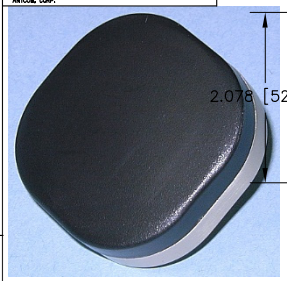
# Dual Polarization (RHCP/LHCP) L1/L2GPS Antenna
## P/N: 1G1215RL-PP-XS-X RevA
## 2" Square Configurations with Back Mounting Option
"-PL-" or "-AL-" for Limiter Options for High Power Pulse Protection

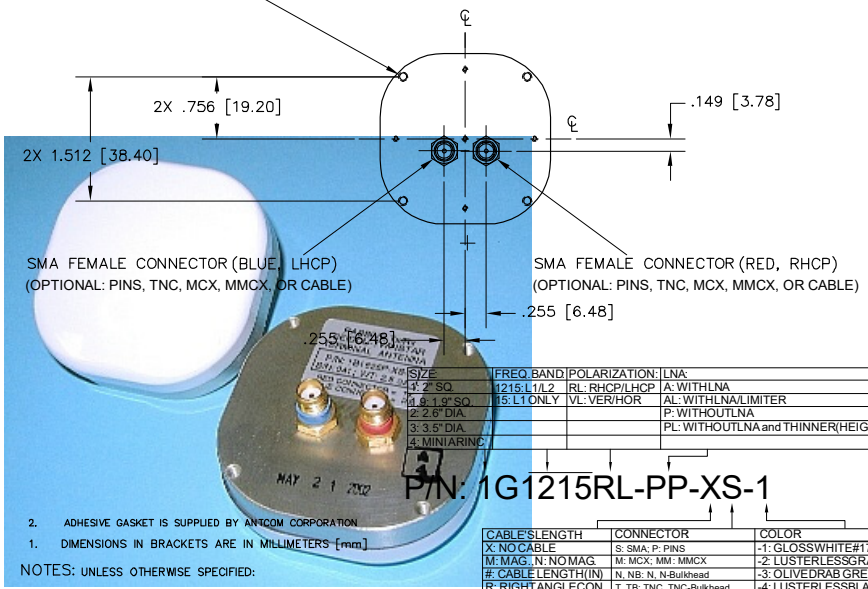
FAA Approved Facility

**ANTCOM CORPORATION . 367 Van Ness Way, Suite 602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com**

Wide Band GNSS Option Is Available

NOTICE OF PROPRIETARY RIGHTS
THIS DOCUMENT CONTAINS CONFIDENTIAL TECHNICAL DATA INCLUDING TRADE SECRETS PROPRIETARY TO ANTCOM CORP. DISCLOSURE OF THIS DATA TO YOU IS EXPRESSLY CONDITIONED UPON YOUR ASSENT THAT ITS USE IS LIMITED TO USE WITHIN YOUR COMPANY ONLY (AND DOES NOT INCLUDE MANUFACTURE OR PROCESSING USES), ANY OTHER USE IS STRICTLY PROHIBITED WITHOUT PRIOR WRITTEN CONSENT OF ANTCOM, CORP.






| SIZE | FREQ.BAND | POLARIZATION: | LNA: |
|---|---|---|---|
| 1: 2" SQ. | 1215: L1/L2 | RL: RHCP/LHCP | A: WITH LNA |
| 1.9: 1.9" SQ. | 15: L1 ONLY | VL: VER/HOR | AL: WITH LNA/LIMITER |
| 2: 2.6" DIA. | | | P: WITHOUT LNA |
| 3: 3.5" DIA. | | | PL: WITHOUT LNA and THINNER(HEIGHT= 0.58") |
| 4: MINIARINC | | | |

| CABLE'S LENGTH | CONNECTOR | COLOR |
|---|---|---|
| X: NO CABLE | S: SMA; P: PINS | -1: GLOSS WHITE#17925 PER FED-STD-595B |
| M: MAG., N: NO MAG. | M: MCX; MM: MMCX | -2: LUSTER LESS GRAY#36320 PER FED-STD-595B |
| #: CABLE LENGTH(IN) | N, NB: N, N-Bulkhead | -3: OLIVE DRAB GREEN#34031 PER FED-STD-595B |
| R: RIGHT ANGLE CON. | T, TB: TNC, TNC-Bulkhead | -4: LUSTER LESS BLACK#37038 PER FED-STD-595B |

