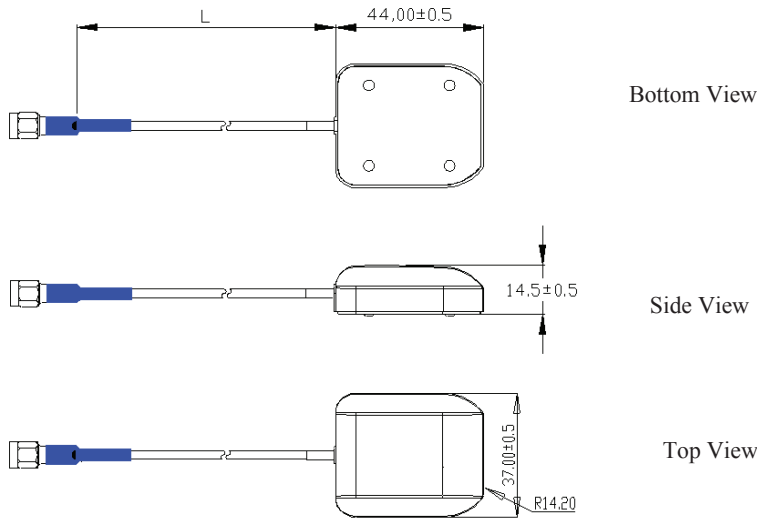
Test condition: 27x27mm ground

### LNA Reflection Profile



Test condition: DC 3.0V

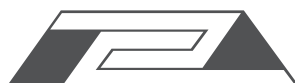
## OUTLINE DIMENSION:



| Parameters           | Description         |
|----------------------|---------------------|
| L (Cable Length)     | 400±10cm            |
| RF Cable Attenuation | 1.3dB/m             |
| Antenna              | Dielectric Ceramics |
| PCB                  | FR4                 |
| RF Connector         | SMA-J3              |
| Shielding            | Tinplate            |
| Thickness            | 15.5mm              |
| Mounting Type        | Magnet Base         |

Unit: mm

ABRACON IS  
ISO9001:2008  
CERTIFIED



**ABRACON**  
CORPORATION

Visit [www.abracon.com](http://www.abracon.com) for Terms & Conditions of Sale **Revised: 10.30.14**  
30332 Esperanza, Rancho Santa Margarita, California 92688  
tel 949-546-8000 | fax 949-546-8001 | [www.abracon.com](http://www.abracon.com)

# GPS+GLONASS Active Antenna Module - Magnet Base

APAMPG-130



ESD Sensitive

RoHS/RoHS II compliant  
Lead in copper alloy exemption (6c); and Lead in glass exemption (7c-I)



44.0 x 14.5mm

## PRODUCT IMAGE:



## PACKAGING:

Each 630 x 460 x 105mm 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.

**ATTENTION:** Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.

ABRACON IS  
ISO9001:2008  
CERTIFIED



**ABRACON**  
CORPORATION

Visit [www.abracon.com](http://www.abracon.com) for Terms & Conditions of Sale **Revised: 10.30.14**  
30332 Esperanza, Rancho Santa Margarita, California 92688  
tel 949-546-8000 | fax 949-546-8001 | [www.abracon.com](http://www.abracon.com)