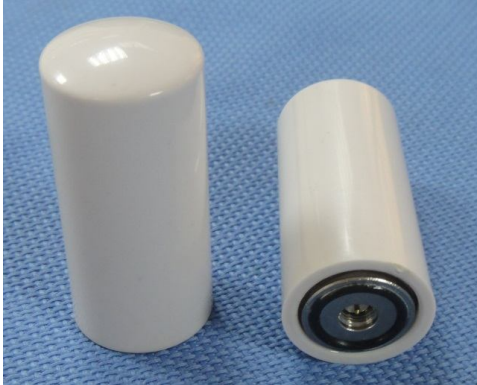


# GPS ANTENNA

## MODEL: GA-90

Compact & Sensitive GPS Antenna Module with Excellent Signal Amplification for Mobile Applications



- Gain: 27 dB
- Ultra-high sensitivity
- Voltage: 2.5~5V DC
- 25mm x 55mm
- ABS PA777D Impact-resistant plastic

**GA-90** is the most compact GPS antenna module currently available on the market, thanks to our cutting-edge technology that makes the device the tiniest possible without sacrificing performance. With comprehensive coverage almost all the way to the horizon, it performs excellently in foliage or urban canyon environment. Featuring diminutive but substantial enclosure plus unparalleled performance, **GA-90** is compatible with almost every GPS receiver model available on the market and provides a perfect alternative for a vast range of GPS applications in the fields of AVL, vehicle navigation, aviation and military.

### Features:

- Compact Construction/ Low Profile/ Fully Waterproof
- Magnet and Screw Mount Base
- Excellent Temperature Stability
- Low Noise Figure
- High Sensitivity

### Applications:

- Automobile GPS
- Bluetooth Receiver
- Car Tracking Navigation System
- AVL / Fleet Management Systems
- External Antenna for Handheld GPS
- External Antenna for PDA Navigator

### Specifications:

PHYSICAL CONDITION	
Dimension:	25mm x 55mm
Weight:	50 g
Standard Mounting:	screw mount
ANTENNA ELEMENT	

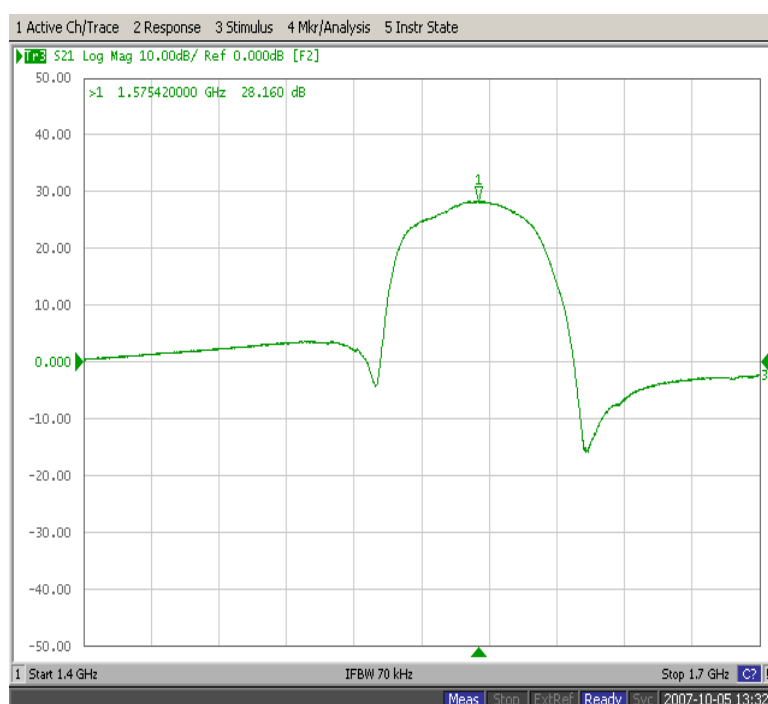
Center Frequency:	1575.42 MHz +/- 1.023 MHz
Polarization:	R.H.C.P. (Right Hand Circular Polarization)
Absolute Gain at Zenith:	0.5 dBic
Axial Ratio:	3.0 dB Typ.
Output VSWR:	2.0 Max.
Output Impedance:	50 ohm
Ground size	50mm*50mm
<b>LOW NOISE AMPLIFIER</b>	
Center Frequency:	1575.42 MHz +/- 1.023 MHz
Gain:	27dB Typ.
Band Width:	5 MHz min. @S11-10 dB
Noise Figure:	1.5 Typ.
Supply Voltage:	2.5V~5 V DC
Current Consumption:	9.0~15 mA
Output Impedance:	50 ohm
<b>CABLE &amp; CONNECTOR</b>	
RF Cable:	
Pulling Strength:	6 Kg/5 sec. with molded plastics on connector end for strain relief (w/o cable loss)
Connector Available:	N(M) or SMA(M)
Optional Adapters:	
<b>ENVIRONMENTAL CONDITIONS</b>	
Operating Temperature:	-40°C~+85°C
Storage Temperature:	-40°C~+90°C
Relative Humidity:	10~95% non-condensing

