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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# GPS Active Antenna Module

## APAMPJ-132

RoHS/RoHS II compliant

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



41.0 X 34.0 X 14.5mm

MSL level: Not Applicable

### FEATURES:

- GPS External Module 1575.42MHz
- Compact design 41 x 34 x 14.5mm
- Patch with low gain LNA
- Low gain to reduce chance of saturation of RFIC
- Gain (12dBm min / 16dBm max)
- Out of band rejection 49dB min
- DC Supply (2.7V min / 5.5V max)
- Easy to install (adhesive tape base)
- RoHS/RoHS II compliant

### TYPICAL APPLICATIONS:

- Automotive Navigation
- Tracking Systems
- GPS Navigation in urban canyons

### STANDARD SPECIFICATIONS:

#### Antenna

| Parameters               | Min. | Typ.    | Max.  | Units    | Note                               |
|--------------------------|------|---------|-------|----------|------------------------------------|
| Center Frequency         |      | 1575.42 |       | MHz      |                                    |
| Bandwidth                | 10   |         |       | MHz      |                                    |
| VSWR at Center Frequency |      |         | 1.5:1 |          |                                    |
| Polarization Model       |      | RHCP    |       |          | (Right Hand Circular Polarization) |
| Impedance                |      | 50      |       | $\Omega$ |                                    |
| Gain (Zenith)            |      | 4.0     |       | dBic     | (Based on 70x 70mm ground plane)   |

#### Low Noise Amplifier (LNA)

| Parameters                             | Min. | Typ.    | Max. | Units | Note                        |
|--|------|---------|------|-------|-----------------------------|
| Center Frequency                       |      | 1575.42 |      | MHz   |                             |
| DC Voltage                             | 2.7  |         | 5.5  | V     |                             |
| Gain                                   | 12   | 14      | 16   | dB    | (Without cable +25°C± 10°C) |
| Out-of-band Rejection (Absolute Value) | 49   |         |      | dB    | (fo+100MHz)                 |
|  | 21   |         |      | dB    | (fo-100MHz)                 |
| Output VSWR                            |      |         | 2:1  |       |                             |
| Noise Figure                           |      | 1.15    | 1.8  |       |                             |
| DC current                             | 15   |         | 25   | mA    |                             |
| Power                                  |      |         | 138  | mW    |                             |

#### Overall (complete module including RF connector)

| Parameters            | Min. | Typ.    | Max. | Units    | Note                             |
|-----------------------|------|---------|------|----------|----------------------------------|
| Center Frequency      |      | 1575.42 |      | MHz      |                                  |
| Gain                  | 12   | 14      | 16   | dBic     | (Based on 70x70mm ground plane.) |
| Output VSWR           |      |         | 2:1  |          |                                  |
| Impedance             |      | 50      |      | $\Omega$ |                                  |
| Operating Temperature | -40  |         | +85  | °C       |                                  |

