TABLE 1: GXA Ka KRFU, AIRCRAFT AIR COOLED, PART NUMBER

PART NUMBER	DESCRIPTION
90401202	GXA Ka KRFU

TABLE 3: J1 POWER CONNECTOR CONTACT ASSIGNMENTS (9)

PIN NUMBER	SIGNAL NAME
A	115 VAC POWER
B	115 VAC RETURN
C	CHASSIS GROUND
D	SIGNAL GROUND

(22) MATERIAL AND FINISH FOR J3 AND J4 WAVEGUIDE FLANGES:
AL ALLOY 6061-T6 IN ACCORDANCE WITH AMS-QQ-A-250/11.
NI PLATE PER QQ-N-290, CLASS 1, SEMI-BRIGHT, CORROSION PROTECTION GRADE F THRU G (.0002 THICK MIN) OVER NI PLATE PER MIL-C-26074, CLASS 4, .0005 THICK MIN.

(21) CAUTION LABEL: ESD SENSITIVE.

(20) WAVESTREAM IDENTIFICATION LABEL.

(19) HONEYWELL MOD DOT LABEL.

18. ENVIRONMENTAL QUALIFICATION CHARACTERISTICS PER TABLE 5.

(17) SPUD DESIGN PER AS5131B36.

(16) WARNING LABEL: HAZARDOUS RF ENERGY.
DO NOT TURN ON WITHOUT PROPER OUTPUT TERMINATION.
DO NOT LOOK INTO OR TOUCH OUTPUT OPENING.

(15) CAUTION LABEL: HOT SURFACE. DO NOT TOUCH.

(14) CAUTION LABEL: SHOCK HAZARD. HIGH VOLTAGE INSIDE.

13. MATERIAL AND FINISH FOR CHASSIS AND MOUNTING FEET:
AL ALLOY 6061-T6 IN ACCORDANCE WITH AMS-QQ-A-250/11.
EXTERNAL SURFACES: BLACK SANDEX POWDER COAT OVER CHEM-FILM PER MIL-DTL-5541 TYPE II, CLASS 3.

12. CONNECTORS FITTED WITH PROTECTIVE SHIPPING COVERS, REMOVE PRIOR TO TEST OR FINAL INSTALLATION.

11. ELECTROSTATIC DISCHARGE SENSITIVE (ESD). HANDLE PER IPC-A-610.

(10) INDICATES CENTER OF GRAVITY.

(9) KRFU EXTERNAL CONNECTORS IDENTIFICATION PER TABLE 2.
J1 AND J2 CONNECTORS CONTACTS ASSIGNMENT PER TABLE 3 AND 4 ACCORDINGLY.

8. COOLING:
FORCED AIR BLOWN THROUGH COOLING SPUD PER ARINC 791.
STANDARD AIR FLOW: 77 KG/HR AT 40°C AT SEA LEVEL WITH PRESSURE DROP OF 250±50Pa.

(7) HONEYWELL IDENTIFICATION LABEL INCLUDES:
DESCRIPTION
H/W PART NUMBER AND REVISION
S/W PART NUMBER AND VERSION
SERIAL NUMBER
DATE OF MANUFACTURE
WEIGHT
CAGE CODE
COUNTRY OF ORIGIN AND SITE TRANSPORT CANADA MFG CODE

6. POWER DISSIPATION AT 96-122VAC (320-800Hz): 132 W MAX @ MAXIMUM OUTPUT POWER (MOP).
POWER CONSUMPTION AT 96-122VAC (320-800Hz): 150 W MAX @ MOP.
CURRENT DRAW IN AMPERES: 2.7A RMS MAXIMUM. POWER FACTOR: GREATER THAN 0.98.

(5) INDICATED SURFACE IS INTENDED FOR ELECTRICAL BONDING.

4. ASSOCIATED CAD DATA HAS BEEN MODELED TO NOMINAL DIMENSIONS.

3. WEIGHT: 6.6 kg (14.6 lb) MAX.

2. DIMENSIONS SHOWN ARE FOR INSTALLATION PURPOSES ONLY.

1. DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5M-1994.

NOTES: UNLESS OTHERWISE SPECIFIED:

TABLE 2: GXA Ka KRFU EXTERNAL CONNECTORS IDENTIFICATION (9)

REF. DES	PART NUMBER	MATES WITH	FUNCTION	REMARKS
J1	D38999/20FC4PN	D38999/26FC4SN (AMPHENOL)	POWER INPUT	4 PIN
J2	D38999/20FC35PN	D38999/26FC35SN (AMPHENOL)	CONTROL INTERFACE	22 PIN
J3	M3922/54-003	M3922/59-005 (THRU HOLE FLANGE)	RF TX INTERFACE	WR-28 WAVEGUIDE WITH FLANGE UG599/U PER MIL-DTL-3922/54, EXCEPT AS DEFINED IN THIS DRAWING (22)
J4	M3922/54-001	M3922/59-003 (THRU HOLE FLANGE)	RF RX INTERFACE	WR-42 WAVEGUIDE WITH FLANGE UG595/U PER MIL-DTL-3922/54, EXCEPT AS DEFINED IN THIS DRAWING (22)
J5	TNC FEMALE PER MIL-C-87104/2	TNC MALE PER MIL-C-87104/2 (AMPHENOL)	IF TX INTERFACE	LABELED BLUE
J6	TNC FEMALE PER MIL-C-87104/2	TNC MALE PER MIL-C-87104/2 (AMPHENOL)	IF RX INTERFACE	LABELED GREEN

TABLE 4: J2 CONTROL CONNECTOR CONTACT ASSIGNMENTS (9)

CONTACT NUMBER	SIGNAL NAME
1	EN1: TX LOW (SPARE)
2	TP18-1 (SPARE)
3	KRFU FILTER SELECT HI
4	KRFU FILTER SELECT LO
5	KRFU TX MUTE HI
6	KRFU TX MUTE LO
7	KRFU RESET HI
8	KRFU RESET LO
9	SPARE
10	SPARE
11	RS-422: KRFU TO KANDU HI
12	RS-422: KRFU TO KANDU LO
13	TP19-1 (SPARE)
14	EN1: RX HIGH (SPARE)
15	EN1: RX LOW (SPARE)
16	TP18-2 (SPARE)
17	RS-422: KANDU TO KRFU HI
18	RS-422: KANDU TO KRFU LO
19	TP17-1 (SPARE)
20	TP19-2 (SPARE)
21	EN1: TX HIGH (SPARE)
22	TP17-2 (SPARE)

TABLE 5: GXA Ka KRFU ENVIRONMENTAL QUALIFICATION CHARACTERISTICS

ENVIRONMENTAL CONDITIONS	LIMITS	RTCA/DO-160G SPECIFICATION
GROUND SURVIVAL LOW TEMPERATURE	-55°C	SECTION 4.5.1, CAT D2
OPERATING LOW TEMPERATURE	-55°C	SECTION 4.5.2, CAT D2
GROUND SURVIVAL HIGH TEMPERATURE	+85°C	SECTION 4.5.3, CAT D2
OPERATING HIGH TEMPERATURE	+70°C	SECTION 4.5.4, CAT D2
IN-FLIGHT LOSS OF COOLING	30 MIN., NO DAMAGE. OVER TEMPERATURE SHUTDOWN OF PA IS EXPECTED.	SECTION 4.5.5, CAT Z
ALTITUDE	51000 FT	SECTION 4.6.1, CAT D2
DECOMPRESSION	15000 FT TO 51000 FT	SECTION 4.6.2, CAT A2
OVER PRESSURE	170 KPA (-15000 FT)	SECTION 4.6.3, CAT A2
TEMPERATURE VARIATION	±10°C/MIN.	SECTION 5, CAT A
HUMIDITY	85% RH @38°C 95% RH @65°C	SECTION 6, CAT B
OPERATIONAL SHOCK	3 SHOCK OF 6 G, 11 MS, 6 DIRECTIONS 3 SHOCK OF 6 G, 20 MS, 6 DIRECTIONS	SECTION 7, CAT B & E
CRASH SAFETY IMPULSE	1 SHOCK OF 20 G, 11 MS, 6 DIRECTIONS 1 SHOCK OF 20 G, 20 MS, 6 DIRECTIONS	SECTION 7, CAT B & E
CRASH SAFETY SUSTAINED	18 G, 3 SECS, 6 DIRECTIONS	SECTION 7, CAT B
VIBRATION	ROBUST RANDOM CURVE E & E1	SECTION 8, CAT R
EXPLOSIVE ATMOSPHERE	AIRCRAFT ZONE III	SECTION 9, CAT E
WATER PROOFNESS	CONDENSING AND SPRAYED	SECTION 10, CAT Y & R
FLUIDS SUSCEPTIBILITY	DE-ICING FLUID	SECTION 11, CAT F
SAND AND DUST	DUST	SECTION 12, CAT D
FUNGUS RESISTANCE	BY ANALYSIS	SECTION 13, CAT F
SALT FOG		SECTION 14, CAT S
ICING		SECTION 24, CAT A

25. UNIT SHALL BE INSTALLED USING ALL 4 MOUNTING HOLES AND MAY BE INSTALLED IN ANY ORIENTATION. RECOMMEND FASTENERS TO BE .190-32 UNJF-3A CORROSION RESISTENT STEEL CRES-A286.

24. UNIT EXPORT CONTROL CLASSIFICATION NUMBER IS 7A994.

(23) FCC LABEL.

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Figure 2-29. KRFU, Forced Air Cooled, Outline and Installation Drawing (Sheet 1 of 3)

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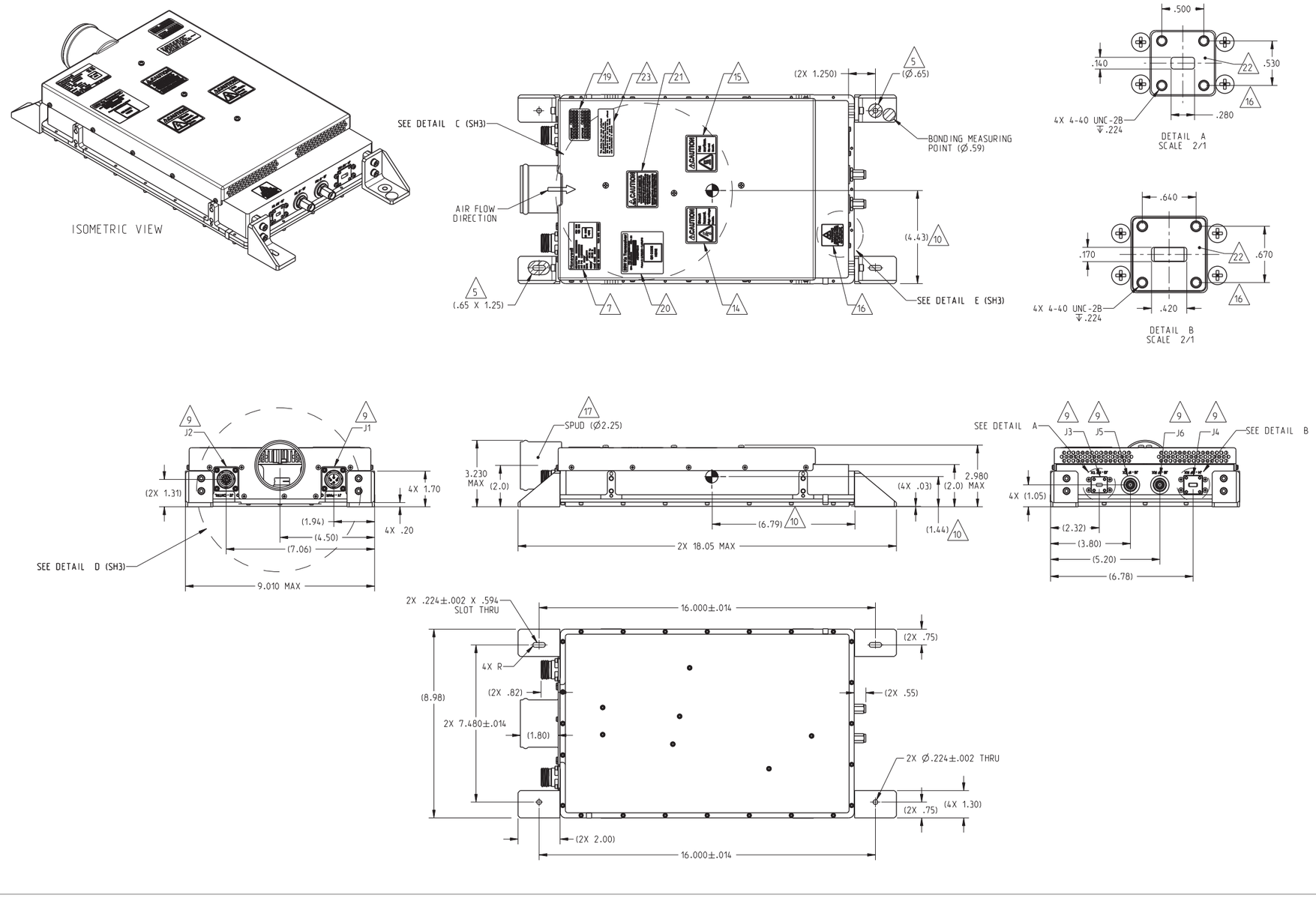

Figure 2-29. KRFU, Forced Air Cooled, Outline and Installation Drawing (Sheet 2 of 3)

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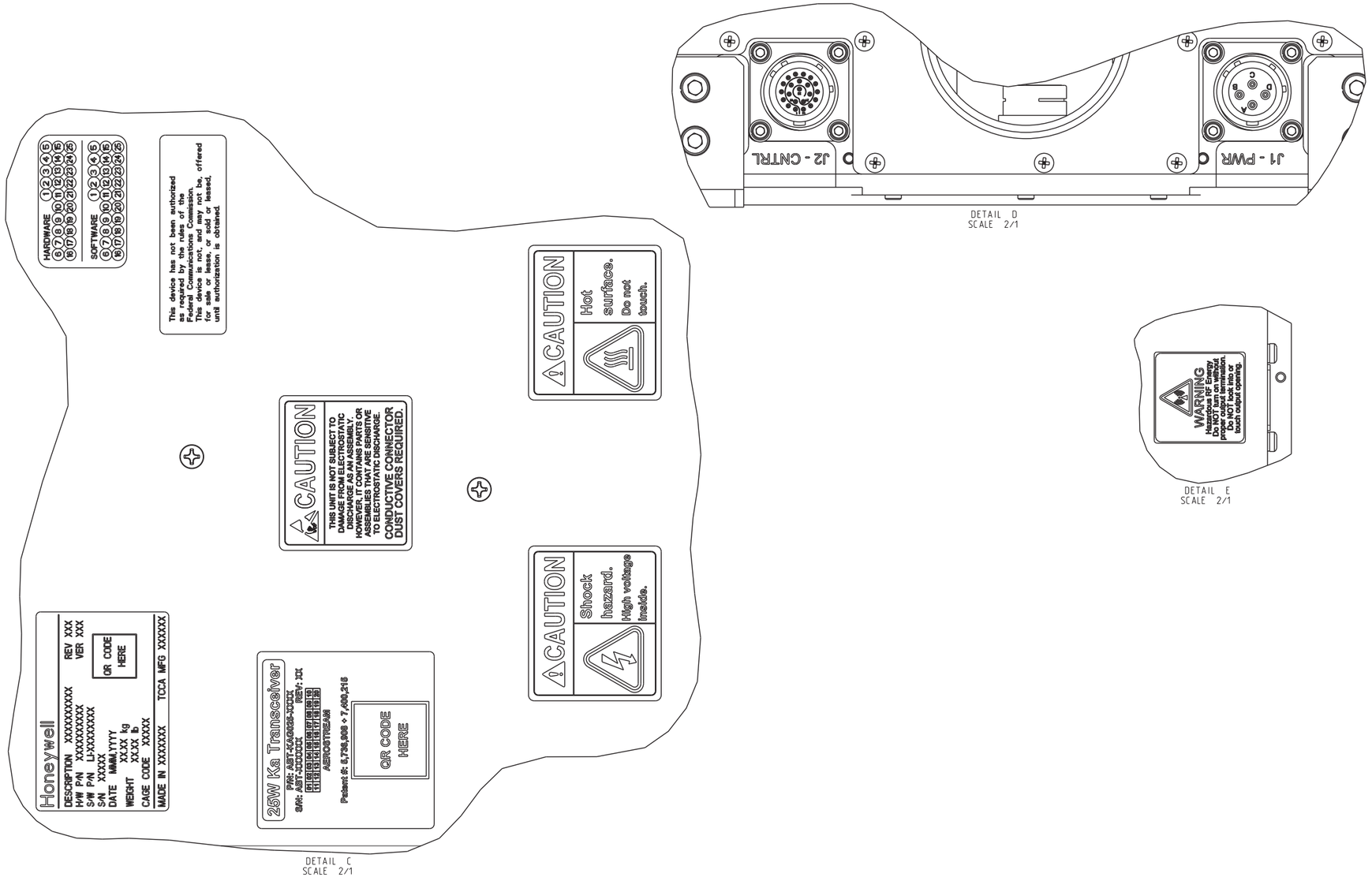

Figure 2-29. KRFU, Forced Air Cooled, Outline and Installation Drawing (Sheet 3 of 3)

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TABLE 1: GXA TMA PART NUMBERS

PART NUMBER	DESCRIPTION
90400013-0001	ASSEMBLY GXA TMA

TABLE 2: J2 (6)

PIN	SIGNAL
A	RS-422: ASC TO TACM DATA HI
B	RS-422: ASC TO TACM DATA LO
C	GND
D	RS-422: TACM TO ASC DATA HI
E	RS-422: TACM TO ASC DATA LO
F	SPARE
G	TMA DC PWR
H	TMA DC PWR RTN
J	RS422: IMU TO ASC DATA LOW
K	RS422: IMU TO ASC DATA HI
L	RS422: ASC TO IMU DATA LOW
M	RS422: ASC TO IMU DATA HI
N	SPARE
P	SPARE
R	SPARE
S	SPARE
T	SPARE
U	IMU DC PWR
V	IMU DC PWR RTN

TABLE 3 GXA TMA CONNECTOR IDENTIFICATION (6)

REF DES	PART NUMBER	MATING CONNECTOR	REMARKS
J2	D38999/20FD19PN	D38999/26FD19SN	SEE TABLE 2 FOR PINOUTS
J3	WAVEGUIDE FLANGE PER UG599/U	WAVEGUIDE FLANGE PER UG599/U	
J4	2.92mm COAX FEMALE	2.92mm COAX MALE	

(13) MOUNTING HOLES IN BASE ARE ACCESSED BY ROTATING THE ANTENNA.

12. CAUTION THIS UNIT CONTAINS PARTS AND ASSEMBLIES SUSCEPTIBLE TO DAMAGE BY ELECTROSTATIC DISCHARGE (ESD).

(11) INDICATED MOUNTING SURFACES ARE ALUMINUM ALLOY 6061-T6 OR -T651 PER AMS-QQ-A-250/11. FINISH OF INDICATED SURFACES IS CHEMICAL CONVERSION COATING PER MIL-DTL-5541, TYPE II, CLASS 3.

10. ELECTROSTATIC DISCHARGE SENSETIVE (ESD) HANDLE PER IPC-A-610.

(9) APPROXIMATE CENTER OF GRAVITY SHOWN BY ⊕ .

