# 2 dBi Ground Independent Tunable Poly Spring Vehicular Antenna 380-520 MHz NMO Mount Connector

## HG382PSGI-NMO

### Features

- 1/2 Wave ground independent wide band antenna
- NMO Mount, Black Chrome Finish
- Flexible Black Polymer Alloy Spring
- Broad Band
- O-ring seal for waterproof construction
- Durable Xenoy™ base with TPB over mold dust seal and grip ring

### Applications

- Service Vehicles
- Public safety
- Public Transportation
- Mining & Construction

### Description

This ground plane independent UHF mobile omnidirectional antenna is ideally suited for multipoint mobile applications including service vehicles, public transportation, public safety, mining and construction vehicles, as well numerous other commercial and industrial applications where mobility and wide coverage is desired. This antenna features a flexible Poly Spring base. Unlike the traditional metal spring base, the Poly Spring will not corrode and does not generate electrical noise when flexed during use. It has a standard TAD/NMO Motorola-type mobile base.

### Configuration

| | |
|---|---|
| Design | Vehicular |
| Application Band | UHF |
| Band Type | Single |
| Radiation Pattern | Omni Directional |
| Wavelength | Half Wave |
| Polarization | Linear, Vertical |
| Ground Plane | Independent |
| Connector Type | NMO Mount |

### Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|---|---|---|---|---|
| Frequency Range (Tunable Range) | 380 | | 520 | MHz |
| Operational Bandwidth | | 50 | | MHz |
| Input VSWR (across operational bandwidth) | | | 2:1 | |
| Impedance | | 50 | | Ohms |
| Gain | | 2 | | dBi |
| Horizontal (Azimuth) Beam Width | | Omnidirectional | | |
| Vertical (Elevation) Beam Width | | 70 | | Degrees |
| Input Power | | | 150 | Watts |

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Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications:
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## HG382PSGI-NMO

### Mechanical Specifications

| | |
|---|---|
| Base Material | Xenoy™ w/TPV over mold grip |
| Whip Material | 17-7 SS |
| Whip Finish | Black Chrome |
| Mounting Application | ¾ inch thru-hole NMO Mount |
| Spring Material | Black Molded Polymer Alloy |

**Size**

| | |
|---|---|
| Length | 16.13 in [409.7 mm] |

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## HG382PSGI-NMO

### Installation Instructions

**HG382PSGI-NMO**
**UHF GROUND PLANE INDEPENDENT ANTENNA**
**(380-520 MHz)**

*Congratulations on your selection of another quality antenna product from L-COM.*
*L-COM is committed to continually provide the greatest antenna VALUE for your wireless applications.*

1. **Parts (Figure 1):**
   Verify all parts are included with the Antenna as shown in Figure 1.
   A. Antenna Whip
   B. e/m-Flex™ Poly Spring Assembly
   C. NMO Base Adapter
   D. O-Ring
2. **Tools/Materials Required:**
   A. Tool for cutting stainless steel whip
   B. Hex Wrench
   C. **Note:** Special tools are not required to install the antenna. The antenna is intended to be installed using a firm hand torque until the sealing O-ring is completely compressed against the installation surface.
3. **Pre-Installation Checklist and Tips:**
   A. **Optimal VSWR and Bandwidth:** Best performance is achieved when mounted to a non-metallic surface or small metal L-Bracket.
   B. **Mounting Option:** Metallic ground plane surface.
   C. Ensure O-ring is properly seated within O-ring groove as shown in figure 2.
   D. **Important:** Verify proper operational frequency. (Figure 2).
   E. Read and follow all Whip Cutting Instructions supplied for this model.
4. **Tuning and Installation (Figure 3):**
   A. Verify contact spring is completely extended. If necessary, adjust by pulling the contact upward.
   B. Thread NMO Base Adapter onto the NMO mount. Tighten by hand until O-Ring is completely seated.
   C. Thread Spring onto NMO Base Adapter. Firmly torque by hand.
   D. Refer to whip cutting instructions. Cut whip according to frequency and ground plane or no ground plane installation.
   E. Verify VSWR. Apply firm torque to whip adapter set screws. (2 ea)

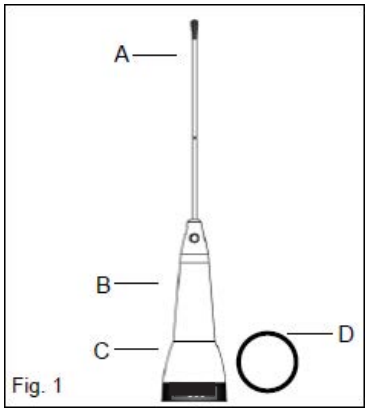


Fig. 1

Fig. 2

Fig. 3

2 dBi Ground Independent Tunable Poly Spring Vehicular Antenna 380-520 MHz NMO Mount Connector

