



# M1516HCT-15A-SMA

## ACTIVE GPS GLONASS ANTENNA

Ordering Part #: 100-00107-01



### Description

The M1516HCT-15A-SMA is a high performance dual stage LNA active antenna designed for the GPS and GLONASS L1 band, and built on Maxtena proprietary Helicore™ technology. This technology provides exceptional pattern control, polarization purity and high efficiency in a very compact form factor. The M1516HCT-15A-SMA is a screw-on design, featuring an integrated SMA connector. The ultra light design is rated IP67 when mounted and unmounted for added protection and includes an internal O-ring. This product is ideal for applications requiring high quality reception of GPS signals.

### General Specifications

| Parameter       | Design Specifications |
|-----------------|-----------------------|
| Operating temp. | from -40°C to 85°C    |
| Weight          | 10.6 grams (typical)  |
| RF connector    | Screw mount SMA       |

### Environmental Specifications

| Parameter    | Compliance |
|--------------|------------|
| RoHS         | Compliant  |
| MIL-STD-810G | Compliant  |

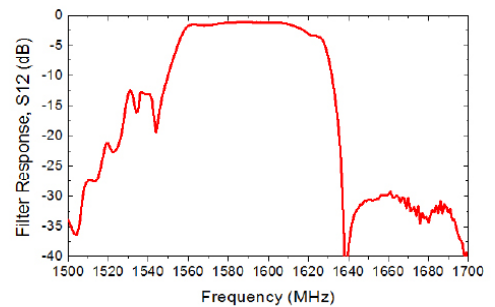
### Electrical Specifications

| Parameter         | Design Specifications                |
|-------------------|--------------------------------------|
| Frequencies       | 1575.42 MHz (GPS) 1602 MHz (GLONASS) |
| Polarization      | RHCP                                 |
| Total active gain | 28 dBic (typical) @ 3.3 V            |
| Passive gain      | -3 dBic (typical)                    |
| Beamwidth         | 140° (both axes)                     |
| Axial ratio       | 1 dB (max) @ zenith                  |
| Input P1dB        | -31 dBm                              |
| Noise figure      | 0.8 dB (typical) LNA chain only      |
| Supply voltage    | 1.5 - 3.7 V                          |
| DC current        | 30 mA (typical) @ 3.3 V              |
| Filtering         | >30 dB rejection @1575 +/- 100 MHz   |

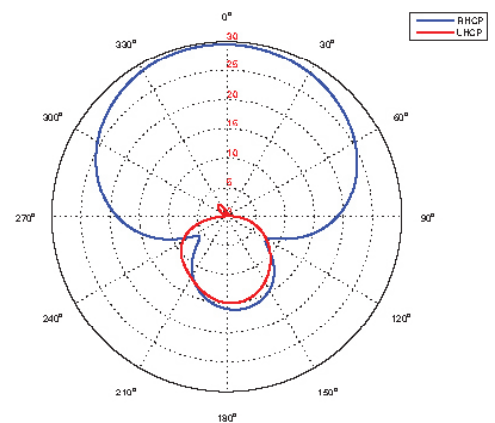
### Applications

- Military & security
- Asset tracking
- Oil & gas industries
- Navigation devices
- LBS & M2M applications
- Handheld devices
- Law enforcement

### Filter Response



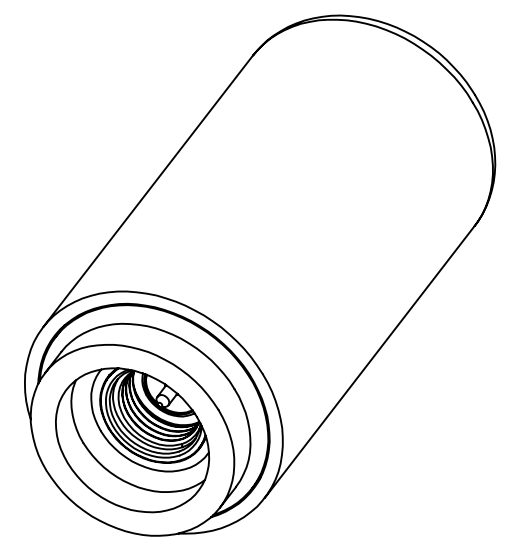
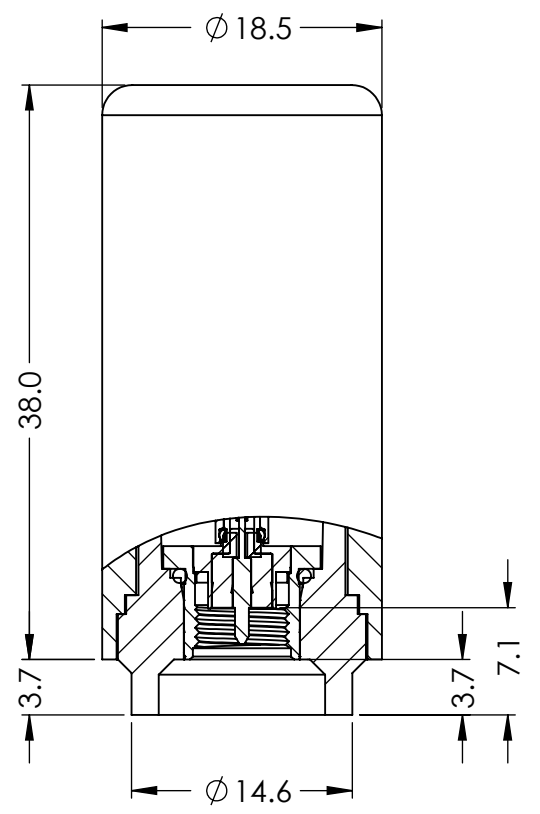
### Typical Radiation Pattern (@ 3.3 V)



8 7 6 5 4 3 2 1

D  
C  
B  
A

D  
C  
B  
A



- NOTES:
- CONNECTOR TYPE: SMA MALE
  - HOUSING MATERIA: ABS/PC, SABIC CYCOLOY C1200HF-701
  - COLAR: BLACK
  - FLAMMABILITY; UL 94 HB
  - DUST AND WATER-RESISTANCE: IP67

|                             |  |   |      |              |  |
|-----------------------------|--|---|------|--------------|--|
| UNLESS OTHERWISE SPECIFIED: |  | NAME  | DATE | MAXTENA, INC |  |
| DIMENSIONS ARE IN MM        |  | DRAWN   | ZX   |              |  |
| TOLERANCES:                 |  | CHECKED   |      |              | TITLE:<br><b>100-00107-01</b><br><b>M1516HCT-15A-SMA</b> |
| FRACTIONAL ±                |  | ENG APPR.   |      |              |  |
| ANGULAR: MACH ± .5° BEND ±  |  | MFG APPR.   |      |              |  |
| ONE PLACE DECIMAL ± .5      |  | Q.A.  |      |              |  |
| TWO PLACE DECIMAL ± .20     |  | INTERPRET GEOMETRIC TOLERANCING PER:                                  |      |              |  |
| THIRD ANGLE PROJECTION      |  | CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY. |      |              | SIZE<br><b>B</b>   |
| DO NOT SCALE DRAWING        |  |   |      |              | DWG. NO.   |
|                             |  |   |      |              | REV<br><b>1</b>  |
|                             |  | CAGE CODE: 5KQH7  |      | SCALE: NONE  | SHEET 1 OF 1   |

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8 7 6 5 4 3 2 1