8. COOLING: NATURAL CONVECTION AND RADIATION ONLY.

(7) UNIT ID NAMEPLATE, RF HAZARD, ESD CAUTION, HARDWARE/SOFTWARE MOD DOT, NO LIFT AND FCC LABELS.
HONEYWELL DATA MATRIX NAMEPLATE INCLUDES:
HONEYWELL NAME
PRODUCT NAME: KA TMA
HARDWARE P/N: 90400013-0001
REVISION: (CURRENT REVISION)
SOFTWARE P/N: (CURRENT S/W P/N)
VERSION: (CURRENT S/W VERSION)
SERIAL NUMBER: (SERIAL NUMBER)
WEIGHT: (WEIGHT IN kg AND lb)
DATE OF MFR: (CURRENT DATE MMM, YYYY)
CAGE CODE: 38473
COUNTRY OF ORIGIN: (MADE IN CANADA)
TCCA MFG CODE: 325-92

6 TMA EXTERNAL CONNECTORS J2, J3 AND J4 IDENTIFICATION PER TABLE 3. CONNECTOR CONTACT ASSIGNMENTS FOR J2 PER TABLE 2.

5. POWER CONSUMPTION
NOM: 35 W
MAX OP: 85 W
PEAK: 231 W

4. ASSOCIATED CAD DATA HAS BEEN MODELED TO NOMINAL DIMENSIONS.

3. WEIGHT: 4.55 Kg (10.0 lb) MAXIMUM.

2. DIMENSIONS SHOWN ARE FOR INSTALLATION PURPOSES ONLY.

1. DIMENSIONS AND TOLERANCES IAW ASME Y14.5M-1994.

NOTES: UNLESS OTHERWISE SPECIFIED

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Figure 2-30. TMA Outline and Installation Drawing (Sheet 1 of 4)

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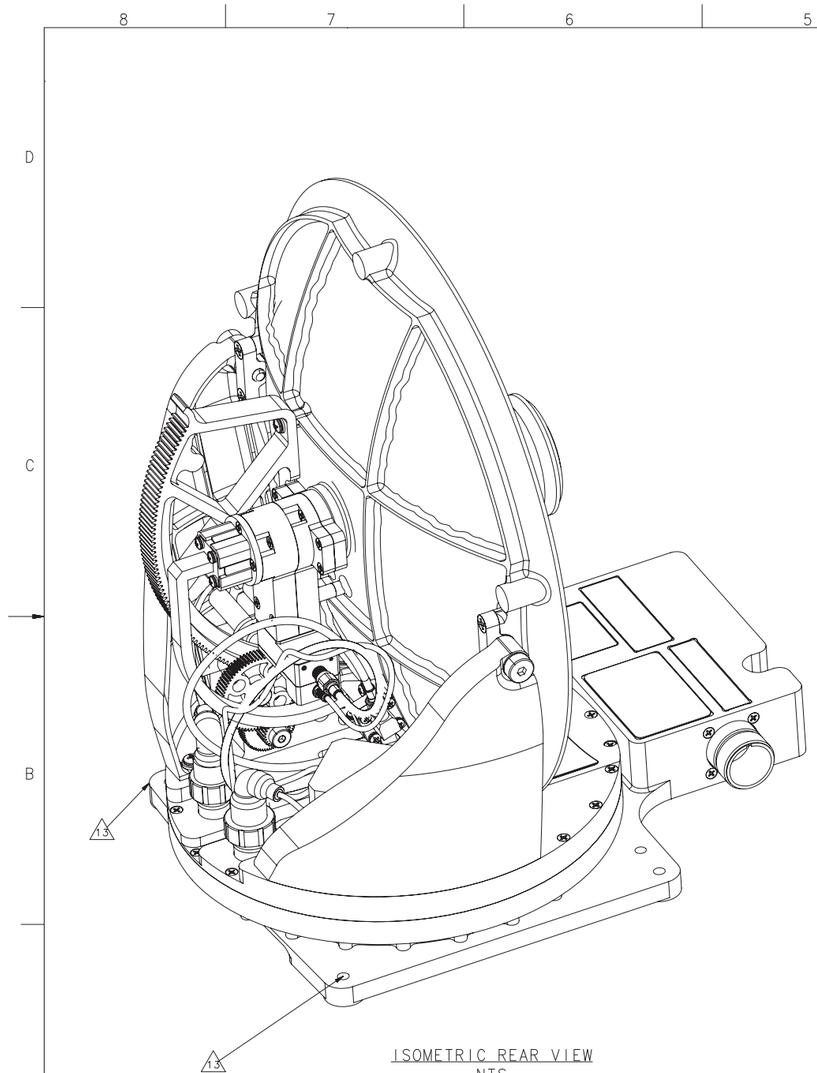
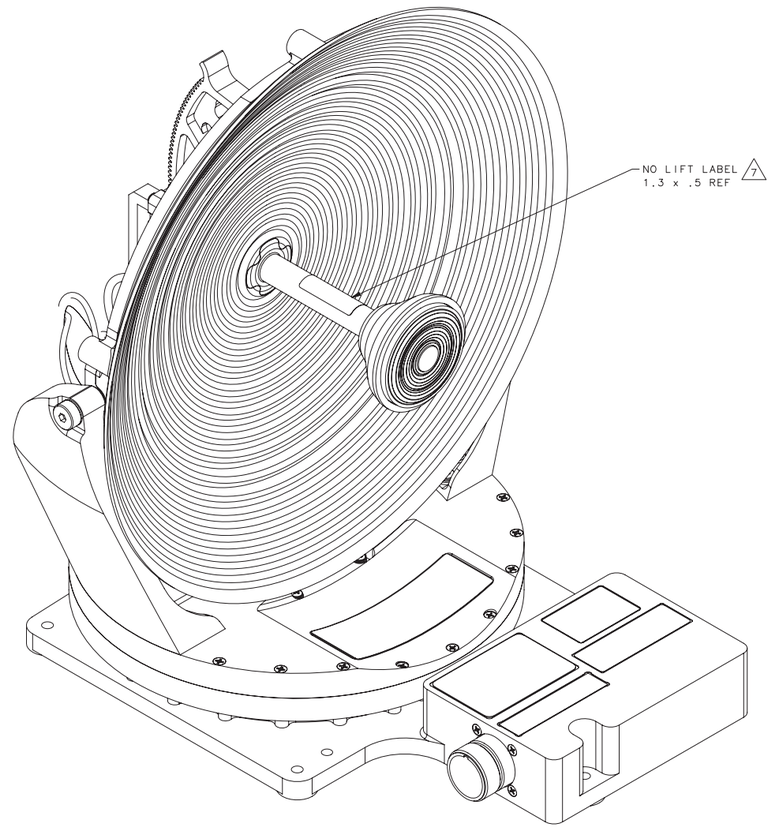


ISOMETRIC REAR VIEW
NTS



ISOMETRIC FRONT VIEW
NTS

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Figure 2-30. TMA Outline and Installation Drawing (Sheet 2 of 4)

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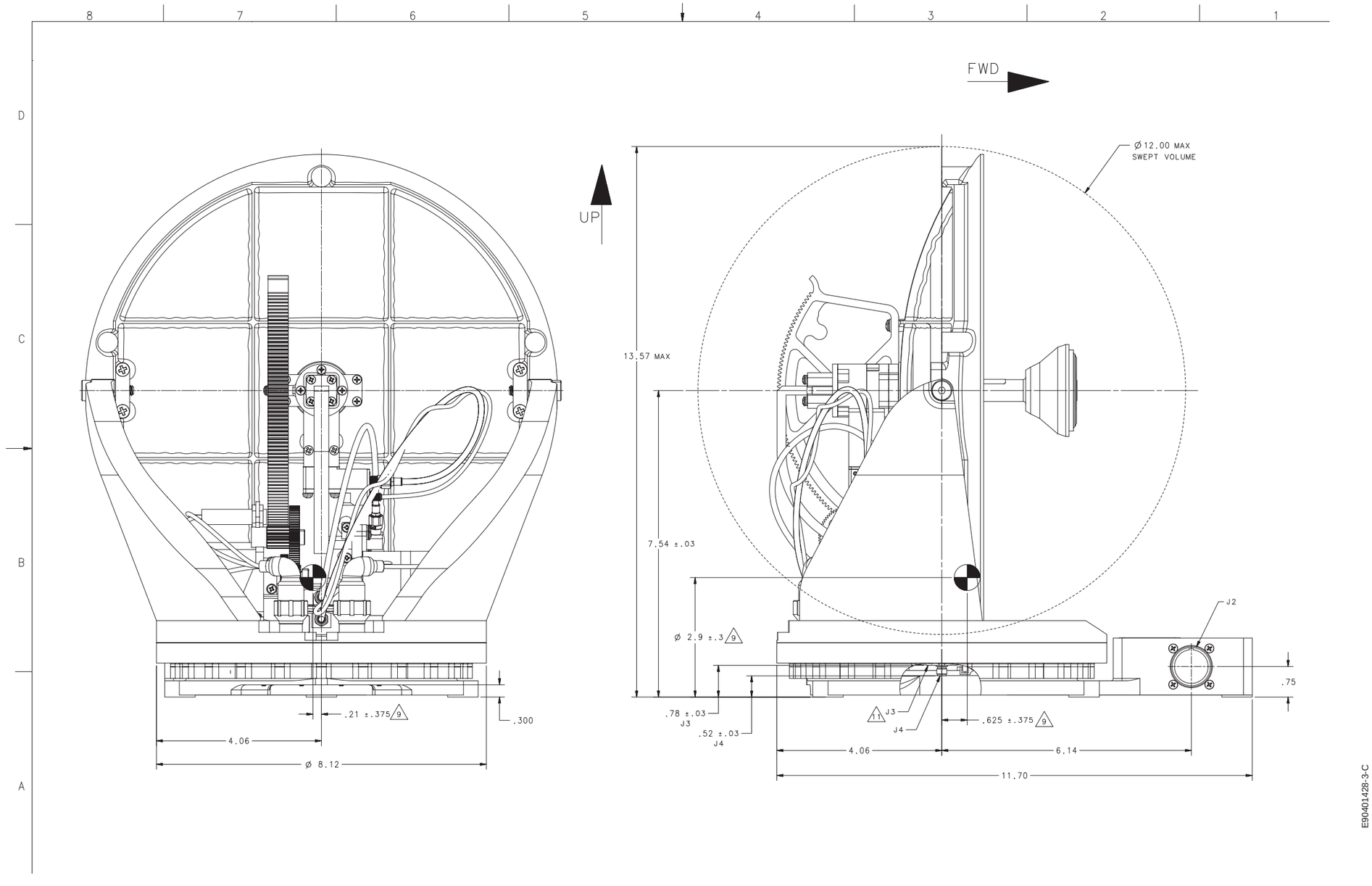

Figure 2-30. TMA Outline and Installation Drawing (Sheet 3 of 4)

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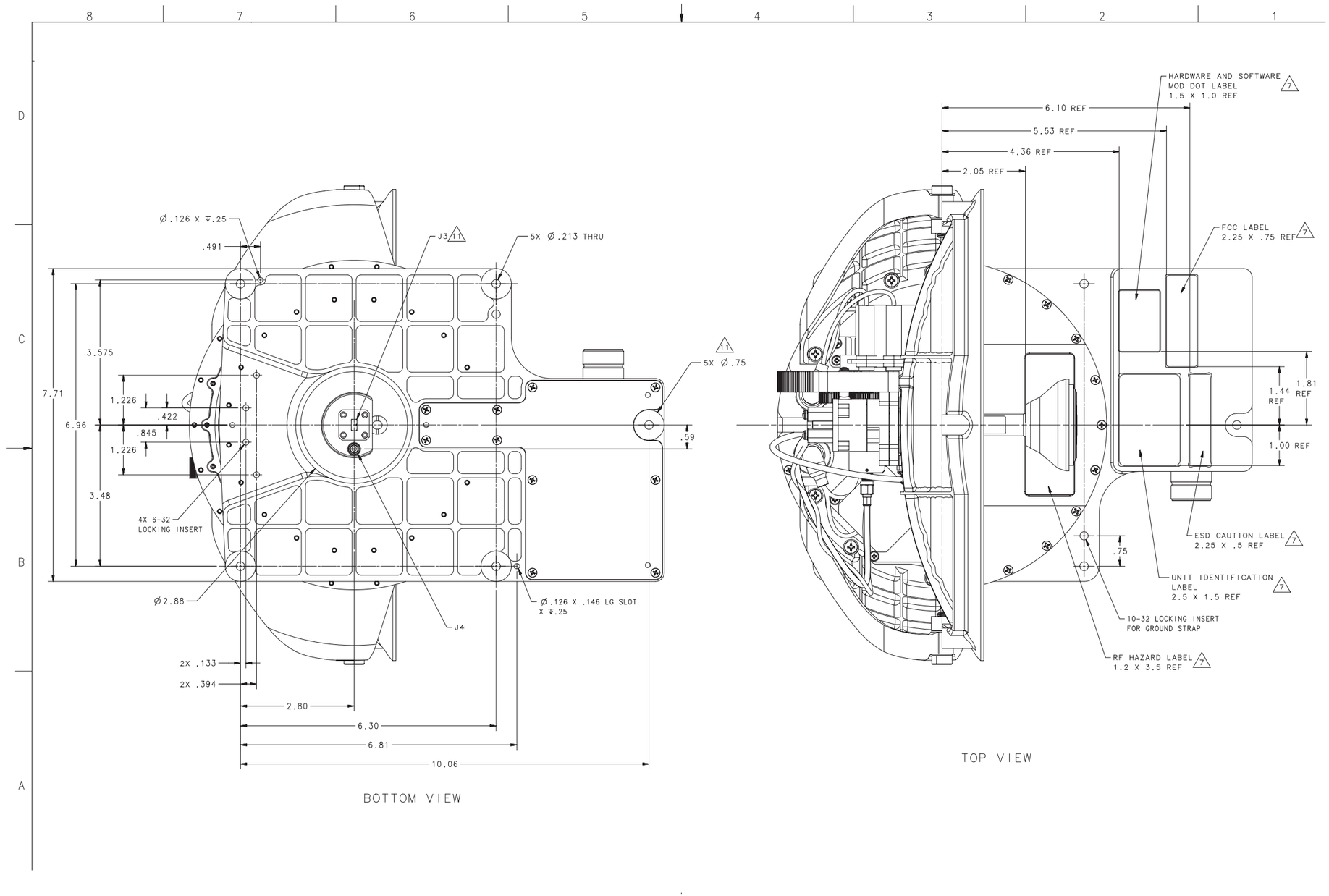

Figure 2-30. TMA Outline and Installation Drawing (Sheet 4 of 4)

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NOTES:

Unless otherwise specified

1. Dimensions and tolerances in accordance with ASME Y14.SM-1994.
   Unless otherwise specified, dimensions are in inches.
   Tolerances on:
   X.XX ±0.03
   X.XXX ±0.010
   ∠ ±2°
2. Dimensions shown are for installation purposes only.
3. Weight:
   3.1 Fuselage mount antenna, PN 90000380-1: 83.0 pounds maximum.
   3.2 Lifting fixture, PN 90000528-001: 5.50 pounds maximum (Sheet 9).
4. Associated CAD data has been modeled to nominal dimensions.
5. Indicated surfaces are intended for electrical bonding measurement.
   See Sheet 3, Zone C4 and Sheet 6, Zone A6.
   Resistance from bonding measurement point indicated to base mounting ring point shall be 50.0 milliohms maximum.
6. Power consumption:
   FMA requirements:
   • 6A peak, 135W steady-state (at 38 VDC)
   IMU requirements:
   • 25W peak below -20°C, 11W between -20°C and +10°C, 2.5W above +10°C.
   (Note: approximate internal IMU temperatures are referenced)
7. Honeywell data matrix label includes:
   Honeywell name
   Product name: FMA
   Hardware/software part numbers
   Serial number
   Weight
   Date of manufacture
   Hardware MOD strike array
   Cage code
   Country of origin
   AR code encoding cage code, serial number, hardware part number and date of manufacture
   Inspection stamp
8. Cooling: Natural convection and radiation only. See Sheet 11 for cooling surfaces.
9. FMA external connectors identification per Table 2. P1, P2 and P3 connectors contact assignments per Table 3, 4, and 5 accordingly. Cables consist of multiple stranded wires in a shielded and insulated jacket. Use cushioned cable clamps to secure cable to aircraft when routing to the mating connector. Ensure cable routing does not obstruct antenna azimuth or elevation rotation defined by swept volume on Sheet 7.
10. ⌖ indicates center of gravity (see Sheet 3).
11. Electrostatic discharge sensitive (ESD). Handle per IPC-A-610.
12. Connectors fitted with protective shipping covers. Remove prior to test or final installation.
13. Indicated mounting surfaces are aluminum alloy 6061-T651 per SAE-AMS4027. Finish of indicated surfaces is chemical conversion coating per MIL-DTL-5541, Type I or II, Class 3, with two coats of primer per MIL-PRF-85582, Type I, Class N.
14. CAUTION: CONTAINS PARTS AND ASSEMBLIES SUSCEPTIBLE TO DAMAGE BY ELECTROSTATIC DISCHARGE (ESD).
15. Environmental qualification characteristics per Table 6.
16. Mounting holes in base are accessed from the top between the antenna and turntable by rotating the assembly in azimuth. Force required to rotate the unit shall be less than 2.5 lb/ft. Mounting hole locations will accommodate 0.52 inch maximum diameter flat washers and socket head cap screws.
17. Mating connectors P1, P2 and P3 must be grounded to aircraft adapter plate. Resistance from connector shell shall be 5 milliohms maximum.
18. Swept volume includes manufacturing tolerances, thermal deflection and dynamic deflection during operation.
19. Export Control Classification Number: 7E994.
20. Indicated surfaces are intended for electrical bonding measurement. See Sheet 6, Zone A6. Resistance from FMA base mounting ring bonding measurement point to adapter plate grounding point must be no greater than 2.5 milliohms. After bonding measurement coat with primer per MIL-PRF-85582, Type I, Class N.
21. Testing:
   21.1 Deleted.
   21.2 Acceptance test per 90000380QTP as defined in Section 1.3 and performed in the following sections: 5.1, 5.2.1, 5.2.2, 5.2.3, 5.2.5 and 5.2.7.

Figure 2-31. FMA Outline and Installation Drawing (Sheet 1 of 12)

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TABLE 1
GXA FMA PART NUMBER

PART NUMBER	DESCRIPTION
90000380-1	GXA FMA ASSEMBLY

TABLE 2
FMA EXTERNAL CONNECTORS IDENTIFICATION

REF. DES.	PART NUMBER	MATES WITH	FUNCTION	REMARKS
P1	PART NUMBER D38999/26FC4PN AMPHENOL CAGE CODE: 02660	PART NUMBER D38999/20FC4SN AMPHENOL CAGE CODE: 02660 [17]	POWER INPUT	4 PIN
P2	PART NUMBER D38999/26FB35PN AMPHENOL CAGE CODE: 02660	PART NUMBER D38999/20FB35SN AMPHENOL CAGE CODE: 02660 [17]	SIGNAL INTERFACE	13 PIN
P3	PART NUMBER D38999/26FB35PA AMPHENOL CAGE CODE: 02660	PART NUMBER D38999/20FB35SA AMPHENOL CAGE CODE: 02660 [17]	TX MUTE/IMU	13 PIN
J4	2.92 MM FEMALE PART NUMBER SF1115-6045 SV MICROWAVE, INC. CAGE CODE: 95077	2.92 MM MALE SEE DETAIL F SHEET 8 MATING COAX DIMENSIONS	RF RX INTERFACE	N/A
J5	90000804-001	SEE DETAIL E SHEET 8 MATING WAVEGUIDE DIMENSIONS	RF TX INTERFACE (WR34)	N/A

TABLE 3
P1 POWER CONNECTOR CONTACT ASSIGNMENT

PIN	SIGNAL
A	38VDC_POWER
B	38VDC_POWER_RETURN
C	FMA CHASSIS GROUND
D	SPARE

TABLE 4
P2 SIGNAL CONNECTOR CONTACT ASSIGNMENT

PIN	SIGNAL
1	MAINTENANCE_ETHERNET_TX+
2	MAINTENANCE_ETHERNET_TX-
3	MAINTENANCE_ETHERNET_RX+
4	MAINTENANCE_ETHERNET_RX-
5	CMD_STATUS_422_RX_HI
6	CMD_STATUS_422_RX_LO
7	CMD_STATUS_422_TX_HI
8	CMD_STATUS_422_TX_LO
9	CMD_STATUS_422_REFERENCE GROUND
10	SPARE
11	SPARE
12	SPARE
13	SPARE

TABLE 5
P3 TX MUTE/IMU CONNECTOR CONTACT ASSIGNMENT

PIN	SIGNAL
1	IMU_TO_KANDU_422_DATA_HI
2	IMU_TO_KANDU_422_DATA_LO
3	KANDU_TO_IMU_422_DATA_HI
4	KANDU_TO_IMU_422_DATA_LO
5	IMU 24 V POWER
6	IMU 24 V POWER RETURN
7	TX TAIL_SECTOR_MUTE_SWITCH
8	TX TAIL_SECTOR_MUTE_SWITCH_RETURN
9	SPARE
10	SPARE
11	SPARE
12	SPARE
13	SPARE

TABLE 6
FMA ENVIRONMENTAL QUALIFICATION CHARACTERISTICS

ENVIRONMENTAL CONDITIONS	LIMITS	RTCA DO-160G SPECIFICATION
GROUND SURVIVAL LOW TEMPERATURE	-55°C	SECTION 4.5.1, CAT F2
OPERATING LOW TEMPERATURE	-55°C	SECTION 4.5.2, CAT F2
GROUND SURVIVAL HIGH TEMPERATURE	+90°C	SECTION 4.5.3, CAT F2
OPERATING HIGH TEMPERATURE	+70°C	SECTION 4.5.4, CAT F2
IN-FLIGHT LOSS OF COOLING	NOT APPLICABLE	NOT APPLICABLE
ALTITUDE	55,000 FT	SECTION 4.6.1, CAT F2
DECOMPRESSION	NOT APPLICABLE	NOT APPLICABLE
OVER PRESSURE	NOT APPLICABLE	NOT APPLICABLE
TEMPERATURE VARIATION	10°C/MIN	SECTION 5, CAT A
HUMIDITY	85% RH AT 38°C 95% RH AT 65°C	SECTION 6, CAT B
OPERATIONAL SHOCK	3 SHOCKS OF 6G/11MS IN 6 DIRECTIONS 3 SHOCKS OF 6G/20MS IN 6 DIRECTIONS	SECTION 7, CAT B AND E
CRASH SAFETY IMPULSE	1 SHOCK OF 20G/11MS IN 6 DIRECTIONS 1 SHOCK OF 20G/20MS IN 6 DIRECTIONS	SECTION 7, CAT B AND E
CRASH SAFETY SUSTAINED	10G UP 8G DOWN 18G FORWARD 4G AFT 6G SIDE	SECTION 7, CAT B AND E
VIBRATION	RANDOM CURVE C AND C1	SECTION 8, CAT S AND R
EXPLOSIVE ATMOSPHERE	AIRCRAFT ZONE 111 (HEPTANE INSTEAD OF HEXANE)	SECTION 9, CAT E
WATER PROOFNESS	CONDENSING AND DRIP	SECTION 10, CAT Y AND W
FLUIDS SUSCEPTIBILITY	DE-ICING FLUID (SPRAY TEST ONLY)	SECTION 11, CAT F
SAND AND DUST	DUST ONLY	SECTION 12, CAT D
FUNGUS RESISTANCE	BY ANALYSIS	SECTION 13, CAT F
SALT FOG	CAT S	SECTION 14, CAT S
ICING	CAT B	SECTION 24, CAT B

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Figure 2-31. FMA Outline and Installation Drawing (Sheet 2 of 12)

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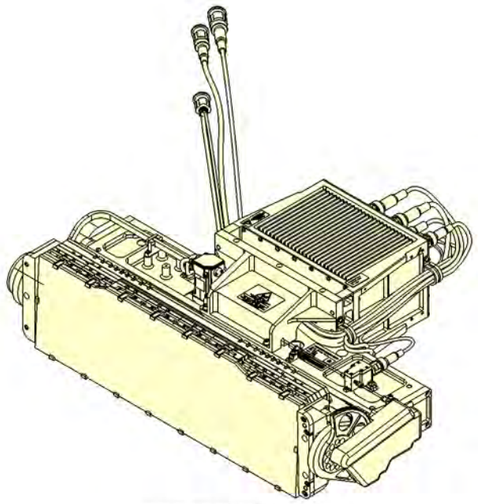

