

# 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		$\Omega$	
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		$\Omega$	
ESD Protection			$\pm 8$	kV	(Direct discharge)
			$\pm 15$	kV	(Air discharge)

# GPS Active Antenna Module

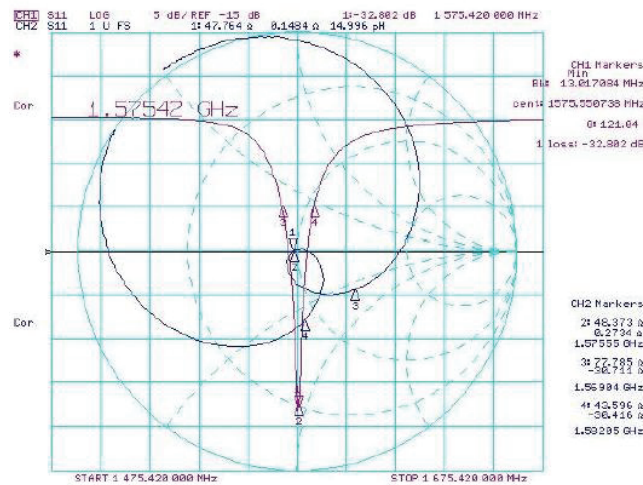
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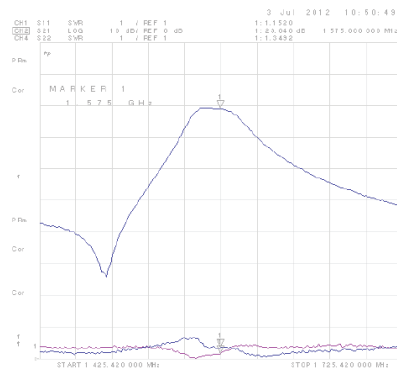
## ANTENNA'S IMPEDANCE AND RETURN-LOSS CHARACTERISTICS



S11: Input VSWR

Test condition: 25x25mm ground

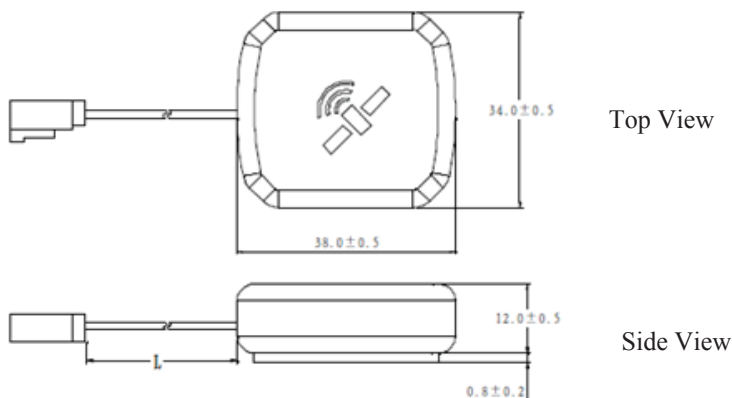
## LNA REFLECTION PROFILE



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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