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION

## SPECIFICATIONS

### ELECTRICAL:

| | | | | | | |
|---|---|---|---|---|---|---|
| FREQUENCY: | L1: (1575.42 ±12) MHz | | | L2: (1227.60 ±12) MHz | | |
| RADIATION PATTERN: | HEMISPHERICAL | | | | | |
| POLARIZATION: | RHCP/LHCP | | | RHCP/LHCP | | |
| VSWR: | < 1.5:1 | | | < 1.5:1 | | |
| IMPEDANCE: | 50 ohms | | | 50 ohms | | |
| ANTENNA GAIN (dBic): | Free Space | 3 in G.P. | 4 ft G.P. | Free Space | 3 in G.P. | 4 ft G.P. |
| @ 90 ° (ZENITH): | + 3.7 | + 4.7 | + 3.1 | - 1.7 | + 3.3 | + 4.5 |
| @ 10 ° Elevation | - 2.9 | - 1.8 | - 1.9 | - 7.3 | - 3.8 | - 3.5 |
| @ 20 ° Elevation | - 1.3 | - 0.3 | + 0.6 | - 6.2 | - 2.0 | - 0.8 |
| @ 30 ° Elevation | 0.0 | + 1.4 | + 1.7 | - 5.2 | - 0.5 | + 1.4 |
| @ 60 - 90 ° Elevation: | > 3.0 | > 3.9 | > 2.4 | > - 3.2 | > 2.7 | > 2.2 |
| BEAM WIDTH (3dB): | 108 Deg. | 114 Deg. | 143 Deg. | 100 Deg. | 106 Deg. | 74 Deg. |
| AXIAL RATIO: | 2 dB | | | 2 dB | | |
| LIGHTNING PROTECTION: | DC GROUNDING | | | | | |
| LNA GAIN OPTION | 33 dB | | | 35 dB | | |
| LNA NOISE FIGURE: | 3.0 dB | | | 3.0 dB | | |
| LNA P1dB Out: | +13 dBm | | | +13 dBm | | |
| LNA DC POWER: | 2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA | | | | | |
| REJECTION@ (-50/+50)MHz | -41 dB / -59 dB | | | -40 dB / -40 dB | | |
| @ (-100/+100)MHz | < -65 dB | | | < -65 dB | | |
| POWER HANDLING | 1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-) | | | | | |

### MECHANICAL:

SIZE: LENGTH: 2.080 in.[ 52.78 mm], WIDTH: 2.080 in. [52.78 mm]
HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)

WEIGHT: 2.88 oz. (82 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMA FEMALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

### ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

### FEDERAL & MILITARY SPECIFICATIONS:

**DESIGN TO:** FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

**ACCEPTANCE TEST PROCEDURE:** ATP-GPS-L1L2-100

REVISIONS

| ZONE | REV | DESCRIPTION | DATE | APPROVED |
|---|---|---|---|---|
| | | | | |

PARTS LIST

| ITEM NO | QUANTITY REQD | DESCRIPTION | PART NO | SPECIFICATION | MATERIAL | FINISH |
|---|---|---|---|---|---|---|
| 5 | | | | - | - | - |
| | | | | | | |
| 3 | 1 | ADHESIVE GASKET | 12345G-3M-1G | - | - | - |
| 2 | 1 | | | - | - | - |
| 1 | 1 | | | - | - | - |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX ± .015 .XXX ± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ⌀ .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

**ANTCOM CORP.** TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
RHCP/LHCP GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1G1215RL-PP-XX-X | REV -
SCALE 1/1 | SHEET 1 OF 1

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf
Amplifiers/Power Divider/Combiner/Filters :http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts1.pdf