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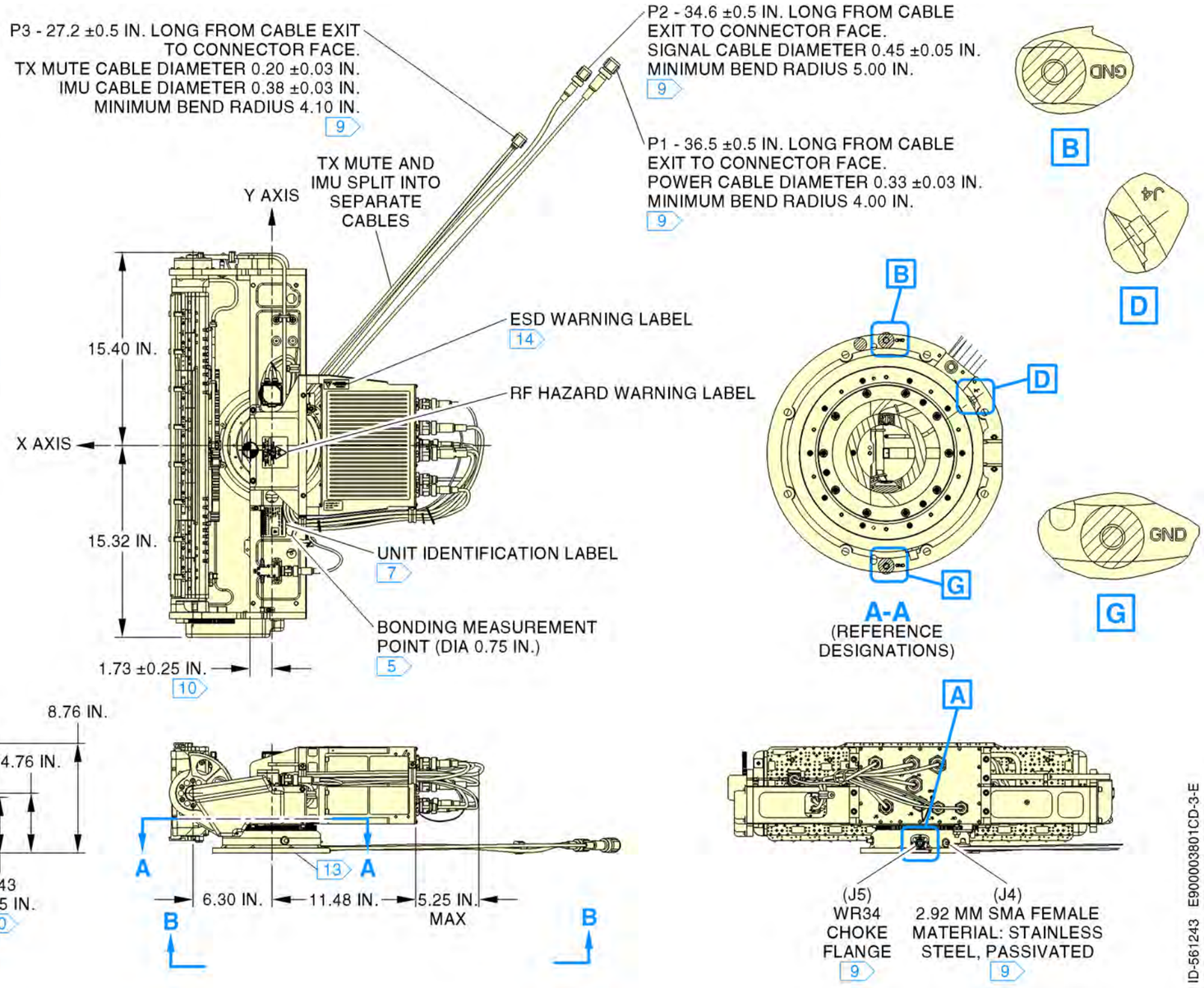

Figure 2-31. FMA Outline and Installation Drawing (Sheet 3 of 12)

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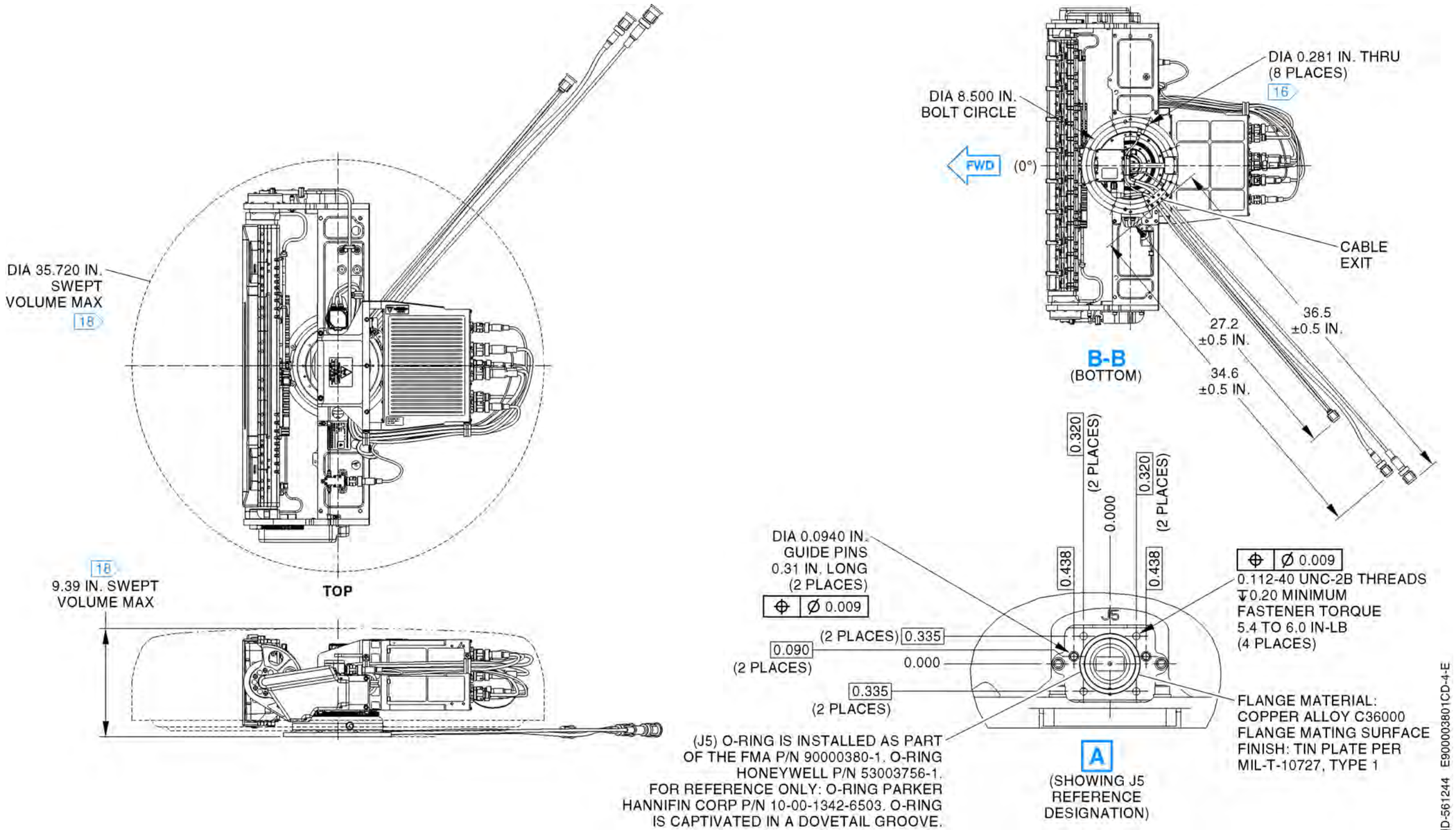

Figure 2-31. FMA Outline and Installation Drawing (Sheet 4 of 12)

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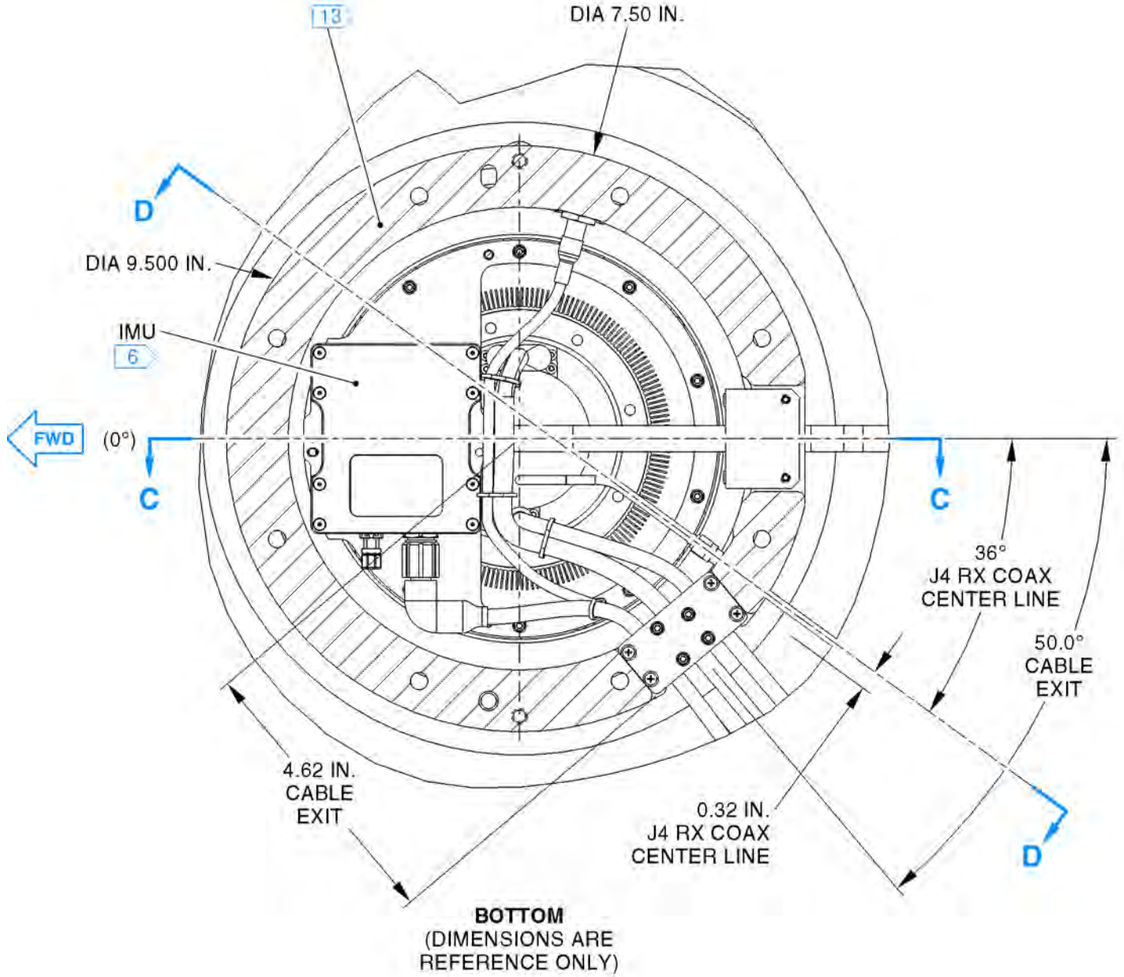

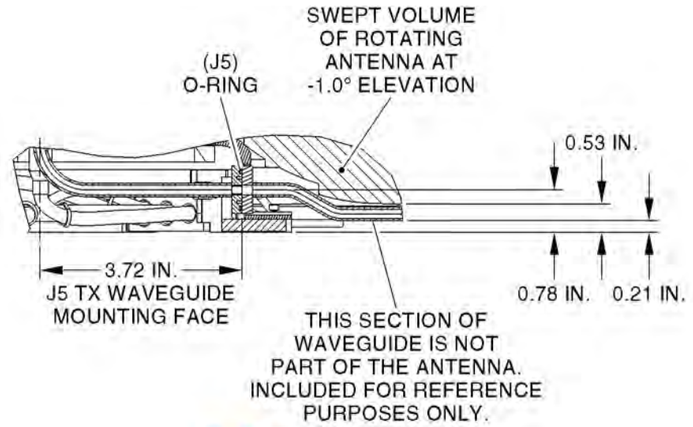

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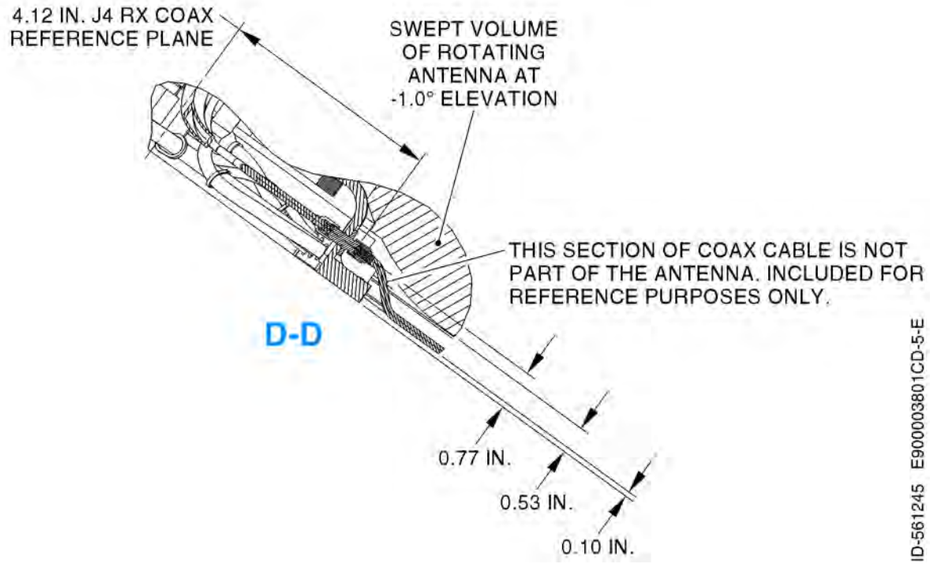

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Figure 2-31. FMA Outline and Installation Drawing (Sheet 5 of 12)

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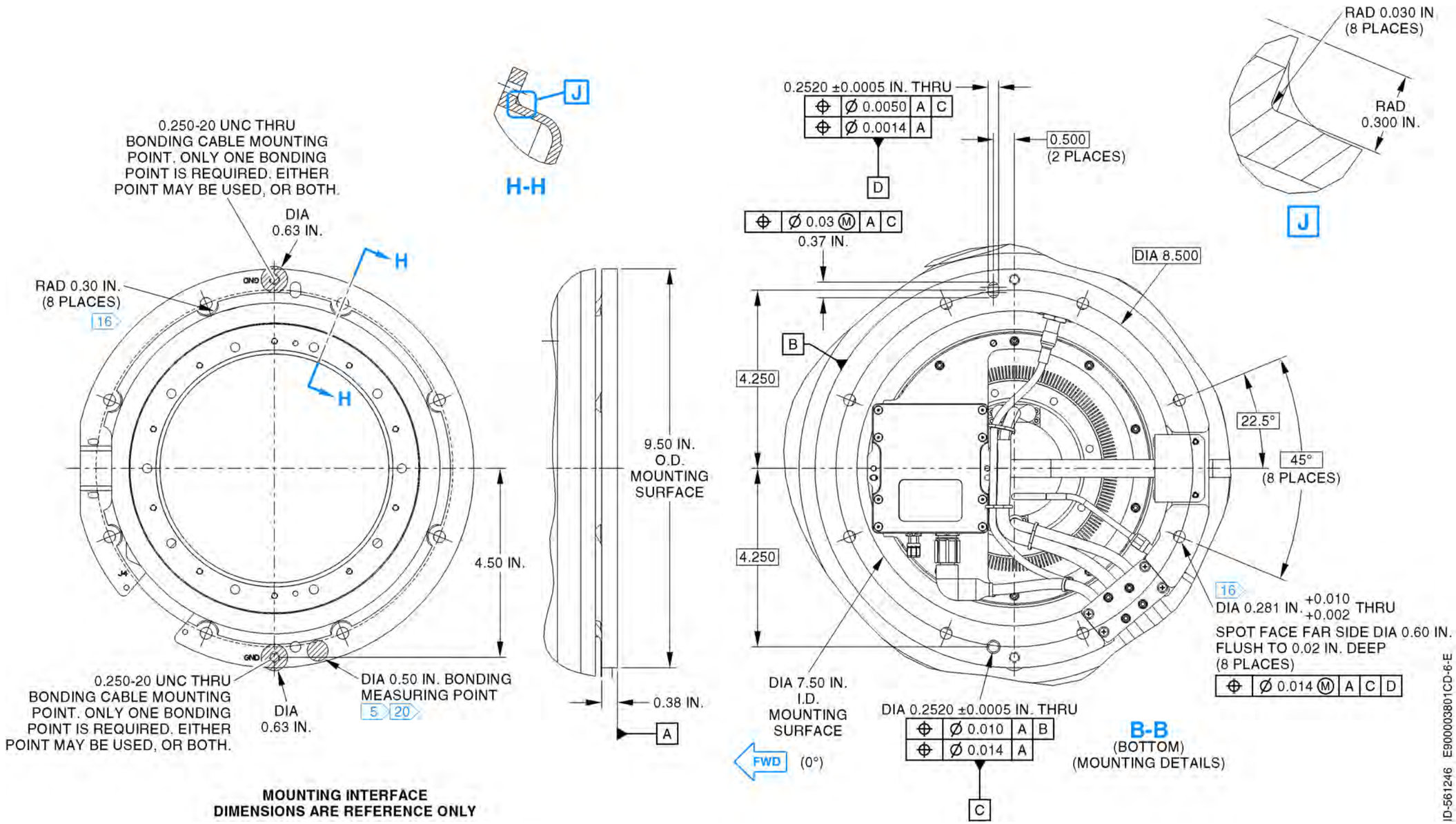

Figure 2-31. FMA Outline and Installation Drawing (Sheet 6 of 12)

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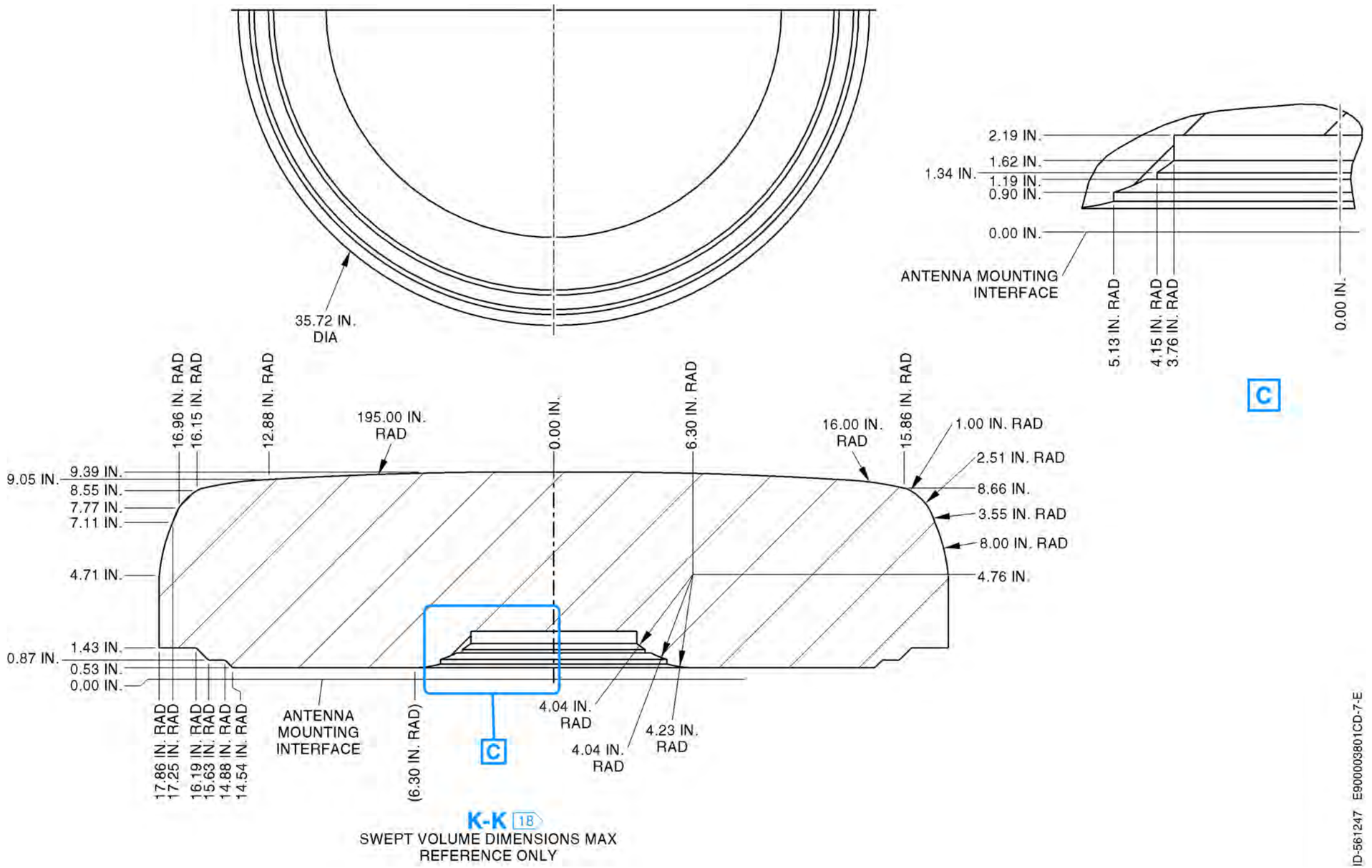

