



MAXTENA, INC.
ANTENNA INNOVATIONS COMPANY
1715 PRATT DR., SUITE 2800
BLACKSBURG, VA 24060
1-877-MAXTENA (629-8362)
INFO@MAXTENA.COM

M1227HCT22A Quadrifilar Antenna for Precision GPS L1/L2 Band



PRODUCT DESCRIPTION

The M1227HCT22A uses Advanced Helicore™ Technology to achieve greater than +2.5dBi performance in both GPS L1 and L2 bands for “dual-frequency” Precision GPS applications. This very small 25mm (base) x 34mm (height) size and lightweight features make this Precision GPS antenna perfect for airborne applications (commercial and military). With axial ratio typically 0.5 dB, upper-hemisphere efficiency >40%, and high-linearity LNA enables this small Precision GPS antenna to operate in the most extreme and demanding applications giving maximum satellite reception, ultra-low Dilution of Precision (DOP), and decimeter accuracy. The interface connector is available in MCX/MMCX options.

PRELIMINARY SPECIFICATIONS

| | Min | Typical | Max | Unit |
|--------------------------------|--|---------|--------|---------------------|
| Frequency GPS L1 | 1570 | 1575.42 | 1580 | MHz |
| Frequency GPS L2 | 1222.6 | 1227.6 | 1232.6 | MHz |
| Polarization | | RHCP | | |
| Efficiency (upper hemisphere) | | 40 | | % |
| Efficiency (total spherical) | | 50 | | % |
| Total Realized Gain | +14 | +16 | +16.5 | dBi |
| LNA Noise Figure | | 0.85 | | dB |
| LNA Input P1dB | +2 | +4 | +6 | dB |
| LNA DC Voltage | 2.5 | 3 | 5 | V |
| LNA DC Current | 20 | 25 | 50 | mA |
| Out of Band Rejection (800MHz) | | TBD | | dBc |
| Out of Band Rejection (1.9GHz) | | TBD | | dBc |
| Beamwidth (3dB) | 120° | 140° | | degrees (both axis) |
| Bandwidth (1dB) | | 10 | | MHz |
| Cross Pole Rejection | 15 | | | dB |
| Axial Ratio | 0.5 | | 1.0 | dB |
| Front to Back Ratio | | 15 | | dB |
| Return Loss | -18 | | -24 | dB |
| Impedance | | 50 | | Ohms |
| Overall Dimensions | 25 (length) x 25 (width) x 35 (height) | | | mm |
| Operating Temperature | -40 | 20 | +75 | °C |

HELI CORE™ TECHNOLOGY

