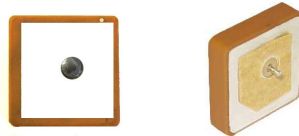




MAXTENA, INC.  
 ANTENNA INNOVATIONS COMPANY  
 1715 PRATT DR., SUITE 2800  
 BLACKSBURG, VA 24060  
 1-877-MAXTENA (629-8362)  
 INFO@MAXTENA.COM

**MPA1575D154**  
**Compact Microstrip Patch Antenna**  
**GPS L1 band**  
**Preliminary Specifications**



\*Actual Size

**PRODUCT DESCRIPTION**

MPA1575D154 is a ceramic microstrip patch antenna with 72% efficiency and realized gain of 5.3 dBic. MPA1575D154 has an adhesive tape on the back for easy installation on different surfaces.

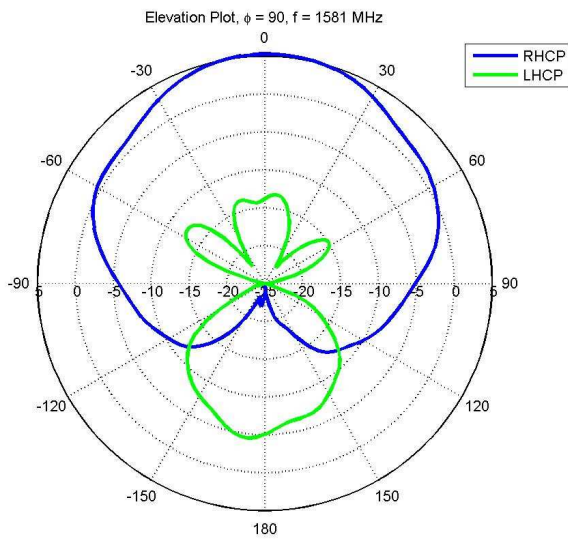
**SPECIFICATIONS**

|                                | Min                              | Typical     | Max     | Unit                |
|--------------------------------|----------------------------------|-------------|---------|---------------------|
| Frequency                      | 1570.42                          | 1575.42     | 1580.42 | MHz                 |
| Polarization                   | Right-hand circular polarization |             |         | RHCP                |
| Efficiency (with RadioMax™)    |                                  | NA          |         | % (total spherical) |
| Efficiency                     |                                  | 72          |         | % (total spherical) |
| Realized Gain (with RadioMax™) |                                  | NA          |         | dBic                |
| Realized Gain                  |                                  | 5.3         |         | dBic                |
| Beamwidth (3dB)                |                                  | 100°        |         | degrees (both axis) |
| Bandwidth (-1 dB)              |                                  | 16          |         | MHz                 |
| Cross Pole Rejection           | 12                               |             |         | dB                  |
| Axial Ratio                    |                                  |             | 3       | dB                  |
| Front to Back Ratio            |                                  | 25          |         | dB                  |
| VSWR                           |                                  | 1.3: 1      |         |                     |
| Impedance (single ended)       |                                  | 50          |         | Ohms                |
| Overall Dimensions             |                                  | 15 x 15 x 4 |         | mm                  |
| Operating Temperature          | -40                              | 20          | +85     | °C                  |

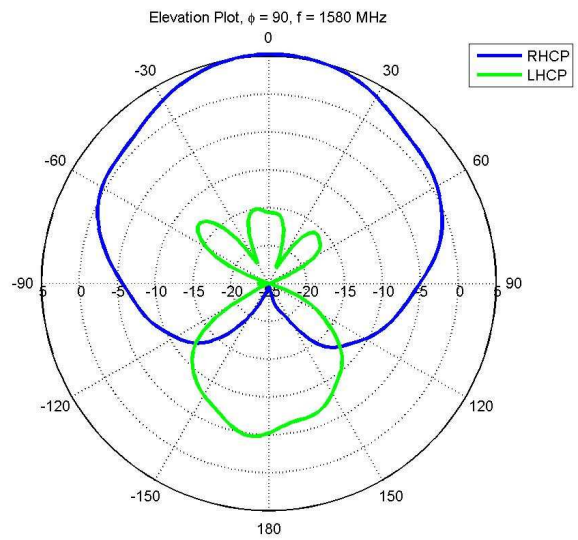
**COMPACT MICROSTRIP PATCH ANTENNA FOR GPS L1 BAND**

