# 5-Element CRPA L1/L2 GPS Antenna Array

## P/N: 5NF-7.6X8SEAT1215P-XS-4

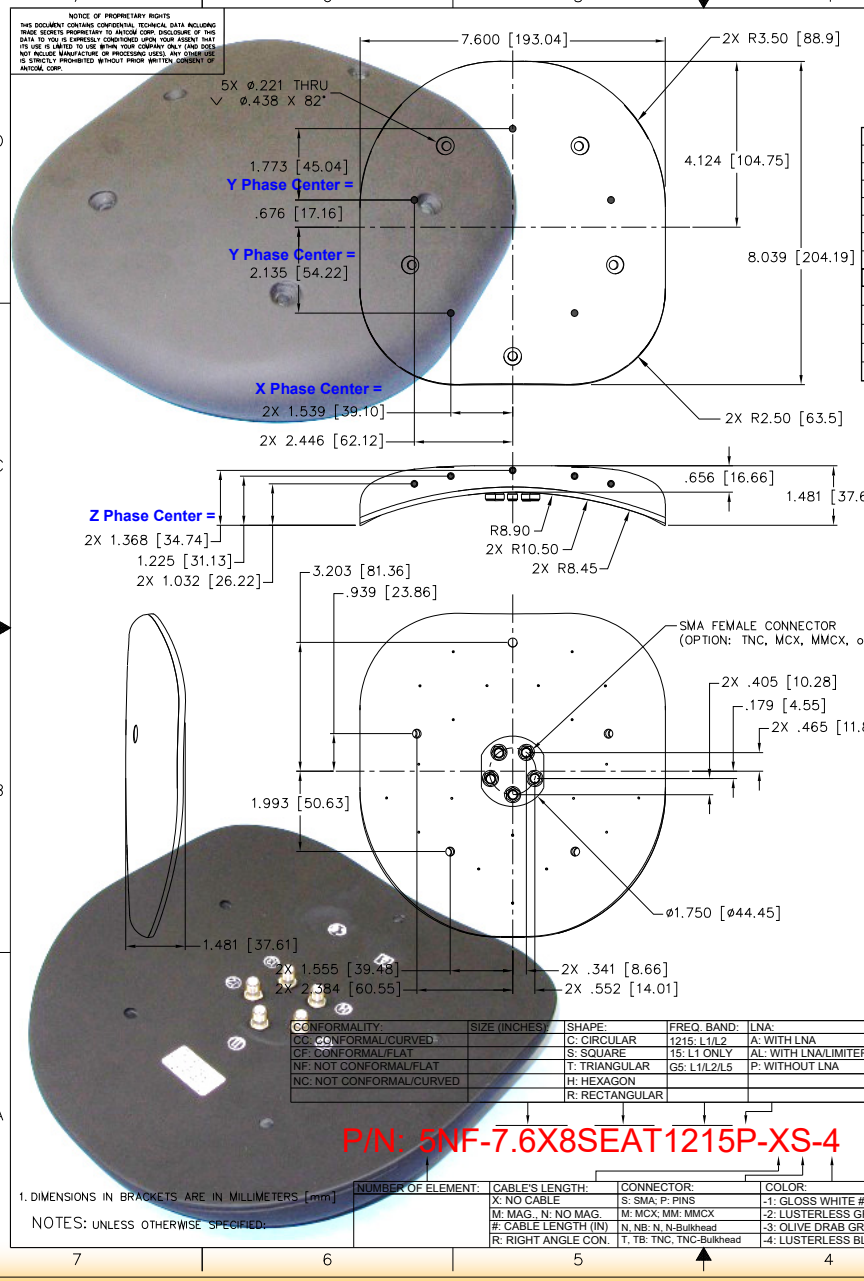
## (8.0" x 7.6" x 1.49" High)