Figure 2-31. FMA Outline and Installation Drawing (Sheet 7 of 12)

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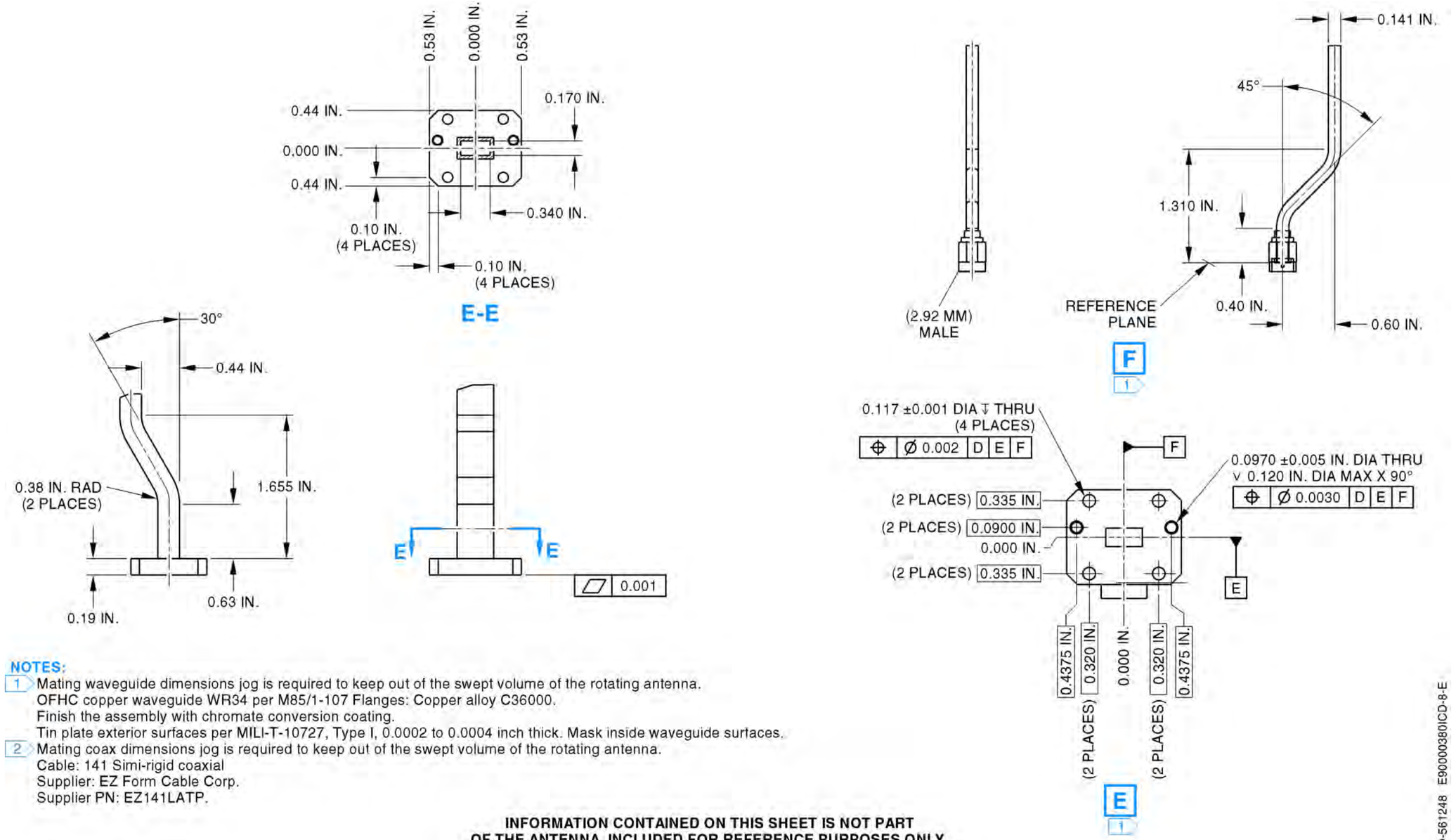
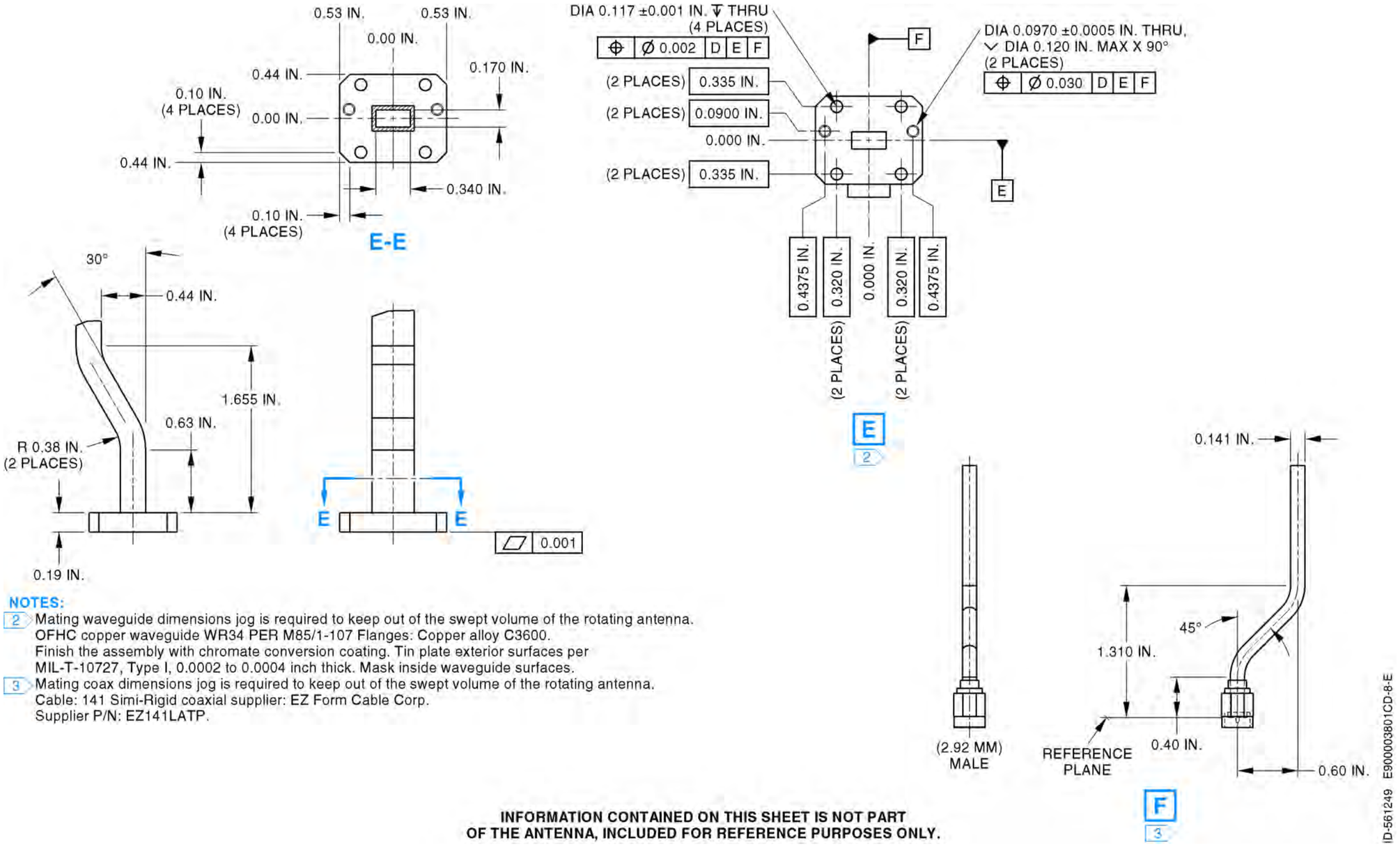


NOTES:

1. Mating waveguide dimensions jog is required to keep out of the swept volume of the rotating antenna.
   OFHC copper waveguide WR34 per M85/1-107 Flanges: Copper alloy C36000.
   Finish the assembly with chromate conversion coating.
   Tin plate exterior surfaces per MILI-T-10727, Type I, 0.0002 to 0.0004 inch thick. Mask inside waveguide surfaces.
2. Mating coax dimensions jog is required to keep out of the swept volume of the rotating antenna.
   Cable: 141 Simi-rigid coaxial
   Supplier: EZ Form Cable Corp.
   Supplier PN: EZ141LATP.

Figure 2-31. FMA Outline and Installation Drawing (Sheet 8 of 12)

Blank Page



NOTES:

2. Mating waveguide dimensions jog is required to keep out of the swept volume of the rotating antenna. OFHC copper waveguide WR34 PER M85/1-107 Flanges: Copper alloy C3600. Finish the assembly with chromate conversion coating. Tin plate exterior surfaces per MIL-T-10727, Type I, 0.0002 to 0.0004 inch thick. Mask inside waveguide surfaces.
3. Mating coax dimensions jog is required to keep out of the swept volume of the rotating antenna. Cable: 141 Simi-Rigid coaxial supplier: EZ Form Cable Corp. Supplier P/N: EZ141LATP.

INFORMATION CONTAINED ON THIS SHEET IS NOT PART OF THE ANTENNA, INCLUDED FOR REFERENCE PURPOSES ONLY.

Figure 2-31. FMA Outline and Installation Drawing (Sheet 9 of 12)

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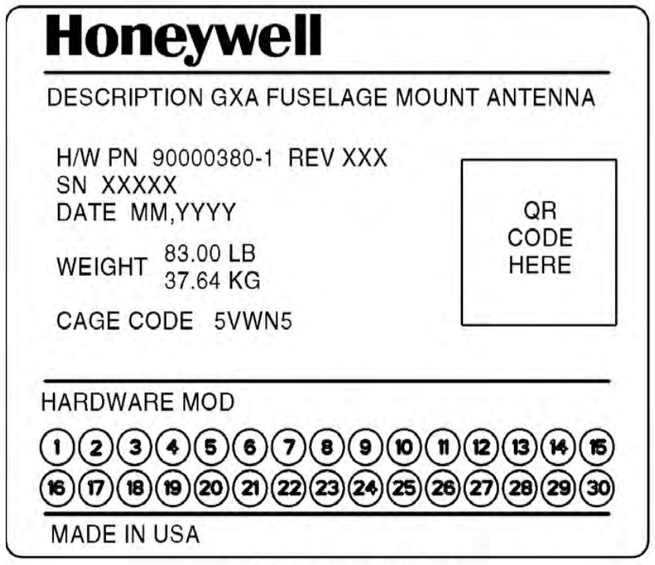
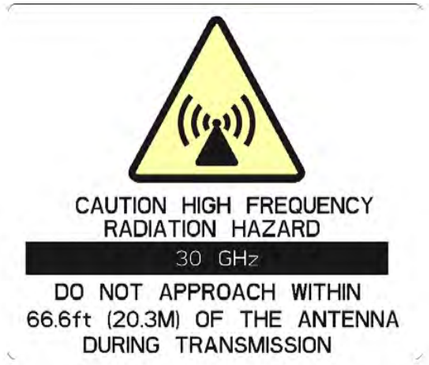
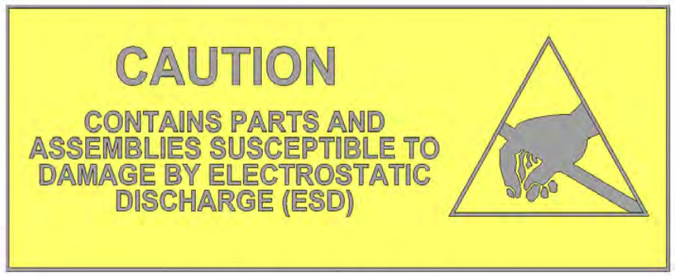


UNIT IDENTIFICATION LABEL



RF HAZARD WARNING LABEL



ESD WARNING LABEL

**SUBASSEMBLY MARKING
REFERENCE ONLY**

ID-561250 E90000380ICD-10-E

Figure 2-31. FMA Outline and Installation Drawing (Sheet 10 of 12)

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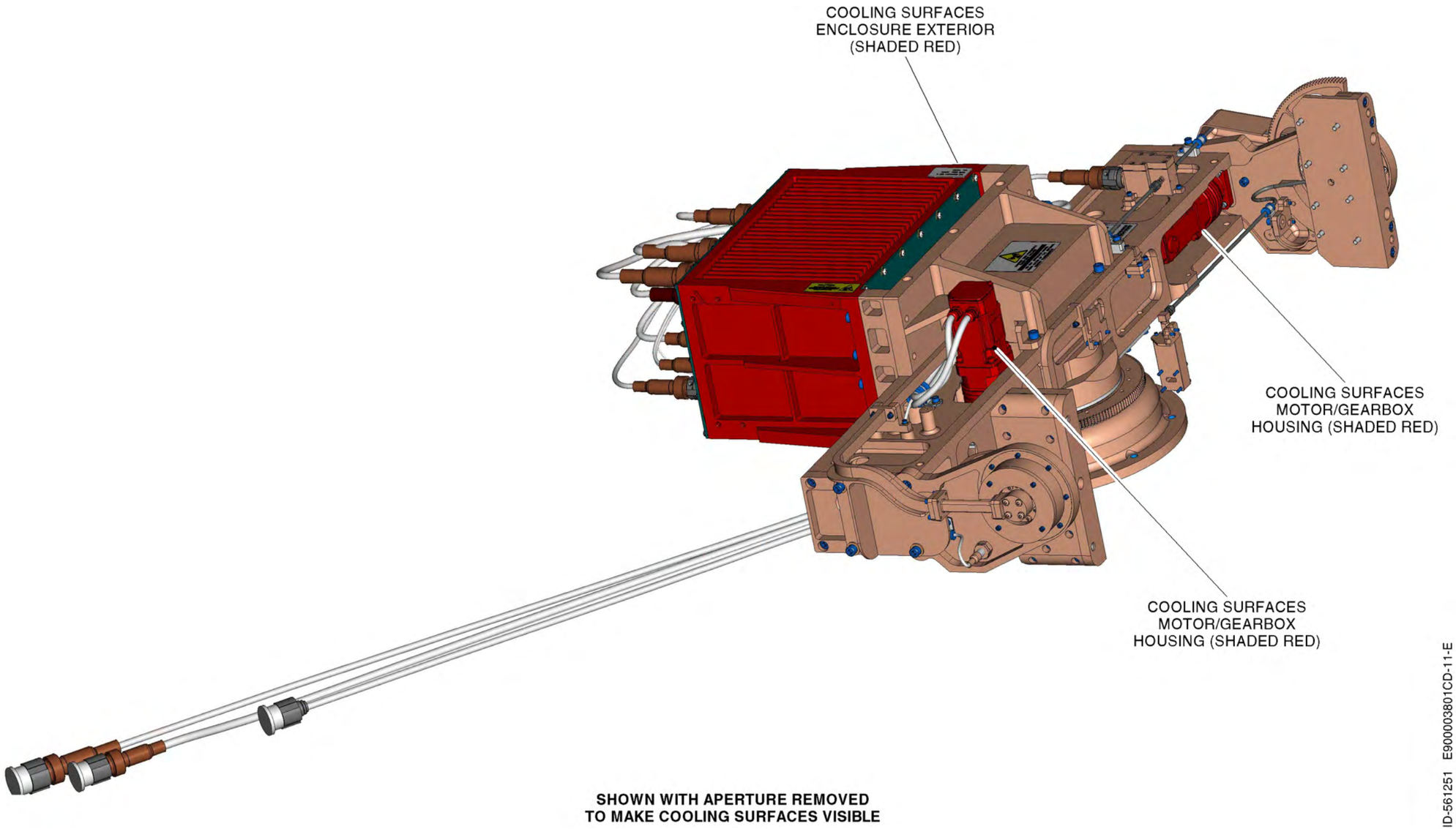

Figure 2-31. FMA Outline and Installation Drawing (Sheet 11 of 12)

Blank Page

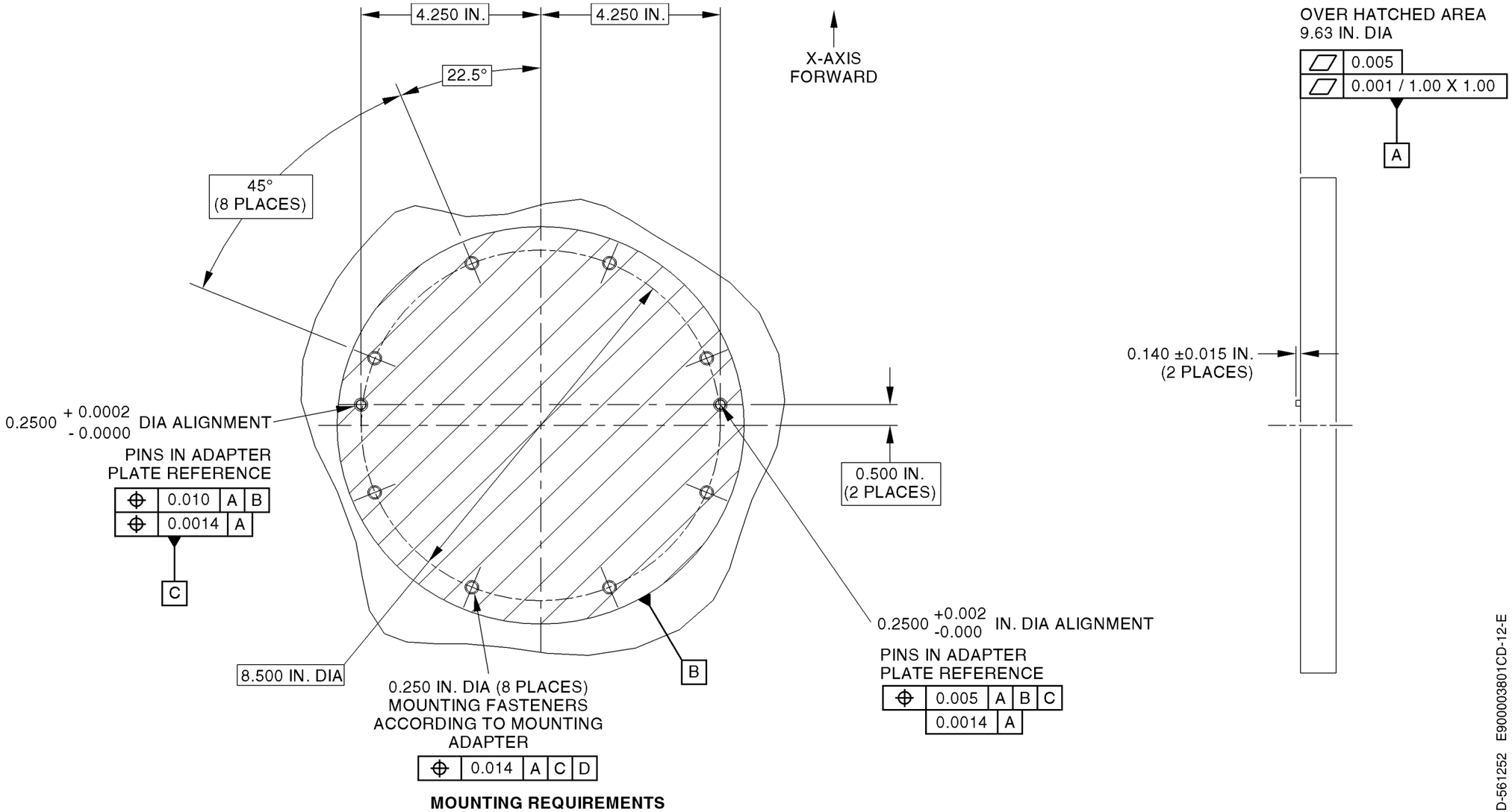

Figure 2-31. FMA Outline and Installation Drawing (Sheet 12 of 12)

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NOTES: UNLESS OTHERWISE SPECIFIED

1. DRAWING STANDARDS:
INTERPRET DRAWING PER ASME Y14.100-2000.
DIMENSIONING AND TOLERANCING PER ASME Y14.5-2009.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCES ON:
.XX +/- .01
.XXX +/- .005
∠ +/- 2°

2. DIMENSIONS SHOWN ARE FOR INSTALLATION PURPOSES ONLY.

3. WEIGHT 53.5 lb [24.27 kg] MAX.

4. ASSOCIATED CAD DATA HAS BEEN MODELED TO NOMINAL DIMENSIONS.

5. ⊕ INDICATES APPROXIMATE CENTRE OF GRAVITY.

6. SEE TABLE I FOR VARIANTS.

7. HONEYWELL ID LABEL INCLUDES:
- HONEYWELL NAME
- HONEYWELL PART NUMBER
- HONEYWELL REVISION
- HONEYWELL CAGE CODE
- SUPPLIER NAME
- SUPPLIER PART NUMBER
- SERIAL NUMBER
- DATE OF MANUFACTURE
- COUNTRY OF MANUFACTURE

8. THE RADOME CONSTRUCTION IS THIN COMPOSITE SANDWICH CONSTRUCTION
AND IS SUSCEPTIBLE TO DAMAGE DUE TO MISHANDLING AND IMPACTS.
- AT LEAST TWO PEOPLE SHOULD HANDLE THE RADOME.
- THE RADOME SHOULD BE LIFTED AT THE FOUR HOIST POINTS IDENTIFIED.
- THE USE OF A CRANE AND SLINGS TO LIFT THE RADOME IS ACCEPTABLE.
- DO NOT STEP ON OR STACK ITEMS ON TOP OF THE RADOME.
- TEMPORARILY STORE THE RADOME, TRIM EDGE DOWN, ON A FLAT CUSHIONED SURFACE.
- LONG TERM STORAGE OF THE RADOME SHOULD BE IN ITS ORIGINAL OR EQUIVALENT PACKAGING
IN AN ENCLOSED STRUCTURE ISOLATED FROM ADVERSE ENVIRONMENTAL CONDITIONS.