\* This specification is subject to change without prior notice

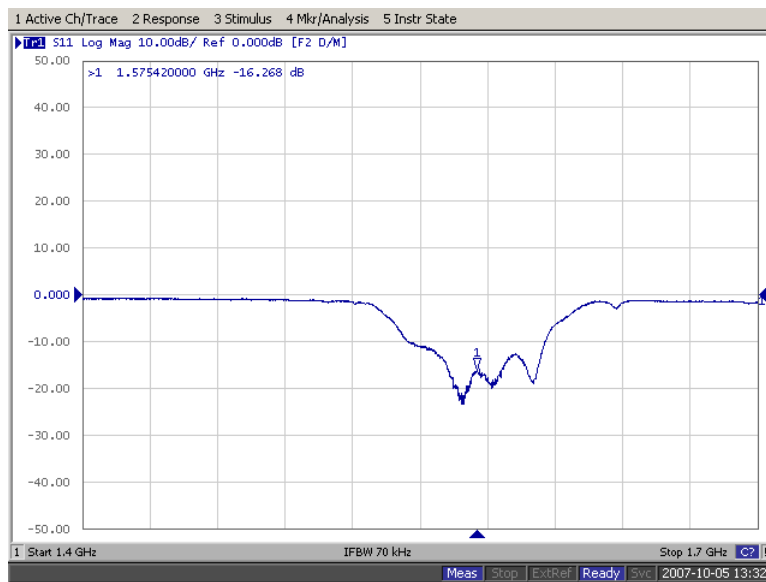
Data Updated: JUN 18, 2013

## I. Insertion Gain and I/O Reflection Coefficient for LNA:

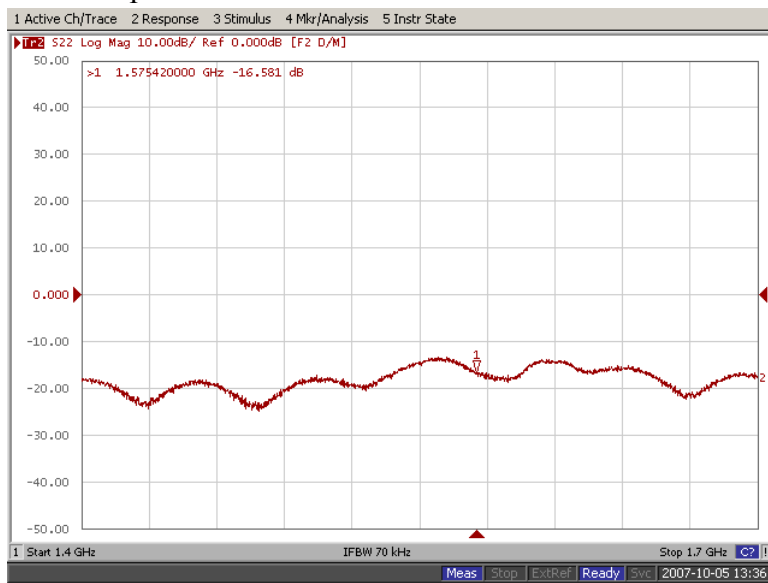
### 1. LNA Insertion Gain



### 2. LNA Input reflection Coefficient



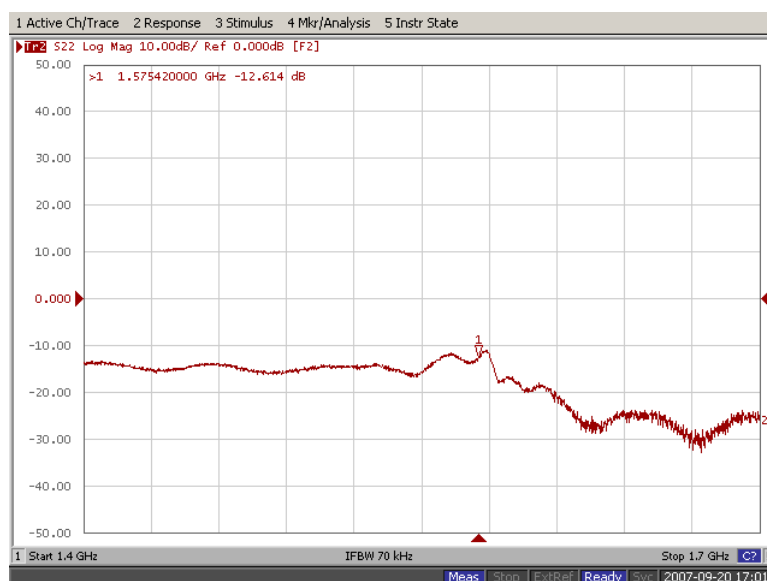
### 3. LNA Output reflection Coefficient



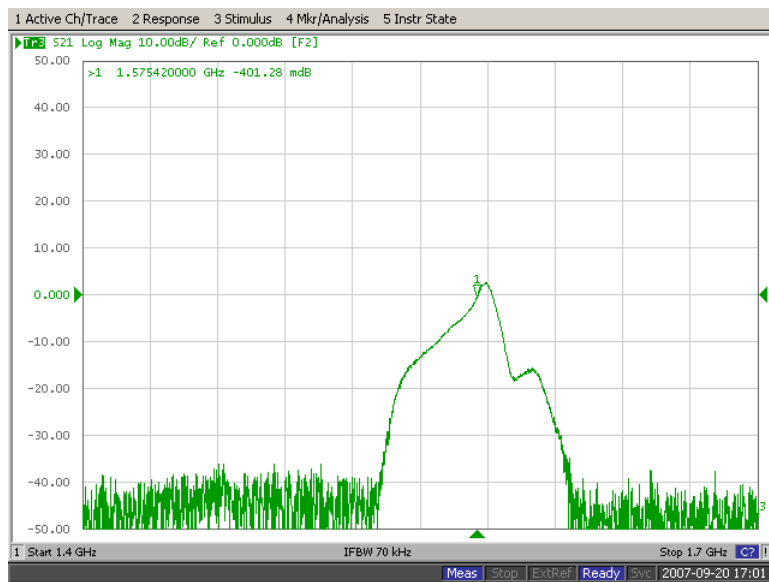
The S-parameters of LNA in the condition of -40 dBm input power.

## II. Active Antenna Module

### 1. Output reflection coefficient



## 2. Active antenna Gain



S21	
1575MHz	S21>-6dB

### Radiation Pattern

