

# GPS Active Antenna Module - Magnet Base

**APAMP-127****ESD Sensitive**RoHS/RoHS II compliant  
Lead in copper alloy exemption (6c); and Lead in glass exemption (7c-I)

38.0 X 34.0 X 12mm

**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
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 70× 70mm ground plane)
Operating Temperature	-40		+80	°C	
Storage Temperature	-45		+85	°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°C ± 10°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			±8	kV	(Direct discharge)
			±15	kV	(Air discharge)



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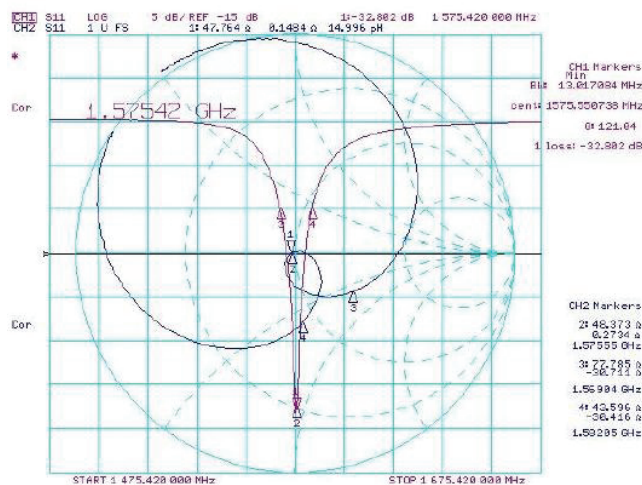
Lead in copper alloy exemption (6c); and Lead in glass exemption (7c-1)

RoHS/RoHS II compliant



38.0 X 34.0 X 12mm

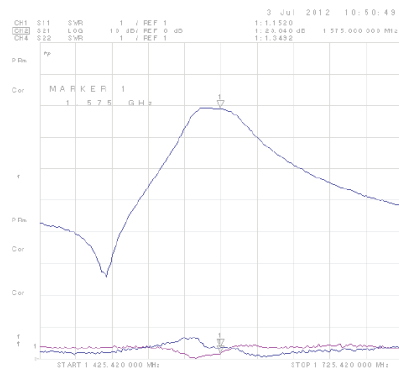
## ANTENNA'S IMPEDANCE AND RETURN-LOSS CHARACTERISTICS



S11: Input VSWR

Test condition: 25x25mm ground

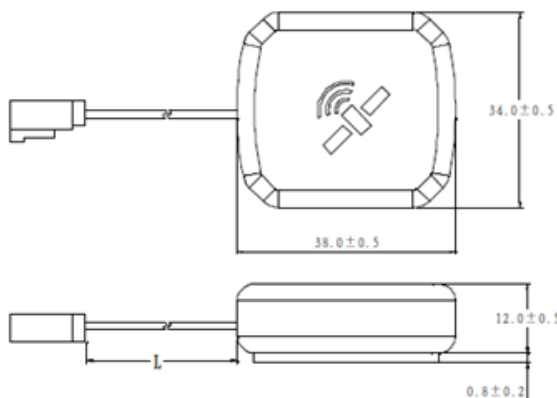
## LNA REFLECTION PROFILE



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	Magnet Base

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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