9. HOIST POINTS ARE LABELLED "HOIST POINT".
HOIST POINT SCREWS ARE TO BE REMOVED TO ALLOW FOR INSERTION OF LIFTING HARDWARE.
LIFTING HARDWARE SHALL BE SUPPLIED BY THE INSTALLER.
MAXIMUM LIFTING HARDWARE LENGTH PROJECTING INTO THE RADOME, MEASURED FROM
THE OUTSIDE SURFACE OF THE RADOME AT THE HOLE, IS 1.5 INCHES.
HOIST POINT SCREWS SHALL BE RE-INSTALLED AFTER REMOVAL OF LIFTING HARDWARE.
HOIST POINT NUTPLATE THREAD TYPE IS .1900-32 UNJF-3B.
MATING LIFTING HARDWARE SHOULD BE THREAD TYPE .1900-32 UNJF-3A.
HOIST POINT SCREW DETAILS (SCREWS SUPPLIED WITH RADOME):
- SCREW TYPE: NAS1790
- SCREW HEAD TYPE: OFFSET CRUCIFORM
- SCREW TORQUE: 25 TO 30 in-lbf
- RUNNING/PREVAILING TORQUE SHALL BE MEASURED AND ADDED TO THE SCREW TORQUE ABOVE

10. RADOME ATTACHMENT SCREWS AND DIMPLE WASHERS ARE SHIPPED SEPARATELY.
DIMPLE WASHERS SHALL BE NAS1169C416L AND ARE USED AT LIGHTNING DIVERTER TERMINATION POINTS (EXCEPT AFT END).
RADOME ATTACHMENT SCREWS SHALL BE NAS1790V4RXA WHERE X REPRESENTS FASTENER GRIP LENGTH.
RADOME FASTENER GRIP LENGTH IS DEPENDENT ON INSTALLATION. CONTACT HONEYWELL FOR FURTHER DETAILS.
MAXIMUM ALLOWABLE TORQUE FOR RADOME ATTACH SCREWS IS 55 in-lbf (LIMITED BY EDGE BAND COMPOSITE).
RUNNING/PREVAILING TORQUE FOR THE RADOME ATTACHMENT POINTS SHOULD BE MEASURED AND ADDED
TO THE DESIRED FINAL TORQUE FOR THE FASTENERS.

11. TEMPORARY HARDWARE FOR SHIPPING ONLY.
HARDWARE SHALL BE REMOVED AND DISCARDED PRIOR TO INSTALLATION.
HARDWARE IS PAINTED RED TO INDICATE THAT IT IS TEMPORARY.
TEMPORARY HARDWARE INCLUDES:
- SCREW: MS24694-S100
- FLAT WASHER: NAS1149-F0432P
- NUT: MS21044-N4

12. INDICATED SURFACES ARE INTENDED FOR ELECTRICAL BONDING MEASUREMENT.
BONDING MEASUREMENT SHALL BE COMPLETED ONCE RADOME IS INSTALLED ON INTERFACE MOUNT PLATE OR FAIRING RING.
BONDING MEASUREMENT SHALL BE TAKEN BETWEEN ANY TWO IDENTIFIED POINTS.

13. PAINT FINISH:
THE RADOME IS PAINTED WITH AN EPOXY-AMINE BASE ANTI-STATIC PRIMER AND POLYURETHANE TOPCOAT.
NO ADDITIONAL APPLICATIONS OF PAINT, OTHER THAN FOR COSMETIC TOUCH-UPS, ARE REQUIRED.
THE APPLICATION OF ADDITIONAL PAINT SHOULD BE AVOIDED AS EXCESSIVE PAINT THICKNESS
AND/OR APPLICATION OF CERTAIN TYPES OF PAINTS WILL NEGATIVELY AFFECT THE PERFORMANCE
OF THE KA SYSTEM.
CONTACT HONEYWELL BEFORE APPLYING ADDITIONAL PAINT TO THE RADOME.
FOR TOP COAT COLOUR SEE TABLE I
CAUTION: DO NOT PAINT THE SEGMENTED, LIGHTNING DIVERTER BUTTONS

14. THROUGH HOLES AND COUNTERSINKS FOR ATTACHMENT HARDWARE HAVE ONLY EPOXY-AMINE BASE
ANTI-STATIC PRIMER APPLIED, 57 PLACES.
AFT CENTERLINE COUNTERSINK/THROUGH HOLE ON SOLID LIGHTNING DIVERTER IS FINISHED WITH
CHEMICAL FILM PER MIL-DTL-5541, TYPE II, CLASS 3.
BASE METAL FOR SOLID LIGHTNING DIVERTER IS 6061-T6 ALUMINUM ALLOY.

15. RADOME EDGE BAND MATERIAL IS E-GLASS EPOXY COMPOSITE LAMINATE.
RADOME RF WINDOW MATERIAL IS A PROPRIETARY COMPOSITE LAMINATE.

16. SEE SHEET 5 FOR REQUIRED NOMINAL POSITIONAL PLACEMENT OF GX FUSELAGE MOUNT ANTENNA,
PN 90000380, UNDER RADOME.
DIMENSIONS SHALL BE USED FOR NOMINAL DESIGN PLACEMENT OF THE FUSELAGE MOUNT ANTENNA
WITH RESPECT TO THE FUSELAGE MOUNT RADOME
MANUFACTURING AND INSTALLATION RELATED POSITIONAL ANTENNA PLACEMENT,
WITH RESPECT TO RADOME, AS DEFINED ON SHEET 5, SHALL BE LESS THAN ± .25".

17. RADOME ATTACH FASTENER TORQUE SEQUENCE:
(NOTE: FLAG NOTE APPLIES TO THIS NOTE NUMBER AND ALL SUB NOTE NUMBERS)
DUE TO TOLERANCES AND NOMINAL DESIGN GAP BETWEEN THE RADOME INNER FAYING SURFACE AND
THE INTERFACE FAYING SURFACE, THE SEATING OF THE RADOME ONTO THE INTERFACE MOUNT MAY
INITIALLY APPEAR MISALIGNED.

17.1 ENGAGE ALL RADOME ATTACHMENT SCREWS PRIOR TO TIGHTENING TO FINAL TORQUE.
THE RECOMMENDED NUMERICAL SEQUENCE FOR FASTENER INSTALLATION IS SHOWN ON SHEET 6.
ONCE THE SIX INDICATED SCREW POSITIONS HAVE BEEN ENGAGED, SUCCESSIVE SCREWS MAY BE
INSTALLED IN ANY SEQUENCE.
ENGAGE SCREWS TO FULL HEAD SEATING AT APPROXIMATELY 25 TO 40 PERCENT OF FINAL TORQUE.

17.2 REPEAT THE TORQUE SEQUENCE A FINAL TIME AND TORQUE ALL FASTENERS TO THE
SPECIFIED FINAL TORQUE VALUE.

TABLE I VARIANTS 6

PART NUMBER	DESCRIPTION	TOP COAT COLOUR
SCD-90401395-01	SPECIFICATION CONTROL DRAWING, RADOME, GXA FMA (WHITE)	GLOSS WHITE PER BAC-7067

EICD-90401395-1-B

Figure 2-32. Fuselage Mount Radome Outline and Installation Drawing (Sheet 1 of 6)

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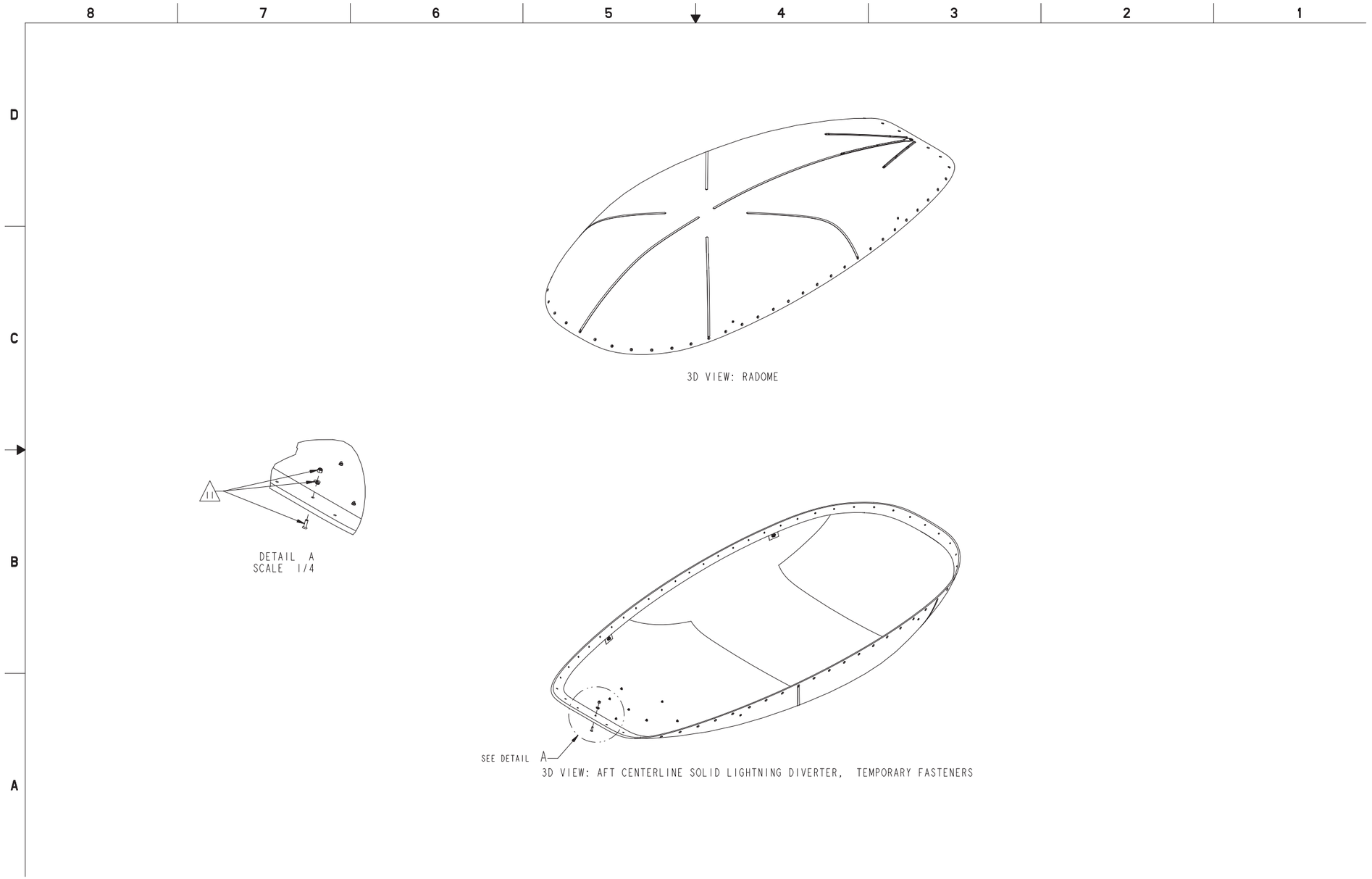

Figure 2-32. Fuselage Mount Radome Outline and Installation Drawing (Sheet 2 of 6)

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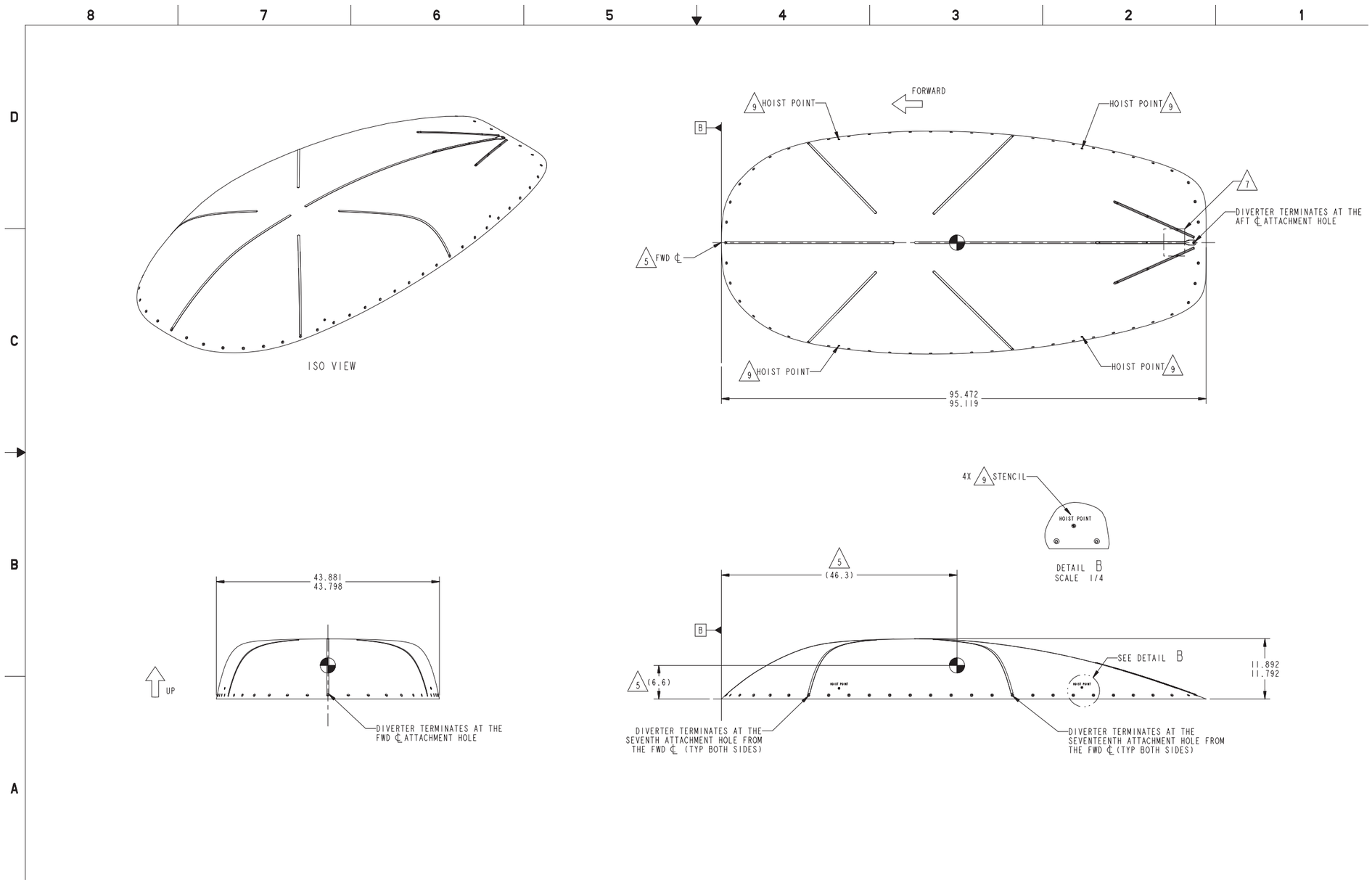

Figure 2-32. Fuselage Mount Radome Outline and Installation Drawing (Sheet 3 of 6)

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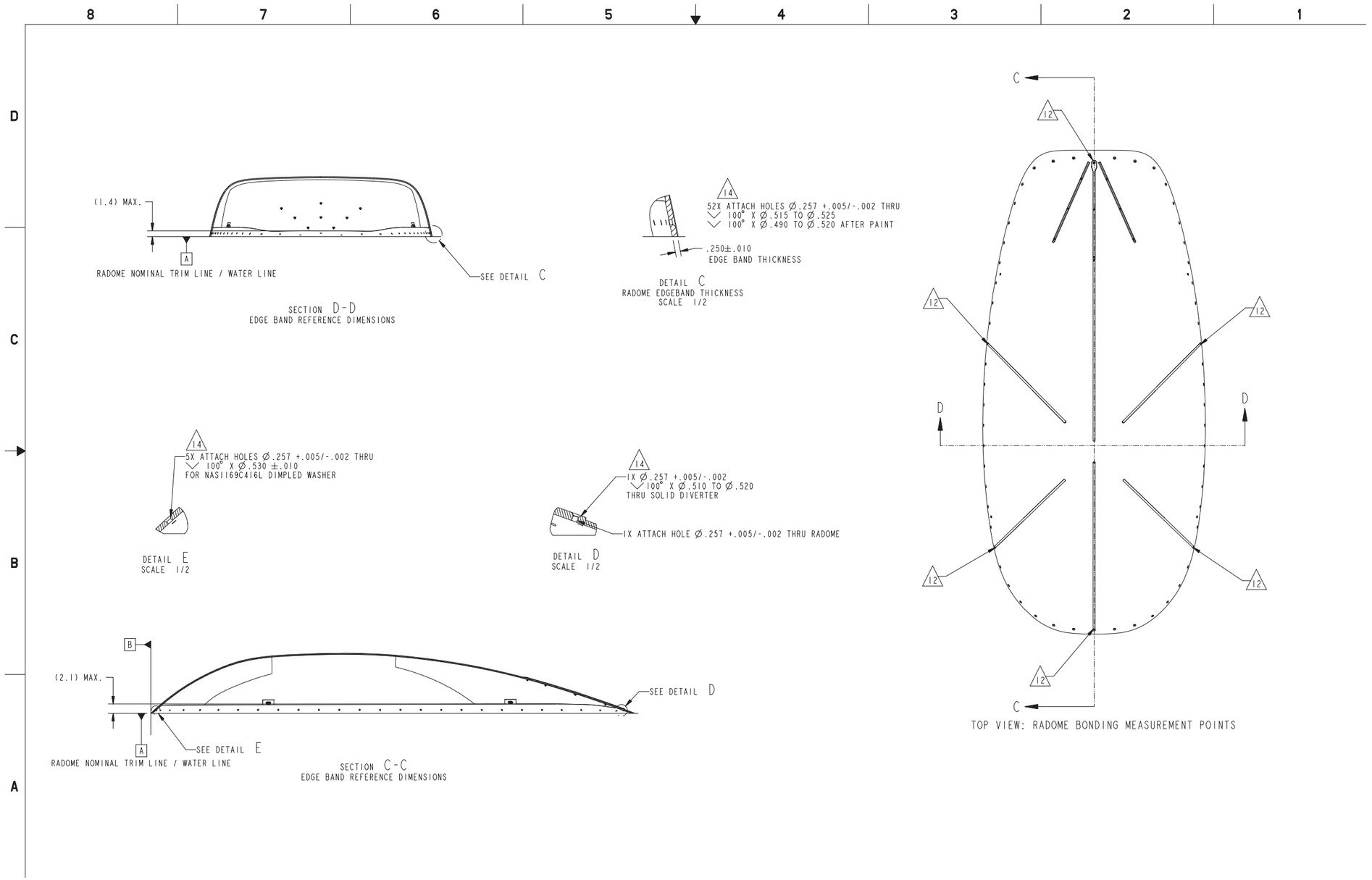

Figure 2-32. Fuselage Mount Radome Outline and Installation Drawing (Sheet 4 of 6)

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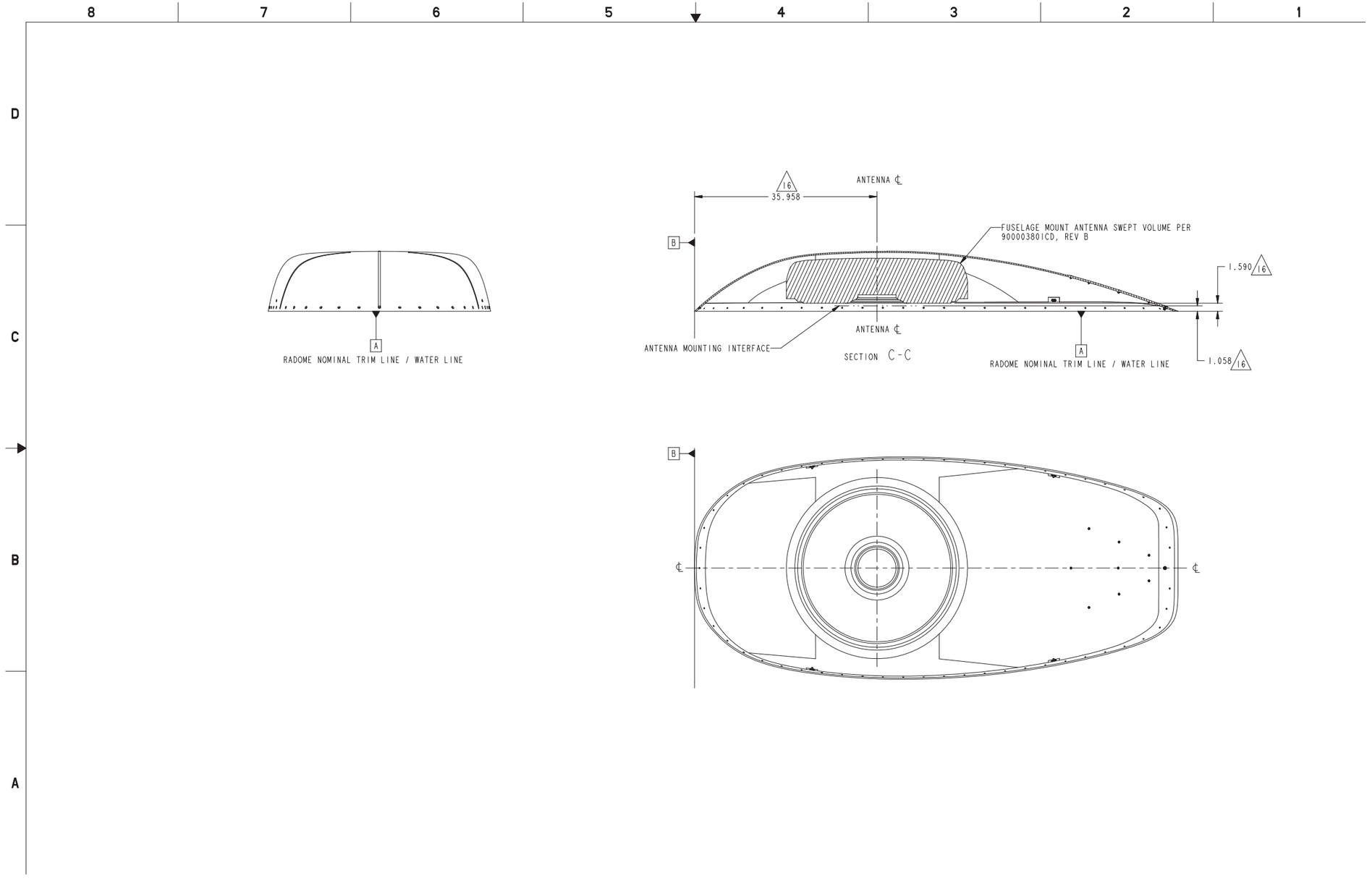

