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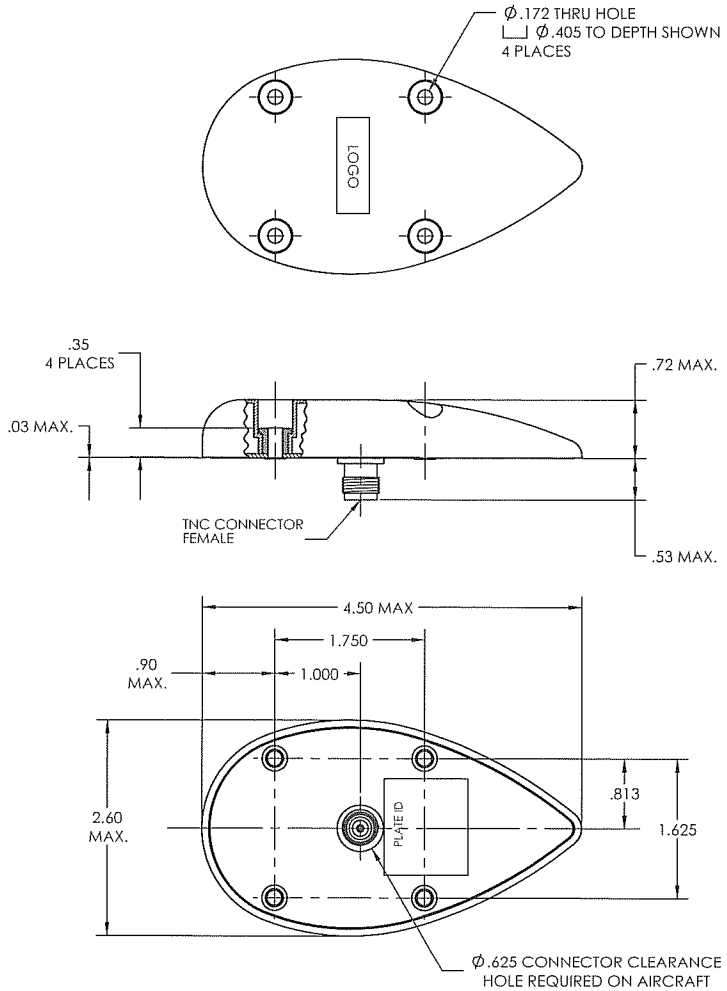
# INSTALLATION DRAWING

| REVISIONS | | | | |
|---|---|---|---|---|
| LTR | DESCRIPTION | | DATE | APPROVAL |
| A | RELEASED DRAWING | JF | 08/26/04 | WS 08/27/04 |
| B | REF ECN 08-095 | MN | 12/03/08 | DH 12/03/08 |




**ANTENNA NOTES & SPECIFICATIONS**

1.0 PASSIVE ANTENNA CHARACTERISTICS ( $T_A$= -55° C TO +70° C )

- 1.1 FREQUENCY ____ 1575.42 ± 3MHz
- 1.2 POLARIZATION ____ RIGHT HAND CIRCULAR
- 1.3 AXIAL RATIO ____ 3.0 dB ON BORESIGHT ( ZENITH ) MAX.
- 1.4 POWER HANDLING ____ 1.0 WATT
- 1.5 RADIATION GAIN PATTERN MINIMUM
  - -1.0 dBic 0 < or = θ < 75°
  - -2.5 dBic 75° < or = θ < 80°
  - -4.5 dBic 80° < or = θ < or = 85°
  - -7.5 dBic θ = 90° ( HORIZON )
  - +5.0 dBic nominal at θ = 0° ( ZENITH )
- 1.6 AZIMUTH GAIN VARIATION ____ < or = 3.0 dB AT > or = 5° ELEVATION

2.0 PREAMPLIFIER CHARACTERISTICS ( $T_A$= 20° C ± 5° C )

- 2.1 GAIN AT 1575.42 ± 3MHz ____ 17 ± 3 dB

3.0 PREAMPLIFIER CHARACTERISTICS ( $T_A$= -55° C TO + 70° C )

- 3.1 FREQUENCY ____ 1575.42 ± 3MHz
- 3.2 OUTPUT IMPEDANCE ____ 50 OHMS ( NOMINAL )
- 3.3 OUTPUT VSWR ____ 1.5 : 1 MAX.
  R/L ____ -13.98 dB
- 3.4 GAIN AT 1575.42 ± 3MHz ____ 17 ± 3 dB
- 3.5 NOISE FIGURE ____ 3.8 dB MAX.
- 3.6 SELECTIVITY ____ - 35 dB MIN. SATCOM BAND ( 1626.5 MHz )
- 3.7 DC VOLTAGE ____ 4 TO 24 VDC
- 3.8 DC CURRENT ____ 20 mA MAX.
- 3.9 STABILITY ____ UNCONDITIONALLY STABLE FOR ANY LOAD IMPEDANCE ON TNC CONNECTOR
- 3.10 BURNOUT PROTECTION ____ 30dBm / 1.0 W CW UNMODULATED

4.0 WEIGHT ____ 4.2 Oz. MAX.

5.0 SPEED RATING ____ 330 KIAS AT SEA LEVEL

6.0 CONNECTOR ____ TNC FEMALE

7.0 TSO ____ C144 (INCOMPLETE SYSTEM)

RTCA DO-160D ENV. CAT.: [F2X]ACB[S(L)U(F,F1)T(C,C1,R)]XRFDXSXXXXX[XX]X[XXXX][1B]CA

8.0 A42020 INSTALLATION INSTRUCTION SUPPLIED WITH ANTENNA.

9.0 RADOME MATERIAL: WHITE NYLON WITH UV INHIBITOR.

**WARNING:** THIS PRODUCT IS TO BE INSTALLED EXCLUSIVELY WITH GPS RECEIVER EQUIPMENT REQUIRING 17dB GAIN.

**NOTICE:** THIS PRODUCT IS TSO C144 COMPLIANT WITH AN FAA APPROVED GAIN DEVIATION TO C144 SPECIFICATIONS AND HAS A NOMINAL GAIN OF 17dB.

ASSY DWG C42028

| UNLESS OTHERWISE SPECIFIED | CONTRACT NO. | | | Comant Industries, inc. |
|---|---|---|---|---|
| DIMENSIONS ARE IN INCHES<br>TOLERANCES ON<br>DECIMALS .XX ± .03 .XXX ± .010<br>FRACTIONS ± 1/16 ANGLES ± 1° | APPROVALS | | DATE | 17dB GPS ANTENNA |
| MACHINE FINISH 125 PER ANSI- B46.1<br>REMOVE BURRS AND<br>SHARP EDGES .015 MAX<br>MEET DIMENSIONS BEFORE PLATING<br>DIMENSIONS ARE PER ASME Y14.5M | DRAWN | J. FRANKS | 08/26/04 | |
| | CHECK | J. GOMEZ | 08/26/04 | |
| | ENGR | W. STIERHOFF | 08/27/04 | |
| MATERIAL : | QC | S. ADAMS | 08/26/04 | DWG SIZE C · CODE IDENT 51351 · DWG. NO. CI 420-221 · REV. B |
| DO NOT SCALE DRAWING | APPD | W. STIERHOFF | 08/27/04 | SCALE: 1:1 · CAD FILE: -- · SHEET : 1 OF 1 |

DWG NO CI 420-221 REV B