**RADIATION CHARACTERISTICS\***

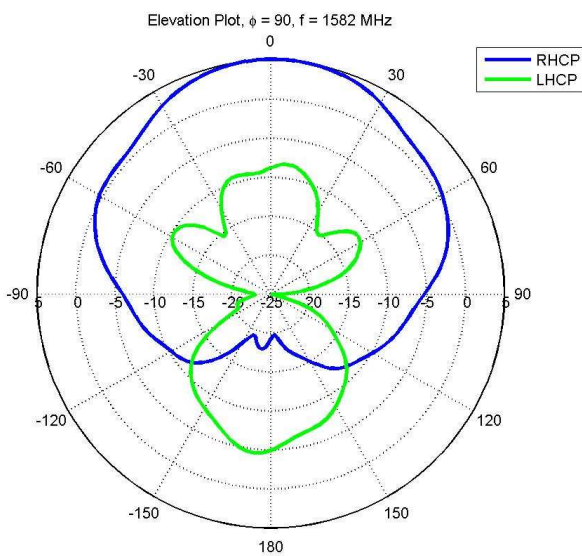
**1581 MHz**



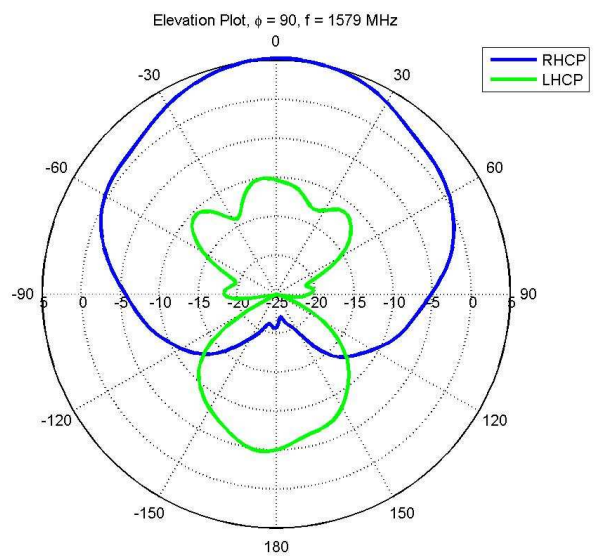
**1580 MHz**



**1581 MHz**



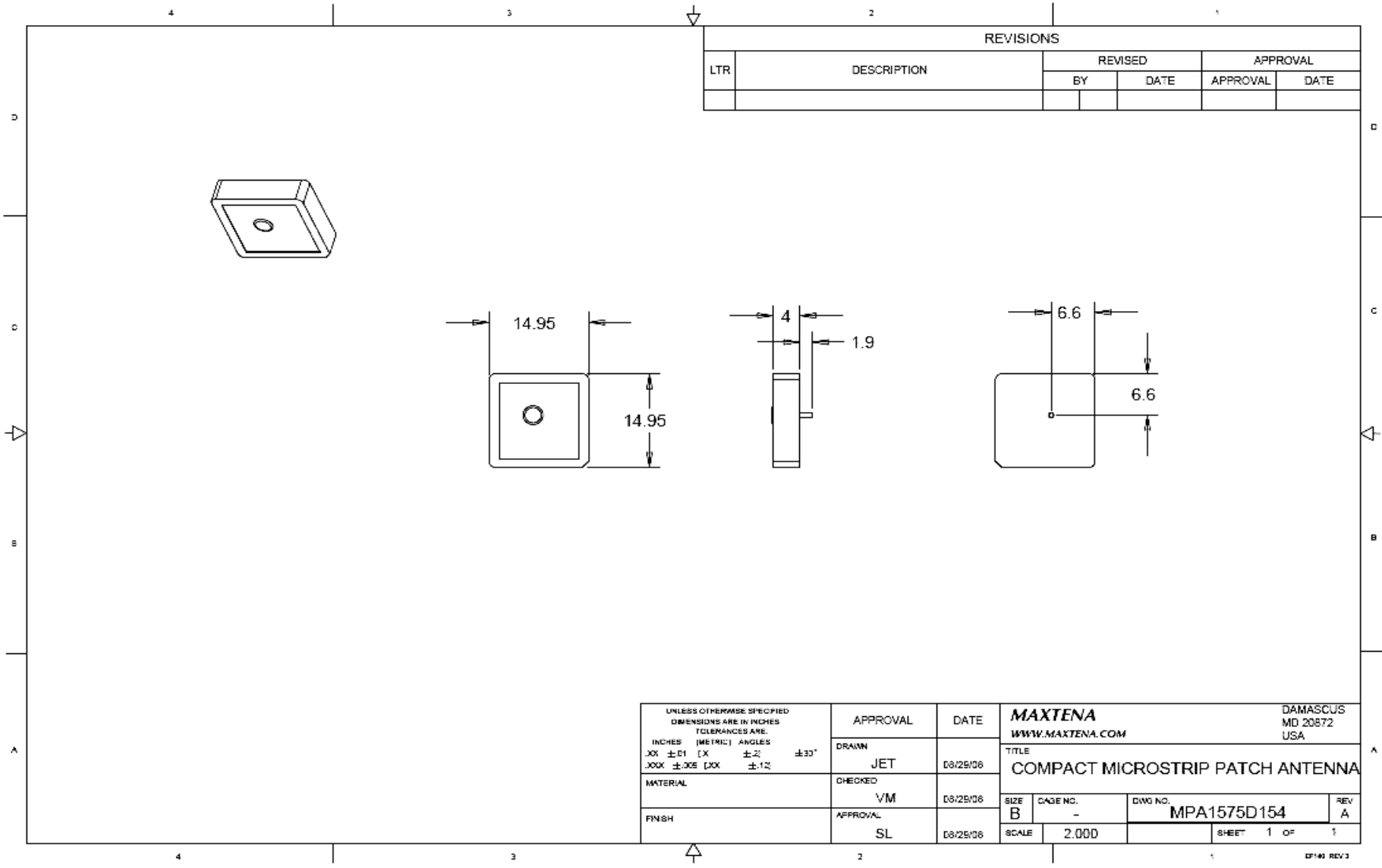
**1580 MHz**



\*Measured on a 3-inch squared ground plane



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| REVISIONS |             |         |      |          |      |
|-----------|-------------|---------|------|----------|------|
| LTR       | DESCRIPTION | REVISED |      | APPROVAL |      |
|           |             | BY      | DATE | APPROVAL | DATE |
|           |             |         |      |          |      |

|  |          |      |  |   |
|--|----------|------|--|---|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>INCHES (METRIC) ANGLES<br>.XX ±.01 [X ±.2] ±33°<br>.XXX ±.005 [XX ±.12] | APPROVAL | DATE | <b>MAXTENA</b><br>DAMASCUS MD 20872 USA<br>WWW.MAXTENA.COM |   |
|  | DRAWN    | JET  | D8/25/06   | TITLE   |
|  | CHECKED  | VM   | D8/25/06   | COMPACT MICROSTRIP PATCH ANTENNA  |
|  | APPROVAL | SL   | D8/25/06   | SIZE B CASE NO. - DWG NO. MPA1575D154 REV A<br>SCALE 2.000 SHEET 1 OF 1 |