Figure 2-32. Fuselage Mount Radome Outline and Installation Drawing (Sheet 5 of 6)

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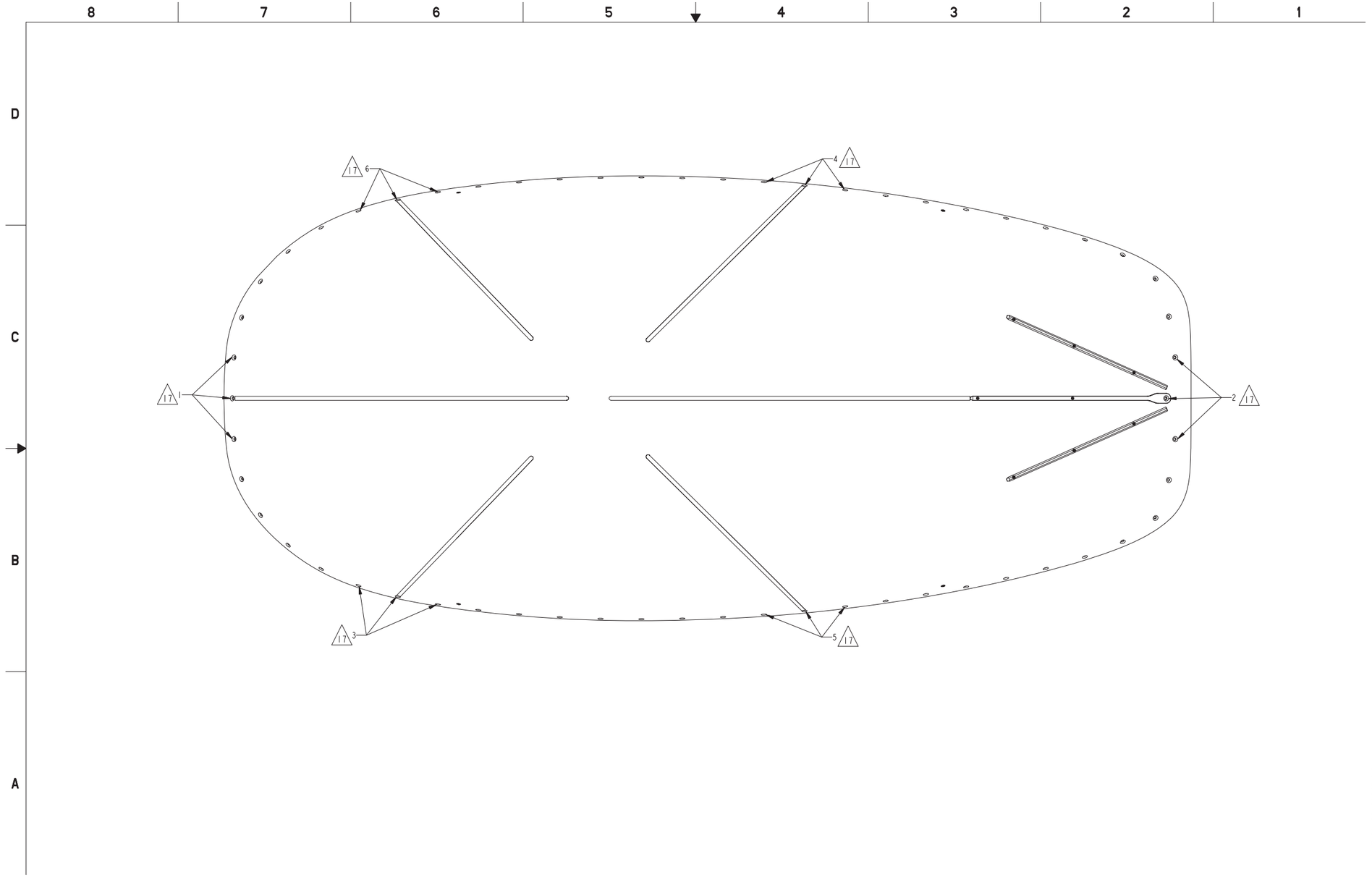

Figure 2-32. Fuselage Mount Radome Outline and Installation Drawing (Sheet 6 of 6)

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NOTES, UNLESS OTHERWISE SPECIFIED:

1. ALL CABLING SHOULD BE IN ACCORDANCE EITHER WITH *SAE AS50881: WIRING AEROSPACE VEHICLE STANDARD* OR AS PER AIRFRAME MANUFACTURER'S REQUIREMENTS.

2. WIRE SIZE RECOMMENDATIONS:
   UNLESS OTHERWISE SPECIFIED ALL SIGNAL WIRES SHALL BE #24AWG.

   (A) RECOMMENDED TO USE SHIELDED TWISTED PAIR M27500G24SD2T23 OR EQUIVALENT.

   (B) RECOMMENDED TO USE SHIELDED TWISTED PAIR M27500G20SD2T23 OR EQUIVALENT FOR ANTENNA POWER, ANTENNA POWER RETURN, IMU POWER AND IMU POWER RETURN.

   (C) RECOMMENDED TO USE ARINC 664 COMPLIANT STAR QUAD CABLE FOR ETHERNET INTERFACES TERMINATING ON QUADRAX RECEPTACLES.

   (D) GXA LRU QUADRAX TERMINATIONS ARE WITH PIN TYPE CONTACTS.

   (E) ETHERNET STAR QUAD WIRE TERMINATIONS SHOULD NOT DISTORT NATURAL WIRE TWIST.

   (F) NO WIRES ARE TO BE LEFT EXPOSED OUTSIDE (TO THE REAR) OF QUADRAX CONTACT SHELL.

3. UNLESS OTHERWISE STATED, ALL POWER, CHASSIS AND SIGNAL GROUNDS MUST NOT EXCEED 0.005 Ω.

4. THE CHARACTERISTIC IMPEDANCE OF RS422 CABLES SHOULD MATCH RS422 DIFFERENTIAL SIGNAL TERMINAL IMPEDANCE REQUIREMENT OF 121 Ω ±10%.

5. ALL CABLE SHIELDS SHOULD BE BONDED TO THE BACKSHELL OR CONNECTOR BODY.

6. MATING PLUGS SHOULD BE NICKEL-PLATED ALUMINUM, NICKEL PLATED COMPOSITE OR STAINLESS STEEL.

7. RF COAXIAL RECEPTACLES AND MATING CONNECTORS SHOULD BE NICKEL-PLATED BRASS.

8. REFER TO PAGE 4 INTERCONNECTION DIAGRAM FOR KANDU INSTALLED IN UNPRESSURISED LOCATION INSIDE AIRCRAFT.

9. REFER TO PAGE 5 INTERCONNECTION DIAGRAM FOR KANDU INSTALLED IN PRESSURISED LOCATION INSIDE AIRCRAFT.

10. (A) 10/100 MBPS ETHERNET AND GIGABIT ETHERNET INTERFACES ARE PROVISIONED IN THE THREE VLAN TAGGED ISOLATED DOMAINS:
    (i) PASSENGER OWNED DEVICES DOMAIN (PODD),
    (ii) PASSENGER INFORMATION AND ENTERTAINMENT SERVICES DOMAIN (PIESD) AND
    (iii) AIRLINE INFORMATION SERVICES DOMAIN (AISD).

    (B) EN3 ETHERNET INTERFACE OPERATE AT 10 MBPS.

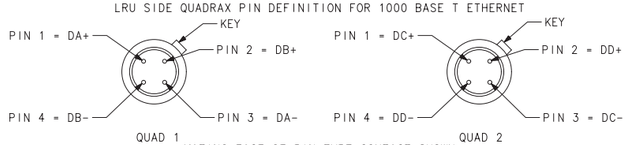
    (C) INSTALLER MAY SELECT APPROPRIATE DOMAIN ETHERNET INTERFACES TO MEET CONNECTIVITY REQUIREMENTS.

11. ALL CABLE SHIELDS, EXCEPT ETHERNET SHIELDS TERMINATED TO QUADRAX CONTACTS, SHOULD BE TERMINATED TO A CONNECTOR BACKSHELL OR GROUNDING POINT DETERMINED BY THE AIRFRAME MANUFACTURER.

12. ALL SHIELDED TWISTED PAIR WIRE FOR ETHERNET INTERFACE SHOULD BE OF 100 Ω CONTROLLED IMPEDANCE.

13. STAR QUAD CABLES SHOULD BE USED FOR GIGABIT ETHERNET INTERCONNECTIONS. RECOMMENDED PIN DEFINITION AND COLOR SCHEME IS SHOWN BELOW.

LRU SIDE QUADRAX PIN DEFINITION FOR 1000 BASE T ETHERNET



MATING FACE OF PIN TYPE CONTACT SHOWN

COLOR CODE FOR POINT TO POINT 1000BASE T ETHERNET CONFIGURATION		
PRIMARY LRU SIGNAL	WIRE COLOR	PERIPHERAL LRU SIGNAL
DA+	QUAD 1 - RED	DB+
DA-	QUAD 1 - BLUE	DB-
DB+	QUAD 1 - YELLOW	DA+
DB-	QUAD 1 - GREEN	DA-
DC+	QUAD 2 - RED	DD+
DC-	QUAD 2 - BLUE	DD-
DD+	QUAD 2 - YELLOW	DC+
DD-	QUAD 2 - GREEN	DC-

14. SHIELDED TWISTED PAIR (2-PAIR) CABLES SHOULD BE USED FOR 10/100 MBPS ETHERNET INTERCONNECTIONS. RECOMMENDED PIN DEFINITIONS AND COLOR SCHEME IS SHOWN BELOW.

COLOR CODE FOR POINT TO POINT 10/100 BASE T ETHERNET WIRING		
PRIMARY LRU SIGNAL	WIRE COLOR	PERIPHERAL LRU SIGNAL
TX +	RED	RX +
TX -	BLUE	RX -
RX +	YELLOW	TX +
RX -	GREEN	TX -

MATING FACE OF PIN TYPE CONTACT SHOWN

15. (A) GXA LRUS OPERATE ON AIRCRAFT POWER SUPPLY OF 115 VAC (96 VRMS TO 122 VRMS WITH FREQUENCY RANGE OF MINIMUM 320 Hz TO 800 HZ).

    (B) GXA DISCRETE SIGNALS ELECTRICAL SPECIFICATIONS ARE IN ACCORDANCE WITH ARINC SPECIFICATION 791/763 SECTION 2.9.6 AND 2.9.7, WITH MAXIMUM CONTROL VOLTAGE NOT EXCEEDING +36 VDC, GROUND (VALID) STATE DEFINED AS LESS THAN 3.5 VDC AND OPEN (INVALID) STATE DEFINED AS VOLTAGE LEVEL BETWEEN 18.5 TO 36 VDC OR RESISTANCE BETWEEN PIN AND AIRFRAME DC GROUND GREATER THAN 100 KΩ. THE MAXIMUM CURRENT FLOW IN THE STEADY STATE 'GROUND' STATE NOT TO EXCEED 20 MA.

16. EMPTY CAVITY CONTACTS ARE INSTALLED BUT NO ELECTRICAL CONNECTIONS.

17. P DENOTES TWISTED PAIR (TP). P DENOTES TWISTED SHIELDED PAIR (TSP). P P DENOTES SHIELDED TWISTED CABLE (2 PAIR).
    DENOTES OVERBRAID. DENOTES QUADRAX TERMINATION WITH STAR QUAD WIRING.

18. DENOTES CHASSIS GROUND. DENOTES RECTANGULAR WAVEGUIDE. DENOTES FLEX/TWIST WAVEGUIDE. DENOTES POWER CABLE

    END A IDENTIFIES CONNECTOR ROTATION OF WIRE WITH CLOCKWISE ROTATION: RED - GREEN - BLUE - YELLOW

    END B IDENTIFIES CONNECTOR ROTATION OF WIRE WITH CLOCKWISE ROTATION: RED - YELLOW - BLUE - GREEN

19. AIRPLANE PERSONALITY MODULE (APM)

    (A) CABLE LENGTH BETWEEN MODMAN AND APM SHALL NOT EXCEED 3 METERS.

    (B) RECOMMEND TO USE 0.164-32 UNC-2A CORROSION RESISTANT MOUNTING FASTENERS. MOUNTING SCREWS TORQUE SHOULD NOT EXCEED 25 IN-LBS.

    (C) APM RECEPTACLE A2J1 IS MIL-DTL-38999/20FB35PN, SERIES III, SHELL SIZE 11 (B) WITH INSERT 11-35 (13 PIN). MATES WITH D38999/26FB35SN OR EQUIVALENT.

    (D) APM DC BONDING RESISTANCE SHOULD NOT EXCEED 2.5 mΩ.

    (E) APM A2J1 CONNECTOR CONTACT ASSIGNMENTS SHOWN IN TABLE 1 (SHEET 8).

    (F) APM CAN OPERATE WITHOUT THE NEED OF ANY FORCED AIR COOLING.

    (G) APM BONDING RECOMMENDED THROUGH CONTACT BASE OF UNIT AND A BONDING CABLE.

    (H) RECOMMENDED TO USE ARINC664 COMPLIANT 2 SHIELDED TWISTED PAIR #24AWG (OR AEROSPACE GRADE SHIELDED CAT5/CAT5e MINIMUM) DATA BUS CABLE FOR APM TO MODMAN INTERCONNECT.

(CONTINUED ON SHEET 2)

E90400189-0001-1-C

Figure 2-33. JetWave™ System Interconnect Diagram - TMA (Sheet 1 of 10)

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NOTES (CONTINUED FROM SHEET 1):

20. MODEM MANAGER (MODMAN)

(A) LRU TO BE MOUNTED ONLY IN AN ARINC 600 TRAY WITH MATCHING CONNECTOR SCHEME.

(B) THE MODMAN USES A STANDARD ARINC SPECIFICATION 600, SIZE 2 CONNECTOR.
MATES WITH RADIALL NSXN2B875S00 OR EQUIVALENT.
THIS SINGLE RECEPTACLE INCLUDES THREE SEPARATE INSERTS (MODMAN A1J1-A, MODMAN A1J1-B, AND MODMAN A1J1-C).
(i) MODMAN A1J1-A : ARRANGEMENT Q11, SHELL SIZE 2 (11X SIZE 8 QUADRAX CAVITIES)CONNECTOR.
(ii) MODMAN A1J1-B : ARRANGEMENT 120Q2, SHELL SIZE 2 (118X #22 CONTACTS, 2 SIZE 8 QUADRAX CAVITIES) CONNECTOR.
(iii) MODMAN A1J1-C : ARRANGEMENT 12F5C2, SHELL SIZE 2 (4X #12 CONTACTS, 1X #16 CONTACT, 5X SIZE 16 OPTICAL CAVITIES, 2X SIZE 5 COAX CAVITIES). OPTICAL INTERFACES ARE NOT USED.

(C) MODMAN BONDING IS THROUGH CONTACT WITH THE BASE OF THE UNIT.

(D) DC BONDING RESISTANCE SHOULD NOT EXCEED 2.5 mΩ.

(E) MODMAN A1J1 CONNECTOR CONTACT ASSIGNMENTS SHOWN IN SHEET 7.

(F) MODMAN KEYING IS AS SHOWN BELOW.

	Receptacle (Modman)			Plug (Rack)		
Position	Left Post	Center Post	Right Post	Left Post	Center Post	Right Post
52	6	3	1	4	2	5

(G) PODD ETHERNET PA1, PODD ETHERNET PA2, PODD ETHERNET PA3 AND PODD ETHERNET PA4 ARE DEFINED AS PER ARINC 791 PART 1 ALTERNATE CONFIGURATION.

21. FOR TX-IF AND RX-IF COAXIAL CABLE ASSEMBLY BETWEEN MODMAN A1J1-C AND THE KRFU A4J5 & A4J6 :

(A) STRAIN RELIEF HEAT SHRINK SLEEVING OF LENGTH 0.5"±0.05" SHOULD BE PROVIDED TO PREVENT STRESS CONCENTRATION AT TX-IF AND RX-IF CABLE TERMINATIONS.

(B) OVERBRAID/SLEEVE JACKETING SHOULD BE USED FOR PROTECTION OF WIRING BETWEEN BULKHEAD INTERFACE A6J3B AND A6J4B AND KRFU A4J5/A4J6. OVERBRAID MAY BE CONNECTED VIA CONNECTOR SHIELD/HOUSING OR DIRECTLY TO HOUSING.

(C) COAXIAL CABLE WITH FOLLOWING SPECIFICATIONS RECOMMENDED FOR TX-IF AND RX-IF INTERCONNECTION BETWEEN MODMAN AND KRFU.
(i) THE MINIMUM CABLE INSERTION LOSS SHOULD BE 11 dB AT 950 MHz.
(ii) THE MAXIMUM CABLE INSERTION LOSS SHOULD NOT TO EXCEED 18 dB AT 1450 MHZ AND 21.2 dB AT 1950 MHz.
(iii) THE NOMINAL CHARACTERISTIC IMPEDANCE : 50 Ω ± 2 Ω AT IF (950-1950 MHz) AND REFERENCE (50 MHz) FREQUENCIES.
(iv) MAXIMUM VOLTAGE STANDING WAVE RATIO (VSWR), AS MEASURED AGAINST 50 Ω : 1.5:1 FROM 10 MHz TO 6 GHz.
(v) THE ISOLATION BETWEEN THE TX-IF CABLE AND THE RX-IF CABLE SHOULD BE A MINIMUM OF 120 dB AT 2150 MHz.
(vi) POWER HANDLING CAPABILITY : +5 dBM AT IF AND REFERENCE FREQUENCY RANGE (950-1950 MHz).
(vii) CABLE RUN ATTENUATION AT 50 MHz SHOULD NOT EXCEED 3.1 dB.
(viii) THE VARIATION IN CABLE LOSS BETWEEN TX-IF AND RX-IF COAX CABLES SHOULD NOT EXCEED 1 dB AT 1450 MHz.

(D) TX-IF CABLE SHOULD BE BLUE BANDED NEAR TNC/N TYPE CONNECTOR ENDS.
RX-IF CABLE SHOULD BE GREEN BANDED NEAR TNC CONNECTOR ENDS.

(E) RECOMMENDED TO USE 10.5 dB EQUALIZER IN TX-IF COAX CABLE INTERCONNECT AND 10 dB ATTENUATOR IN RX-IF COAX CABLE INTERCONNECT BETWEEN MODMAN A1J1-C AND BULKHEAD INTERFACE IF THE COAX INTERCONNECTS LOSS BETWEEN MODMAN AND KRFU IS LESS THAN 6.5 dB AT 950 MHz.

(F) RECOMMENDED TO USE 4.8 dB EQUALIZER IN TX-IF COAX CABLE INTERCONNECT AND 5 dB ATTENUATOR IN RX-IF COAX CABLE INTERCONNECT BETWEEN MODMAN A1J1-C AND BULKHEAD INTERFACE IF THE COAX INTERCONNECTS LOSS BETWEEN MODMAN AND KRFU IS GREATER THAN OR EQUAL TO 6.5 dB BUT LESS THAN 11 dB AT 950 MHz.

22. KA-BAND AIRCRAFT NETWORKING DATA UNIT (KANDU)

(A) KANDU RECEPTACLE A3J1 IS MIL-DTL-38999/20FD19PN, SERIES III, FLANGE MOUNT RECEPTACLE, INSERT 15-19, NORMAL KEYING, WITH 19 PIN-TYPE CONTACTS OF SIZE 20 AWG.
MATES WITH D38999/26FD19SN FOR AIRCRAFT INTERFACE.

(B) KANDU RECEPTACLE A3J2 IS MIL-DTL-38999/20FC4SN, SERIES III, FLANGE MOUNT RECEPTACLE, INSERT 13-4, NORMAL KEYING, WITH 4 SOCKET-TYPE CONTACTS OF SIZE 16 AWG.
MATES WITH D38999/26FC4PN FOR POWER OUTPUT.

22. KA-BAND AIRCRAFT NETWORKING DATA UNIT (KANDU)(CONTINUED)

(C) KANDU RECEPTACLE A3J3 IS MIL-DTL-38999/20FG35PN, SERIES III, FLANGE MOUNT RECEPTACLE, INSERT 21-35, NORMAL KEYING, WITH 79 PIN-TYPE CONTACTS OF SIZE 22 AWG.
MATES WITH D38999/26FG35SN FOR CONTROL INTERFACE.

(D) KANDU RECEPTACLE A3J4 IS TVPOORGQF-21-75P (AMPHENOL)/ EQUIVALENT.
MATES WITH TV06RQF-21-75S(AMPHENOL)OR EQUIVALENT FOR ETHERNET INTERFACE.

(E) MAXIMUM ROUND TRIP WIRING INTERCONNECTION RESISTANCE BETWEEN KANDU A3J2 AND OAE-TMA A5J2 SHOULD NOT EXCEED 0.684 Ω (CONSIDERING 20 AWG WIRE). FOR ANTENNA POWER DURING NORMAL OPERATION, THE MAXIMUM AVERAGE POWER REQUIREMENT IS 60 WATTS.