## HG382PSGI-NMO

### WHIP CUTTING INSTRUCTIONS FOR TUNING HG382PSGI-NMO

**"Ground Plane" and "No Ground Plane" Installations**

**PLEASE CAREFULLY READ ALL INSTRUCTIONS BEFORE CUTTING THE WHIP**

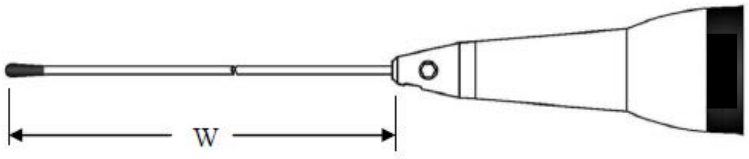
| FREQUENCY BAND | TUNED WHIP LENGTH "W" NO GROUND PLANE | | TUNED WHIP LENGTH "W" GROUND PLANE | |
|---|---|---|---|---|
| (MHz) | (inches) | (mm) | (inches) | (mm) |
| 380 - 430 | 6-13/16 | 172 | 6-3/4 | 170 |
| 400 - 450 | 6-1/4 | 159 | 6-1/4 | 159 |
| 440 - 490 | 5-5/8 | 141 | 5-5/8 | 141 |
| 470 - 520 | 4-5/8 | 116 | 4-5/8 | 116 |

Table 1

1. **IMPORTANT! Before Cutting**
   **OPTIMAL BANDWIDTH PERFORMANCE:** This antenna is specifically designed for optimal performance, operating across a 50 MHz (or greater) bandwidth for each cut length specified in Table 1. VSWR may vary slightly depending on the actual installation surface material, location, bracket type and size.

   **Cutting NOTE:** The whip can be cut using a grinding wheel or shearing tool designed for this purpose. Due to a large variation of installations without a conductive ground plane surface, it is strongly recommended to cut the whip slightly longer than the specified dimensions in Table 1. If necessary, continue to trim for best VSWR match. Always verify actual VSWR or Return Loss performance after cutting and installation.

   **TUNED LENGTH "W"** is determined by measuring the distance between the top of the whip adapter and the top of the whip. **See Figure 4. NOTE: The actual cut length will be approximately 1" (25mm) longer than TUNED WHIP LENGTH "W".**
2. Choose the column in Table 1 for "Ground Plane" or "No Ground Plane" installation.
3. Identify the desired center frequency ($F_C$) of operation.
4. Choose the **FREQUENCY BAND** from the left column in Table 1 that provides the best frequency band centering of $F_C$.
5. Imperial and Metric units are given for convenience. Cut the whip as required to establish the specified **TUNED WHIP LENGTH "W"** as shown in Figure 4. Verify VSWR. Secure set screws (2 ea.).




[Note: Add 1" (25mm) to Tuned Length "W" when cutting whip.] Fig. 4

2 dBi Ground Independent Tunable Poly Spring Vehicular Antenna 380-520 MHz NMO Mount Connector

## HG382PSGI-NMO

### Environmental Specifications

**Temperature**

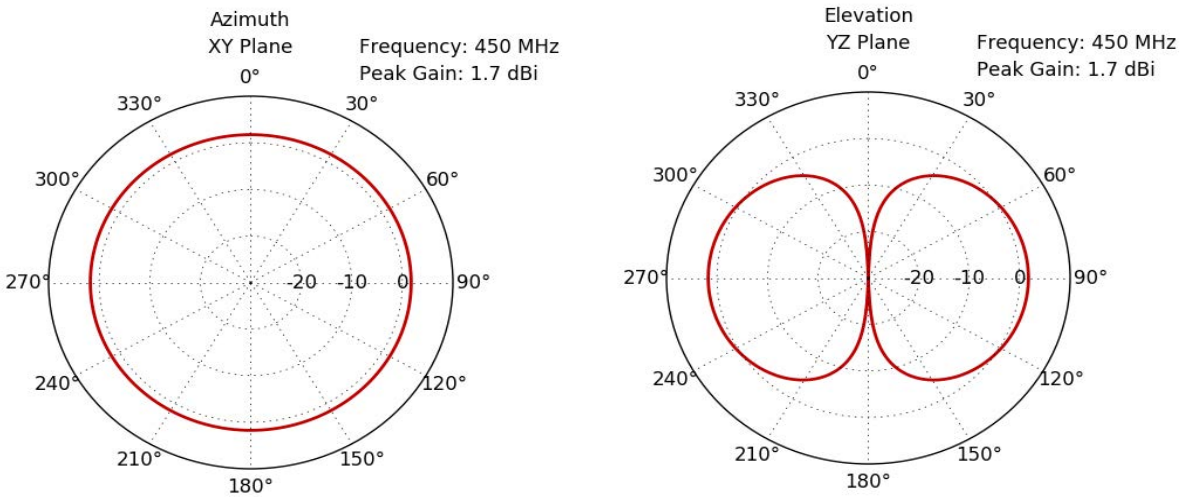
| | |
|---|---|
| Operating Range | -40 to +85 deg C |
| Humidity | 95% |

**Compliance Certifications** (see product page for current document)

### Plotted and Other Data

Notes:

**Typical Radiation Pattern**

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## L-com CAD Drawing