"-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




## SPECIFICATIONS

### ELECTRICAL:

| | | | | |
|---|---|---|---|---|
| FREQUENCY: | L1: (1575.42 ±12) MHz | | L2: (1227.60 ±12) MHz | |
| RADIATION PATTERN: | HEMISPHERICAL | | | |
| POLARIZATION: | RHCP | | RHCP | |
| VSWR: | < 1.5:1 | | < 1.5:1 | |
| IMPEDANCE: | 50 ohms | | 50 ohms | |
| ANTENNA GAIN (dBic): | Free Space | 24" Dia. Tube, 2 ft Long | Free Space | 24" Dia. Tube, 2 ft Long |
| @ 90 ° (ZENITH): | + 4.5 | + 4.2 | - 2.5 | + 4.6 |
| @ 10 ° Elevation: | - 1.5 | - 3.0 | - 4.3 | - 2.1 |
| @ 20 ° Elevation: | 0.0 | 0.9 | - 3.0 | - 0.9 |
| @ 30 ° Elevation: | +1.1 | +1.1 | - 1.5 | + 0.4 |
| @ 60 - 90 ° Elevation: | > 3.0 | > 2.8 | > 1.7 | > 3.1 |
| BEAM WIDTH (3dB): | 112 Deg. | 120 Deg. | 104 Deg. | 102 Deg. |
| AXIAL RATIO: | 2 dB | | 2 dB | |
| LIGHTNING PROTECTION: | DC GROUNDING | | | |

### MECHANICAL:

| | |
|---|---|
| SIZE: | 8.04" [204.2mm] L x 7.6" [193.04mm] W<br>HEIGHT: 1.48" [37.61mm] |
| WEIGHT: | 3.0 lbs (1.36Kg) |
| FINISH: | SKYDROL RESISTANT POLYURETHANE ENAMEL<br>BASE IRIDITE PER MIL-C-5441 |
| MATERIAL: | 6061-T6 ALUMINUM ALLOY BASE<br>COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,<br>SKYDROL RESISTANCE, AND FIRE RETARDANT |
| CONNECTOR: | SMA FEMALE<br>(OPTION: TNC, 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

| CONFORMALITY: | SIZE (INCHES): | SHAPE: | FREQ. BAND: | LNA: |
|---|---|---|---|---|
| CC: CONFORMAL/CURVED | | C: CIRCULAR | 1215: L1/L2 | A: WITH LNA |
| CF: CONFORMAL/FLAT | | S: SQUARE | 15: L1 ONLY | AL: WITH LNA/LIMITER |
| NF: NOT CONFORMAL/FLAT | | T: TRIANGULAR | G5: L1/L2/L5 | P: WITHOUT LNA |
| NC: NOT CONFORMAL/CURVED | | H: HEXAGON | | |
| | | R: RECTANGULAR | | |

| ITEM NO | PART NO | DESCRIPTION | QUANTITY REQD |
|---|---|---|---|
| 1 | MS24693C274 | MOUNTING SCREWS: 10-32, 3/4" | 24 |

PARTS LIST

P/N: 5NF-7.6X8SEAT1215P-XS-4

| NUMBER OF ELEMENT: | 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: LUSTERLESS 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: LUSTERLESS BLACK #37038 PER FED-STD-595B |

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

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 ⌀ Ø .005. MACHINED SURFACES 125

DO NOT SCALE DRAWING

| | | |
|---|---|---|
| ORIGINALLY DRAWN | S. HUYNH | May-29-01 |
| ORIGINALLY DESIGNED | S. HUYNH | May-29-01 |
| UPDATE DRAWN | P. TRAN | Sept-26-12 |
| DESIGN UPDATE | S. HUYNH | Sept-26-12 |
| APPROVED | S. HUYNH | Sept-26-12 |

**ANTCOM CORP.** TORRANCE CALIFORNIA

OUTLINE DRAWING:
5 ELEMENT L1L2 GPS
ANTENNA ARRAY

SIZE D | CAGE NO 3CVE1 | DRAWING NO 5NF-7.6X8SEAT1215P-XS-4 | REV —

SCALE 1/1 | SHEET 1 OF 1

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

REVISIONS

ORIGINAL DOCUMENT WHEN STAMP IS RED

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