(F) KANDU BONDING TO THE AIRCRAFT SHOULD BE ACHIEVED THROUGH THE MOUNTING STRUCTURE (FASTENERS) AND KANDU A3J1-A.

(G) KANDU CONNECTOR CONTACT ASSIGNMENTS SHOWN IN TABLES 2, 3, 4 AND 5 (SHEET 8).

23. KA-BAND RADIO FREQUENCY UNIT (KRFU)

(A) KRFU RECEPTACLE A4J1 IS MIL-DTL-38999/20FC4PN, SERIES III, FLANGE MOUNT RECEPTACLE, INSERT 13-4, NORMAL KEYING, WITH 4 PIN-TYPE CONTACTS OF SIZE 16 AWG.
MATES WITH D38999/26FC4SN FOR POWER INPUT.

(B) KRFU RECEPTACLE A4J2 IS MIL-DTL-38999/20FC35PN, SERIES III, FLANGE MOUNT RECEPTACLE, INSERT 13-35, NORMAL KEYING, WITH 22 PIN-TYPE CONTACTS OF SIZE 22 AWG.
MATES WITH D38999/26FC35SN FOR CONTROL INTERFACE.

(C) KRFU RECEPTACLE A4J3 IS WR28 WAVEGUIDE, M3922/54-003.
MATES WITH M3922/59-005 THROUGH HOLE FLANGE TYPE WR-28 WAVEGUIDE FLANGE PER MIL-DTL-3922/54 (UG599/U) [0.112-40 UNC-2B] FOR RF-TX INTERFACE. REFER TO SDIM FOR WAVEGUIDE PLUMBING DETAILS.

(D) KRFU RECEPTACLE A4J4 IS WR42 WAVEGUIDE, M3922/54-001.
MATES WITH M3922/59-003 THROUGH HOLE FLANGE TYPE WR 42 WAVEGUIDE FLANGE PER MIL-DTL-3922/54 (UG595/U) [0.112-40 UNC-2B] FOR RF RX INTERFACE.

(E) RECOMMENDED TO USE WR42 TO 2.92MM WAVEGUIDE TO COAXIAL ADAPTOR CONNECTED AT KRFU A4J4 END.

(F) KRFU RECEPTACLE A4J5 IS TNC FEMALE PER MIL-C-87104/2.
MATES WITH TNC MALE PER MIL-C-87104/2 FOR TX-IF INTERFACE (LABELED BLUE).

(G) KRFU RECEPTACLE A4J6 IS TNC FEMALE PER MIL-C-87104/2.
MATES WITH TNC MALE PER MIL-C-87104/2 FOR RX-IF INTERFACE (LABELED GREEN).

(H) THE RECEIVE PATH INTERCONNECT LOSSES BETWEEN THE KRFU AND OAE-TMA SHOULD BE A MINIMUM OF 0.5 dB AND SHOULD NOT EXCEED 2 dB.

(I) RECOMMENDED TO USE BLUE COLOR CABLE SHRINK FOR THE TX-IF COAX CABLE AND GREEN COLOR CABLE SHRINK FOR THE RX-IF COAX CABLE.

(J) STRAIN RELIEF HEAT SHRINK SLEEVING OF LENGTH 0.5"±0.05" SHOULD BE PROVIDED TO PREVENT STRESS CONCENTRATION AT COAX CABLE TERMINATIONS. RECOMMEND TO USE BLUE COLOR CABLE SHRINK FOR THE TX-IF COAX CABLE AND GREEN COLOR CABLE SHRINK FOR THE RX-IF COAX CABLE.

(K) COAXIAL CABLE WITH FOLLOWING SPECIFICATIONS RECOMMENDED FOR RECEIVE PATH INTERCONNECTION BETWEEN WAVEGUIDE TO COAX ADAPTER AT KRFU A4J4 AND OAE-TMA A5J4
(i) THE FREQUENCY RANGE OF OPERATION : 19.2 GHz TO 21.2 GHz.
(ii) THE NOMINAL CHARACTERISTIC IMPEDANCE : 50 Ω.

(L) THE TRANSMIT PATH INTERCONNECT LOSSES BETWEEN THE KRFU AND OAE-TMA SHOULD NOT EXCEED 0.6 dB.

(M) THE TRANSMITTER FREQUENCY RANGE OF OPERATION : 29 GHz TO 30 GHz.

(N) KRFU POWER AND CONTROL CONNECTOR CONTACT ASSIGNMENTS SHOWN IN TABLES 6 AND 7 (SHEET 8).

(O) AWG 18 CABLE MAY BE USED FOR KRFU POWER FOR REDUCED VOLTAGE DROP IN CONSULTATION WITH AIRCRAFT MANUFACTURER.

(P) KRFU LRU IS CONDUCTION COOLED THROUGH BASE PLATE WITH THERMAL PAD. RECOMMENDED TO USE T-FLEX 560, 0.060 INCH THICK MATERIAL AS THERMAL PAD. TOTAL SURFACE AREA IS 105.2 SQ INCH.

(CONTINUED ON SHEET 3)

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Figure 2-33. JetWave™ System Interconnect Diagram - TMA (Sheet 2 of 10)

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NOTES (CONTINUED FROM SHEET 2):

23. KA-BAND RADIO FREQUENCY UNIT (KRFU)(CONTINUED)

(Q) KRFU LRU THERMAL PAD SHOULD BE COMPRESSED BY 25% (CORRESPONDING TO 30 PSI OF PRESSURE) DURING INSTALLATION TO FILL 0.045 INCH GAP.

(R) THE TRANSMIT AND RECEIVE INTERCONNECT ASSEMBLIES BETWEEN KRFU AND OAE-TMA SHOULD HAVE VSWR BETTER THAN OR EQUAL TO 1.5:1 OVER FREQUENCY RANGE OF OPERATION.

(S) KRFU BONDING TO THE AIRCRAFT SHOULD BE ACHIEVED THROUGH MOUNTING FASTENERS ON THE KRFU AND KRFU A4J1-C.

24. BULKHEAD INTERFACE

(A) RECOMMENDED TO USE MIL-DTL-38999 SERIES III, INSERT 19-35, NORMAL KEYING WITH 66 CONTACTS AS KANDU BULKHEAD CONTROL CONNECTOR FOR KANDU INTER-WIRING TO MODMAN IF KANDU IS INSTALLED IN AN UNPRESSURISED LOCATION INSIDE AIRCRAFT.

(B) RECOMMENDED TO USE MIL-DTL-38999 SERIES III, INSERT 19-35, NORMAL KEYING WITH 66 CONTACTS AS KANDU BULKHEAD CONTROL CONNECTOR FOR KANDU INTER-WIRING TO KRFU & OAE-TMA IF KANDU IS INSTALLED IN PRESSURIZED LOCATION INSIDE AIRCRAFT.

(C) RECOMMENDED TO USE MIL-DTL-38999 SERIES III, INSERT 17-8, NORMAL KEYING WITH 8 CONTACTS AS KANDU BULKHEAD POWER CONNECTOR IF 115 VAC POWER IS NOT PROVISIONED IN UNPRESSURISED LOCATION OF AIRCRAFT.

(D) RECOMMENDED TO USE TNC/N-TYPE HERMETICALLY SEALED BULKHEAD INTERFACE PER MIL-C-87104/2 FOR ROUTING TX-IF SIGNALS BETWEEN MODMAN AND KRFU. TX-IF INTERFACE TO BE LABELED BLUE.

(E) RECOMMENDED TO USE TNC HERMETICALLY SEALED BULKHEAD INTERFACE PER MIL-C-87104/2 FOR ROUTING RX-IF SIGNALS BETWEEN MODMAN AND KRFU. RX-IF INTERFACE TO BE LABELED GREEN.

(F) THE BULKHEAD INTERFACE DESIGN COULD BE EITHER JAM-NUT OR FLANGE IN CONSULTATION. IF FLANGE DESIGN CONNECTOR IS USED, IT SHOULD BE INSTALLED SUCH THAT THE FLANGE IS LOCATED ON THE PRESSURIZED AREA OF THE AIRCRAFT. IF JAM NUT CONNECTOR IS USED, JAM-NUT CONNECTOR SHOULD UTILIZE A LOCK WIRE.

(G) BULKHEAD INTERFACE SHOULD BE INSTALLED SUCH THAT RECEPTACLE PINS ARE ON THE PRESSURIZED AREA AND RECEPTACLE SOCKETS ARE ON UNPRESSURIZED SIDE OF THE AIRCRAFT.

(H) THE BULKHEAD INTERFACE CONNECTORS SHOULD BE ELECTRICALLY BONDED TO THE AIRCRAFT.

25. OUTSIDE ANTENNA EQUIPMENT - TAIL MOUNT ANTENNA (OAE-TMA)

(A) TAIL MOUNT OAE RECEPTACLE A5J2 IS MIL-DTL-38999 SERIES III, FLANGE MOUNT RECEPTACLE, INSERT 15-19, NORMAL KEYING, WITH 19 PIN-TYPE CONTACTS OF SIZE 20 AWG. MATES WITH D38999/26FD19SN FOR POWER AND CONTROL INTERFACE.

(B) TAIL MOUNT OAE RECEPTACLE A5J3 IS WR28 WAVEGUIDE, M3922/54-003. WITH M3922/59-005 THROUGH HOLE FLANGE TYPE WR28 WAVEGUIDE FLANGE PER MIL-DTL-3922/54 (UG599/U) MATES [0.112-40 UNC-2B] FOR RF TX INTERFACE. REFER TO SDIM FOR WAVEGUIDE PLUMBING DETAILS.

(C) TAIL MOUNT OAE RECEPTACLE A5J4 IS 2.92 MM COAX FEMALE.

(D) TAIL MOUNT OAE RECEPTACLE A5J2 CONTACT ASSIGNMENTS ARE SHOWN IN TABLE 8 (SHEET 9).

26. BULKHEAD INTERFACE POWER AND CONTROL CONNECTOR CONTACT ASSIGNMENTS SHOWN IN TABLES 9, 10 (SHEET 9) AND TABLE 11, 12 (SHEET 10).

27. IT IS RECOMMENDED NOT TO USE 'NOT CONNECTED' PINS IDENTIFIED IN THE INTERCONNECTION DIAGRAM FOR ANY OTHER PURPOSE. HONEYWELL TO BE CONSULTED FOR ANY SUCH REQUIREMENTS.

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Figure 2-33. JetWave™ System Interconnect Diagram - TMA (Sheet 3 of 10)

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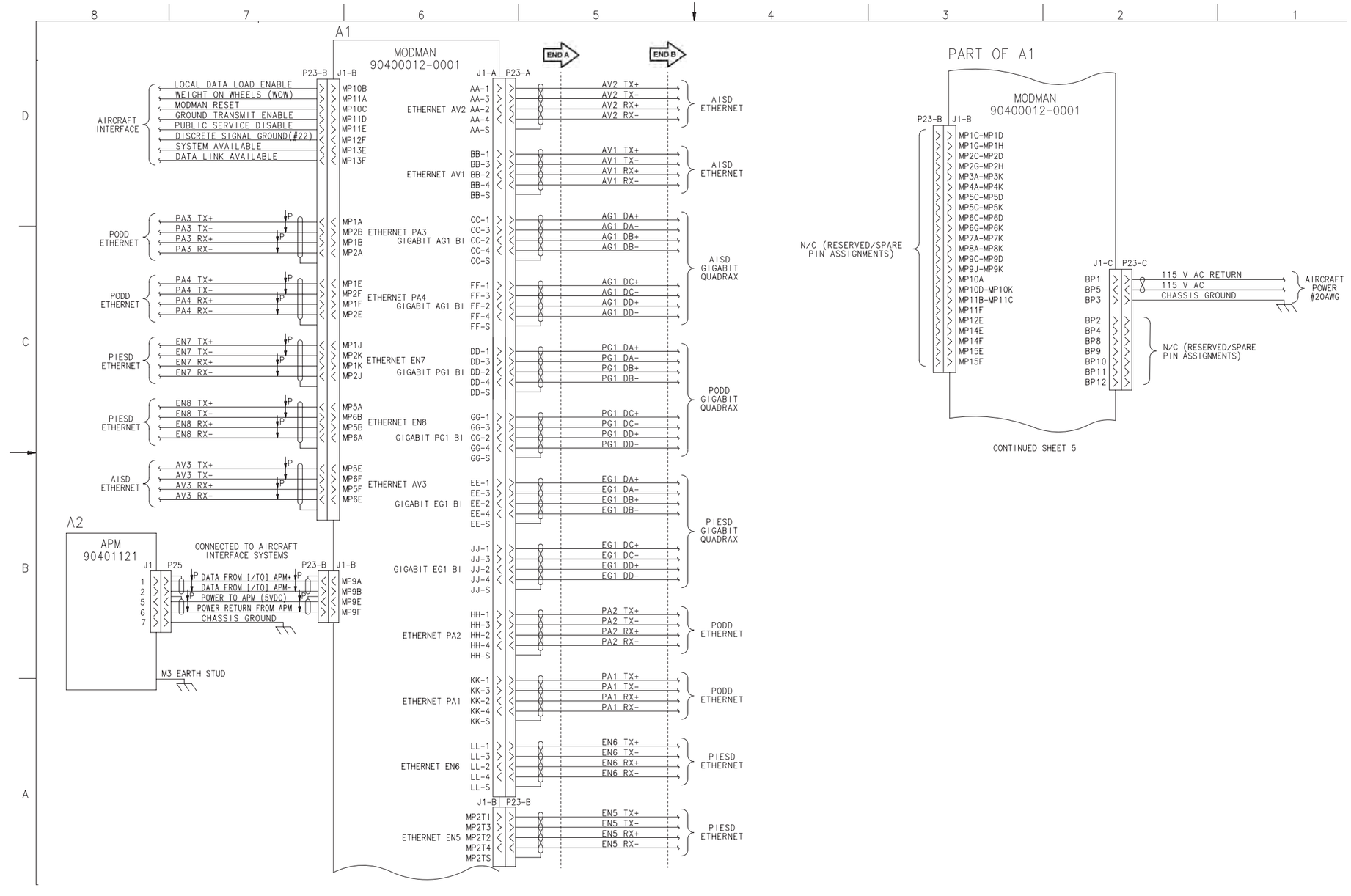

Figure 2-33. JetWave™ System Interconnect Diagram - TMA (Sheet 4 of 10)

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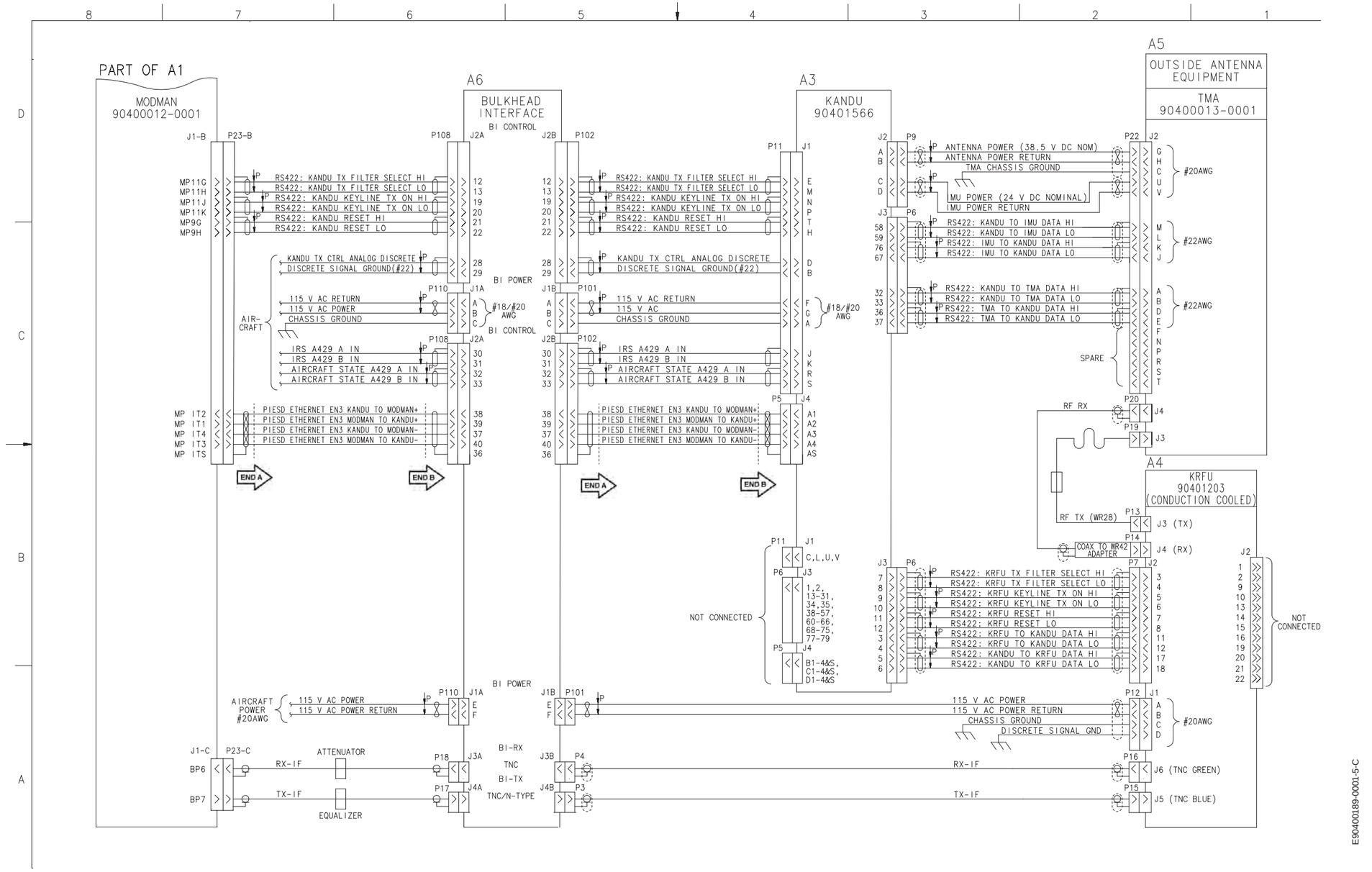

Figure 2-33. JetWave™ System Interconnect Diagram - TMA (Sheet 5 of 10)

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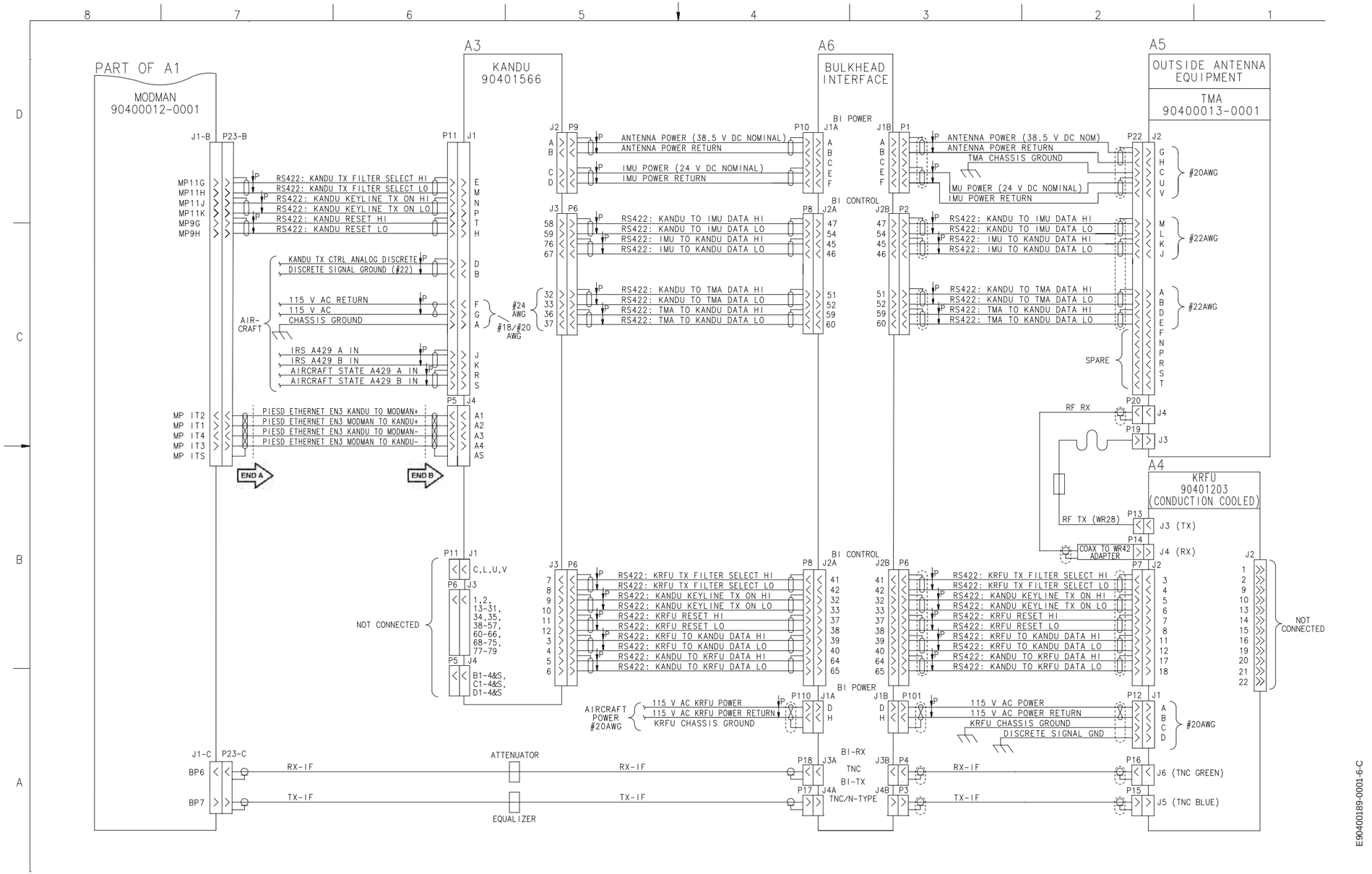

