

# GPS Active Antenna Module

## APAMPJ-132

RoHS/RoHS II compliant

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



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

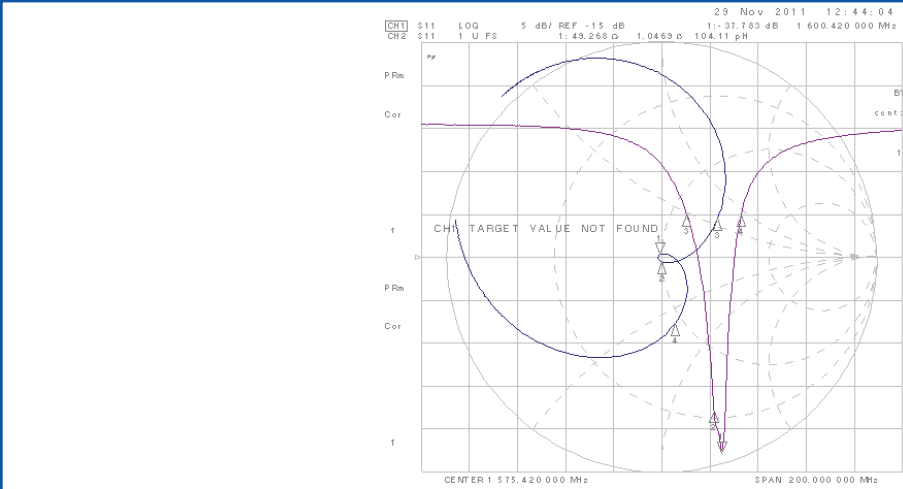
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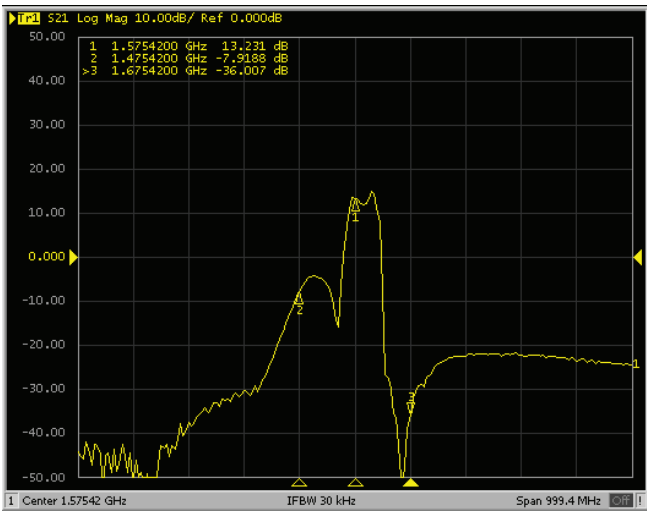


41.0 X 34.0 X 14.5mm

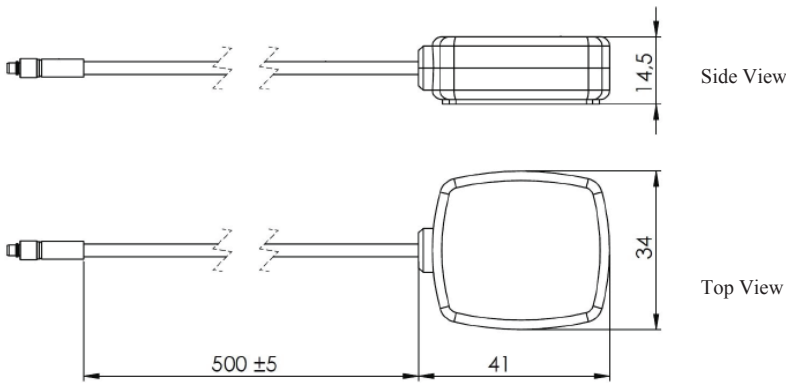
## ANTENNA'S IMPEDANCE AND RETURN-LOSS CHARACTERISTICS



## 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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## 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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