# GPS Active Antenna Module

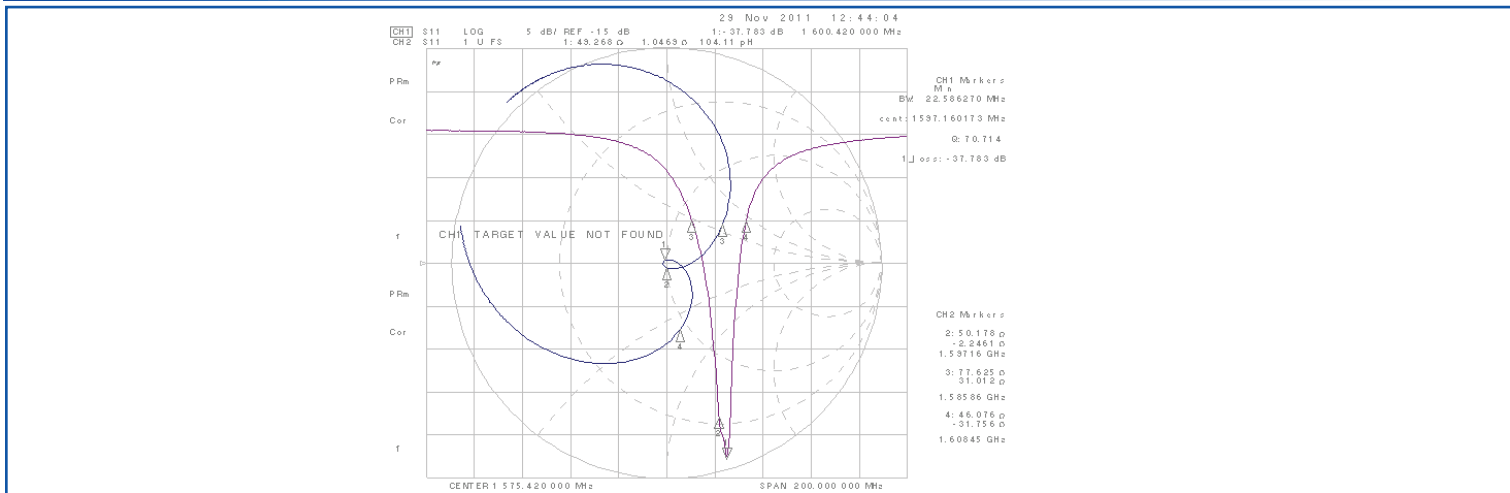
**APAMPJ-132**

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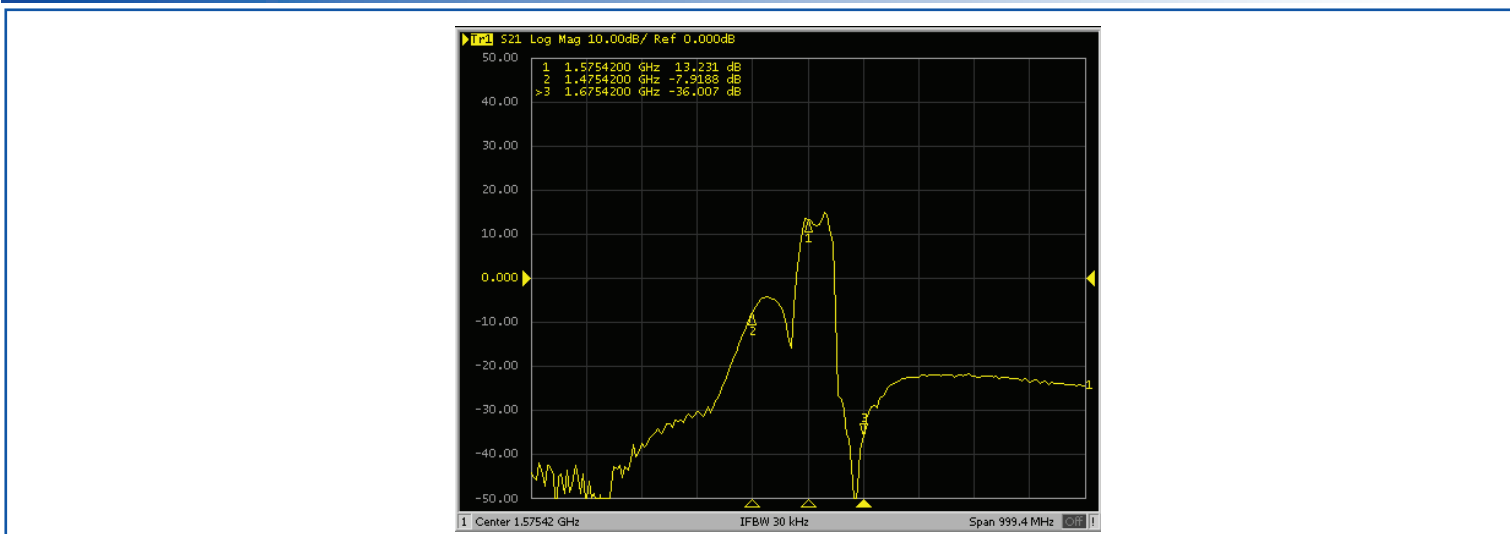


41.0 X 34.0 X 14.5mm

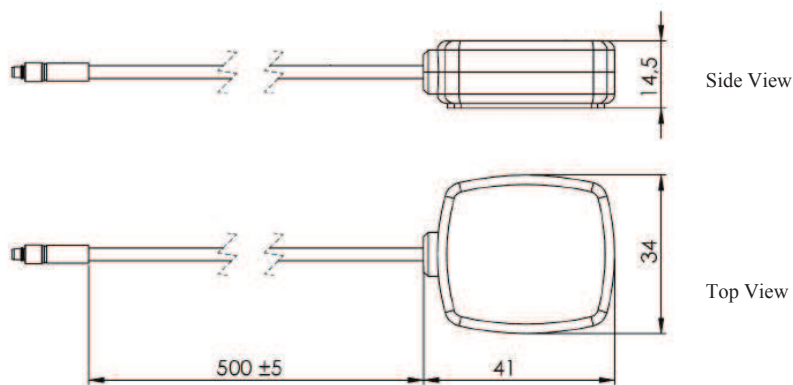
## ANTENNA'S IMPEDANCE AND RETURN-LOSS CHARACTERISTICS



## ANTENNA S21 GAIN



## OUTLINE DRAWING:



| Parameters           | Description                  |
|----------------------|------------------------------|
| L (Cable Length)     | 500±5cm                      |
| Antenna              | Dielectric Ceramic           |
| RF Cable Attenuation | 1.3 dB/m                     |
| RF Cable             | Coax. cable RG174U           |
| PCB                  | FR4                          |
| RF Connector         | MMCX, Male, Straight, Nickel |
| Housing              | Black ABS                    |
| Mounting             | Adhesive Tape                |

Unit:mm

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41.0 X 34.0 X 14.5mm

## PACKAGING:

Antenna is packaged in 100x200x0.1mm size poly bag. There are 300pcs in 465x310x250mm size box.



### 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 them.
- (2) Do not expose the component to open flame.
- (3) This specification applies to the functionality of the component as a single unit.  
Please evaluate your specifications before mounting this product.

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