Figure 2-33. JetWave™ System Interconnect Diagram - TMA (Sheet 6 of 10)

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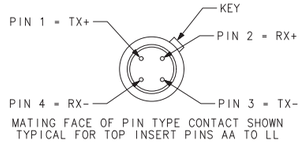
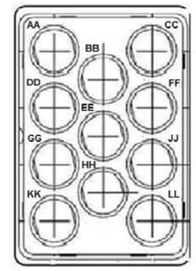


MATING FACE OF PIN TYPE CONTACT SHOWN
TYPICAL FOR TOP INSERT PINS AA TO LL

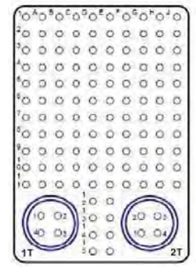
TOP INSERT

AA	AISD ETHERNET AV2		BB	AISD ETHERNET AV1		CC	AISD GIGABIT AG1			
DD	PODD GIGABIT PG1		EE	PIESD GIGABIT EG1		FF	AISD GIGABIT AG1			
GG	PODD GIGABIT PG1		HH	PODD ETHERNET PA2		JJ	PIESD GIGABIT EG1			
KK	PODD ETHERNET PA1					LL	PIESD ETHERNET EN6			



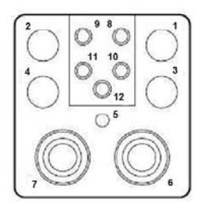
MIDDLE INSERT

	A	B	C	D	E	F	G	H	J	K
1	ETHERNET PA3 TX+	ETHERNET PA3 RX+	NOT CONNECTED	NOT CONNECTED	ETHERNET PA4 TX+	ETHERNET PA4 RX+	NOT CONNECTED	NOT CONNECTED	ETHERNET EN7 TX+	ETHERNET EN7 RX+
2	ETHERNET PA3 RX-	ETHERNET PA3 TX-	NOT CONNECTED	NOT CONNECTED	ETHERNET PA4 RX-	ETHERNET PA4 TX-	NOT CONNECTED	NOT CONNECTED	ETHERNET EN7 RX-	ETHERNET EN7 TX-
3	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED
4	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED
5	ETHERNET EN8 TX+	ETHERNET EN8 RX+	NOT CONNECTED	NOT CONNECTED	ETHERNET AV3 TX+	ETHERNET AV3 RX+	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED
6	ETHERNET EN8 RX-	ETHERNET EN8 TX-	NOT CONNECTED	NOT CONNECTED	ETHERNET AV3 RX-	ETHERNET AV3 TX-	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED
7	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED
8	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED
9	DATA FROM/TO APM+	DATA FROM/TO APM-	NOT CONNECTED	NOT CONNECTED	POWER TO APM (5V DC)	POWER RETURN FROM APM	RS422 : KANDU RESET HI	RS422 : KANDU RESET LO	NOT CONNECTED	NOT CONNECTED
10	NOT CONNECTED	LOCAL DATA LOAD ENABLE	MODMAN RESET	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED
11	WEIGHT ON WHEELS (WOW)	NOT CONNECTED	NOT CONNECTED	GROUND TRANSMIT ENABLE	PUBLIC SERVICE DISABLE	NOT CONNECTED	RS422: KANDU TX FILTER SELECT HI	RS422: KANDU TX FILTER SELECT LO	RS422 :KANDU KEYLINE TX ON HI	RS422: KANDU KEYLINE TX ON LO
12	1T PIESD ETHERNET EN3 MODMAN KANDU				NOT CONNECTED	DISCRETE SIGNAL GROUND	2T PIESD ETHERNET EN5 IFE			
13	1 TX+	2 RX+			SYSTEM AVAILABLE	DATA LINK AVAILABLE	2 RX+	3 TX-		
14	4 RX-	3 TX-			NOT CONNECTED	NOT CONNECTED	1 TX+	4 RX-		
15					NOT CONNECTED	NOT CONNECTED				



BOTTOM INSERT

2	NOT CONNECTED	9	NOT CONNECTED	NOT CONNECTED	8	1 115 VAC RETURN
4	NOT CONNECTED	11	NOT CONNECTED	NOT CONNECTED	10	3 CHASSIS GROUND
7	TX IF	12	NOT CONNECTED			6 RX IF
		5	115 VAC			



CONTACT ASSIGNMENTS FOR MODMAN A1J1
VIEW SHOWN ON MATING FACE

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Figure 2-33. JetWave™ System Interconnect Diagram - TMA (Sheet 7 of 10)

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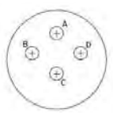
TABLE 1 : APM A2J1 CONNECTOR PIN ASSIGNMENTS	
PIN NUMBER	SIGNAL NAME
1	DATA FROM [/TO] APM +
2	DATA FROM [/TO] APM –
3	NOT CONNECTED
4	NOT CONNECTED
5	POWER TO APM (5 V DC)
6	POWER RETURN FROM APM
7	CHASSIS GROUND
8–13	NOT CONNECTED

TABLE 2: KANDU A3J1 CONNECTOR PIN ASSIGNMENTS	
PIN NO	PIN DESIGNATION
A	CHASSIS GROUND
B	DISCRETE SIGNAL GROUND
C	NOT CONNECTED
D	KANDU TX CONTROL ANALOG DISCRETE
E	RS422: KANDU TX FILTER SELECT HI
F	115 V AC RETURN
G	115 V AC
H	RS422: KANDU RESET LO
J	IRS A429 A IN
K	IRS A429 B IN
L	NOT CONNECTED
M	RS422: KANDU TX FILTER SELECT LO
N	RS422: KANDU KEYLINE TX ON HI
P	RS422: KANDU KEYLINE TX ON LO
R	AIRCRAFT STATE A429 A IN
S	AIRCRAFT STATE A429 B IN
T	RS422: KANDU RESET HI
U	NOT CONNECTED
V	NOT CONNECTED

TABLE 3: KANDU A3J2 CONNECTOR PIN ASSIGNMENTS	
PIN NO	PIN DESIGNATION
A	ANTENNA POWER (38.5 V DC NOMINAL)
B	ANTENNA POWER RETURN
C	IMU POWER (24 V DC NOMINAL)
D	IMU POWER RETURN



CONTACT LEGEND, EXCEPT KANDU J4 (QUADRAX INTERFACE) AND MODMAN (ARINC 600 CONTACTS)

16 AWG 20 AWG 22D AWG

TABLE 4 : KANDU A3J3 CONNECTOR PIN ASSIGNMENTS			
PIN NO	PIN DESIGNATION	PIN NO	PIN DESIGNATION
1	NOT CONNECTED	41	NOT CONNECTED
2	NOT CONNECTED	42	NOT CONNECTED
3	RS422: KRFU TO KANDU DATA HI	43	NOT CONNECTED
4	RS422: KRFU TO KANDU DATA LO	44	NOT CONNECTED
5	RS422: KANDU TO KRFU DATA HI	45	NOT CONNECTED
6	RS422: KANDU TO KRFU DATA LO	46	NOT CONNECTED
7	RS422: KRFU TX FILTER SELECT HI	47	NOT CONNECTED
8	RS422: KRFU TX FILTER SELECT LO	48	NOT CONNECTED
9	RS422: KRFU KEYLINE TX ON HI	49	NOT CONNECTED
10	RS422: KRFU KEYLINE TX ON LO	50	NOT CONNECTED
11	RS422: KRFU RESET HI	51	NOT CONNECTED
12	RS422: KRFU RESET LO	52	NOT CONNECTED
13	NOT CONNECTED	53	NOT CONNECTED
14	NOT CONNECTED	54	NOT CONNECTED
15	NOT CONNECTED	55	NOT CONNECTED
16	NOT CONNECTED	56	NOT CONNECTED
17	NOT CONNECTED	57	NOT CONNECTED
18	NOT CONNECTED	58	RS422: KANDU TO IMU DATA HI
19	NOT CONNECTED	59	RS422: KANDU TO IMU DATA LO
20	NOT CONNECTED	60	NOT CONNECTED
21	NOT CONNECTED	61	NOT CONNECTED
22	NOT CONNECTED	62	NOT CONNECTED
23	NOT CONNECTED	63	NOT CONNECTED
24	NOT CONNECTED	64	NOT CONNECTED
25	NOT CONNECTED	65	NOT CONNECTED
26	NOT CONNECTED	66	NOT CONNECTED
27	NOT CONNECTED	67	RS422: IMU TO KANDU DATA LO
28	NOT CONNECTED	68	NOT CONNECTED
29	NOT CONNECTED	69	NOT CONNECTED
30	NOT CONNECTED	70	NOT CONNECTED
31	NOT CONNECTED	71	NOT CONNECTED
32	RS422: KANDU TO TMA DATA HI	72	NOT CONNECTED
33	RS422: KANDU TO TMA DATA LO	73	NOT CONNECTED
34	NOT CONNECTED	74	NOT CONNECTED
35	NOT CONNECTED	75	NOT CONNECTED
36	RS422: TMA TO KANDU DATA HI	76	RS422: IMU TO KANDU DATA HI
37	RS422: TMA TO KANDU DATA LO	77	NOT CONNECTED
38	NOT CONNECTED	78	NOT CONNECTED
39	NOT CONNECTED	79	NOT CONNECTED
40	NOT CONNECTED		

TABLE 5 : KANDU A3J4 CONNECTOR PIN ASSIGNMENTS	
PIN NO	PIN DESIGNATION
A-1	PIESD ETHERNET EN3 KANDU TO MODMAN TX+
A-3	PIESD ETHERNET EN3 KANDU TO MODMAN TX–
A-2	PIESD ETHERNET EN3 MODMAN TO KANDU RX+
A-4	PIESD ETHERNET EN3 MODMAN TO KANDU RX–
A-S	PIESD ETHERNET EN3 SHIELD
B-1	NOT CONNECTED
B-3	NOT CONNECTED
B-2	NOT CONNECTED
B-4	NOT CONNECTED
B-S	NOT CONNECTED
C-1	NOT CONNECTED
C-3	NOT CONNECTED
C-2	NOT CONNECTED
C-4	NOT CONNECTED
C-S	NOT CONNECTED
D-1	NOT CONNECTED
D-3	NOT CONNECTED
D-2	NOT CONNECTED
D-4	NOT CONNECTED
D-S	NOT CONNECTED

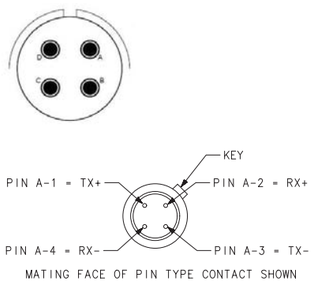


TABLE 6 : KRFU A4J1 CONNECTOR PIN ASSIGNMENTS	
PIN NO	PIN DESIGNATION
A	115 V AC POWER
B	115 V AC POWER RETURN
C	CHASSIS GROUND
D	DISCRETE SIGNAL GROUND

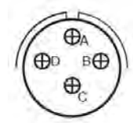


TABLE 7 : KRFU A4J2 CONNECTOR PIN ASSIGNMENTS	
PIN NO	PIN DESIGNATION
1	NOT CONNECTED
2	NOT CONNECTED
3	RS422: KRFU TX FILTER SELECT HI
4	RS422: KRFU TX FILTER SELECT LO
5	RS422: KRFU KEYLINE TX ON HI
6	RS422: KRFU KEYLINE TX ON LO
7	RS422: KRFU RESET HI
8	RS422: KRFU RESET LO
9	NOT CONNECTED
10	NOT CONNECTED
11	RS422: KRFU TO KANDU DATA HI
12	RS422: KRFU TO KANDU DATA LO
13	NOT CONNECTED
14	NOT CONNECTED
15	NOT CONNECTED
16	NOT CONNECTED
17	RS422: KANDU TO KRFU DATA HI
18	RS422: KANDU TO KRFU DATA LO
19	NOT CONNECTED
20	NOT CONNECTED
21	NOT CONNECTED
22	NOT CONNECTED

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Figure 2-33. JetWave™ System Interconnect Diagram - TMA (Sheet 8 of 10)

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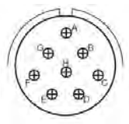
TABLE 8 : OAE TMA A5J2 CONNECTOR PIN ASSIGNMENTS	
PIN NO	PIN DESIGNATION
A	RS422: KANDU TO TMA DATA HI
B	RS422: KANDU TO TMA DATA LO
C	TMA CHASSIS GND
D	RS422: TMA TO KANDU DATA HI
E	RS422: TMA TO KANDU DATA LO
F	NOT CONNECTED
G	ANTENNA POWER (38.5 V DC NOMINAL)
H	ANTENNA POWER RETURN
J	RS422: IMU TO KANDU DATA LO
K	RS422: IMU TO KANDU DATA HI
L	RS422: KANDU TO IMU DATA LO
M	RS422: KANDU TO IMU DATA HI
N	NOT CONNECTED
P	NOT CONNECTED
R	NOT CONNECTED
S	NOT CONNECTED
T	NOT CONNECTED
U	IMU POWER (24 V DC NOMINAL)
V	IMU POWER RETURN

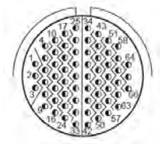
TABLE 9 : BULKHEAD INTERFACE - POWER A6J1A & A6J1B CONNECTOR PIN ASSIGNMENTS FOR KANDU INSTALLED OUTSIDE PRESSURIZED AREA (SHEET 5)	
PIN NO	PIN DESIGNATION
A	115 V AC KANDU POWER (FROM AIRCRAFT)
B	115 V AC KANDU POWER RETURN
C	CHASSIS GROUND
D	NOT CONNECTED
E	115 V AC KRFU POWER (FROM AIRCRAFT)
F	115 V AC KRFU POWER RETURN
G	NOT CONNECTED
H	NOT CONNECTED

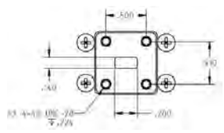


CONTACT LEGEND, EXCEPT KANDU J4 (QUADRAX INTERFACE) AND MODMAN (ARINC 600 CONTACTS)

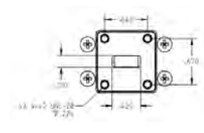
16 AWG 20 AWG 22D AWG

TABLE 10 : BULKHEAD INTERFACE - CONTROL A6J2A & A6J2B CONNECTOR PIN ASSIGNMENTS FOR KANDU INSTALLED OUTSIDE PRESSURIZED AREA (BULKHEAD INTERFACE BETWEEN MODMAN AND KANDU)(SHEET 5)			
PIN NO	PIN DESIGNATION	PIN NO	PIN DESIGNATION
1	NOT CONNECTED	34	NOT CONNECTED
2	NOT CONNECTED	35	NOT CONNECTED
3	NOT CONNECTED	36	ETHERNET SHIELD
4	NOT CONNECTED	37	PIESD ETHERNET EN3 KANDU TO MODMAN-
5	NOT CONNECTED	38	PIESD ETHERNET EN3 KANDU TO MODMAN+
6	NOT CONNECTED	39	PIESD ETHERNET EN3 MODMAN TO KANDU+
7	NOT CONNECTED	40	PIESD ETHERNET EN3 MODMAN TO KANDU-
8	NOT CONNECTED	41	NOT CONNECTED
9	NOT CONNECTED	42	NOT CONNECTED
10	NOT CONNECTED	43	NOT CONNECTED
11	NOT CONNECTED	44	NOT CONNECTED
12	RS422: KANDU TX FILTER SELECT HI	45	NOT CONNECTED
13	RS422: KANDU TX FILTER SELECT LO	46	NOT CONNECTED
14	NOT CONNECTED	47	NOT CONNECTED
15	NOT CONNECTED	48	NOT CONNECTED
16	NOT CONNECTED	49	NOT CONNECTED
17	NOT CONNECTED	50	NOT CONNECTED
18	NOT CONNECTED	51	NOT CONNECTED
19	RS422: KANDU KEYLINE TX ON HI	52	NOT CONNECTED
20	RS422: KANDU KEYLINE TX ON LO	53	NOT CONNECTED
21	RS422: KANDU RESET HI	54	NOT CONNECTED
22	RS422: KANDU RESET LO	55	NOT CONNECTED
23	NOT CONNECTED	56	NOT CONNECTED
24	NOT CONNECTED	57	NOT CONNECTED
25	NOT CONNECTED	58	NOT CONNECTED
26	NOT CONNECTED	59	NOT CONNECTED
27	NOT CONNECTED	60	NOT CONNECTED
28	KANDU TX CONTROL ANALOG DISCRETE	61	NOT CONNECTED
29	DISCRETE SIGNAL GROUND	62	NOT CONNECTED
30	IRS A429 A IN	63	NOT CONNECTED
31	IRS A429 B IN	64	NOT CONNECTED
32	AIRCRAFT STATE A429 A IN	65	NOT CONNECTED
33	AIRCRAFT STATE A429 B IN	66	NOT CONNECTED

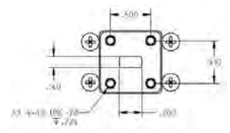




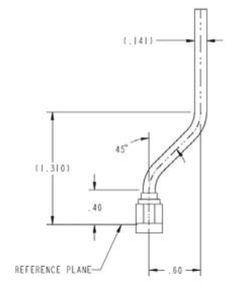
MATING FACE OF KRFU A4J3
(DIMENSION ARE IN INCHES)



MATING FACE OF KRFU A4J4
(DIMENSION ARE IN INCHES)



MATING FACE OF OAE-TMA A5J3
(DIMENSION ARE IN INCHES)



MATING FACE OF OAE-TMA A5J4
(DIMENSION ARE IN INCHES)

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Figure 2-33. JetWave™ System Interconnect Diagram - TMA (Sheet 9 of 10)

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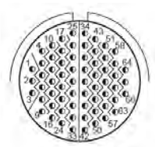
TABLE 11 : BULKHEAD INTERFACE – POWER A6J1A & A6J1B CONNECTOR PIN ASSIGNMENTS FOR KANDU INSTALLED INSIDE PRESSURIZED AREA (SHEET 6)	
PIN NO	PIN DESIGNATION
A	ANTENNA POWER (38.5 V DC NOM)
B	ANTENNA POWER RETURN
C	TMA CHASSIS GROUND
D	115 V AC KRFU POWER (FROM AIRCRAFT)
E	IMU POWER (24 V DC NOMINAL)
F	IMU POWER RETURN
G	NOT CONNECTED
H	115 V AC KRFU POWER RETURN

TABLE 12 : BULKHEAD INTERFACE – CONTROL A6J2A & A6J2B CONNECTOR PIN ASSIGNMENTS FOR KANDU INSTALLED INSIDE PRESSURIZED AREA (BULKHEAD INTERFACE BETWEEN KANDU AND KRFU & OAE_TMA)(SHEET 6)			
PIN NO	PIN DESIGNATION	PIN NO	PIN DESIGNATION
1	NOT CONNECTED	34	NOT CONNECTED
2	NOT CONNECTED	35	NOT CONNECTED
3	NOT CONNECTED	36	NOT CONNECTED
4	NOT CONNECTED	37	RS422: KRFU RESET HI
5	NOT CONNECTED	38	RS422: KRFU RESET LO
6	NOT CONNECTED	39	RS422: KRFU TO KANDU DATA HI
7	NOT CONNECTED	40	RS422: KRFU TO KANDU DATA LO
8	NOT CONNECTED	41	RS422: KRFU TX FILTER SELECT HI
9	NOT CONNECTED	42	RS422: KRFU TX FILTER SELECT LO
10	NOT CONNECTED	43	NOT CONNECTED
11	NOT CONNECTED	44	NOT CONNECTED
12	NOT CONNECTED	45	RS422: IMU TO KANDU DATA HI
13	NOT CONNECTED	46	RS422: IMU TO KANDU DATA LO
14	NOT CONNECTED	47	RS422: KANDU TO IMU DATA HI
15	NOT CONNECTED	48	NOT CONNECTED
16	NOT CONNECTED	49	NOT CONNECTED
17	NOT CONNECTED	50	NOT CONNECTED
18	NOT CONNECTED	51	RS422: KANDU TO TMA DATA HI
19	NOT CONNECTED	52	RS422: KANDU TO TMA DATA LO
20	NOT CONNECTED	53	NOT CONNECTED
21	NOT CONNECTED	54	RS422: KANDU TO IMU DATA LO
22	NOT CONNECTED	55	NOT CONNECTED
23	SIGNAL GROUND	56	NOT CONNECTED
24	NOT CONNECTED	57	NOT CONNECTED
25	NOT CONNECTED	58	NOT CONNECTED
26	NOT CONNECTED	59	RS422: TMA TO KANDU DATA HI
27	NOT CONNECTED	60	RS422: TMA TO KANDU DATA LO
28	NOT CONNECTED	61	NOT CONNECTED
29	NOT CONNECTED	62	NOT CONNECTED
30	NOT CONNECTED	63	NOT CONNECTED
31	NOT CONNECTED	64	RS422: KANDU TO KRFU DATA HI
32	RS422: KRFU KEYLINE TX ON HI	65	RS422: KANDU TO KRFU DATA LO
33	RS422: KRFU KEYLINE TX ON LO	66	NOT CONNECTED



CONTACT LEGEND, EXCEPT KANDU J4 (QUADRAX INTERFACE) AND MODMAN (ARINC 600 CONTACTS)

16 AWG 20 AWG 22D AWG

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Figure 2-33. JetWave™ System Interconnect Diagram - TMA (Sheet 10 of 10)

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