995611.XI CABLE ASSEMBLY, BT REVERSE POLARITY

NOTES

1.0 CHARACTERISTICS: (UNLESS OTHERWISE SPECIFIED)
- 1.1. GENERAL:
  - 1.1.1. PARTS MUST BE CLEAN AND FREE OF ALL FOREIGN MATTER.
  - 1.1.2. PACKAGING FOR SHIPMENT: PARTS MUST BE PACKAGED TO PREVENT DAMAGE DURING SHIPMENT. PACKAGING DESIGN MUST BE APPROVED BY NSN BEFORE PROCEEDING WITH PRODUCTION RUN OF PARTS.
  - 1.1.3. SAMPLE PARTS MUST BE APPROVED BY NSN BEFORE PROCEEDING WITH PRODUCTION RUN.
  - 1.1.4. A REFERENCE DIMENSION (X.XX) IS A DIMENSION WITHOUT TOLERANCE AND IS USED FOR INFORMATION PURPOSES ONLY.
  - 1.1.5. ALL DIMENSIONS SHOWN ACROSS A CENTERLINE SHALL BE CENTRALIZED WITHIN ONE HALF THEIR TOTAL TOLERANCE.
  - 1.1.6. A CRITICAL DIMENSION IS DENOTED WITH A BOX-X SYMBOL [X].
  - 1.1.7. ALL WIRING, SLEEVING, AND TUBING TO BE UL RECOGNIZED COMPONENTS.
  - 1.1.8. THE OVERALL CABLE ASSEMBLY SHALL BE MANUFACTURED TO COMPLY WITH UL TRACEABILITY REQUIREMENTS PER WIRING HARNESS (CATEGORY ZPFW2) AND/OR PROCESS WIRE CATEGORIES (ZKLU, ZKLU2, ZKLU7, AND ZKLU8 (AS APPLICABLE PER ASSEMBLY). THE CABLE ASSEMBLY MAY BE SUBJECT TO A UL END-PRODUCT FOLLOW-UP SERVICES INSPECTION.
- 1.2. ENVIRONMENTAL:
  - 1.2.1. OPERATING TEMPERATURE RANGE: -40°C TO +85°C.
  - 1.2.2. STORAGE TEMPERATURE RANGE: -40°C TO +85°C.
  - 1.2.3. HUMIDITY RANGE: 10% TO 95% RH.
  - 1.2.4. FLAME RESISTANCE: ALL COMPONENTS SHALL BE UL 94V-2 OR BETTER. EXEMPT FROM THIS REQUIREMENT ARE PVC, TFE, PTFE, FEP AND NEOPRENE INSULATION ON WIRING. CABLE TIES, HEAT SHRINK, AND LABELS ARE ALSO EXEMPT FROM THIS REQUIREMENT.
- 1.3. MECHANICAL:
  - 1.3.1. CABLE: SEE TABLE 2.
  - 1.3.2. CONNECTORS:
    - 1.3.2.1. CONNECTOR A: SEE TABLE 1.
    - 1.3.2.2. CONNECTOR B: SEE TABLE 1. THIS CONNECTOR WILL BE EXPOSED TO THE ENVIRONMENT AND MUST BE IP67 RATED WHEN MATED. THE MATERIALS AND PLATING MUST BE CAPABLE OF WITHSTANDING A 30-DAYS SALT FOG TEST PER ASTM B117-03
  - 1.3.3. HEAT SHRINK TUBING TO BE FLAME RESISTANT, FLEXIBLE, HEAT SHRINKABLE POLYOLEFIN, PER MIL-DTL-23053/5C - CLASS 1, OR APPROVED AND QUALIFIED EQUIVALENT. TUBING MUST BE TIGHT FITTING AND IMMOVABLE AFTER SHRINKING.
  - 1.3.4. MARKING:
    - 1.3.4.1. NSN CODE, PART REVISION, MANUFACTURE DATE CODE (WK/YR), AND VENDOR ID MUST BE PERMANENTLY AND LEGIBLY MARKED IN AREA SHOWN. REVISION LABELED MUST REFLECT CURRENT PART REVISION AT TIME OF MANUFACTURE. CHARACTERS MUST BE 2.0MM TO 4.0MM HIGH.
  - 1.3.5. CONNECTORS AND CABLES TO BE ASSEMBLED AND TERMINATED IN COMPLIANCE WITH CONNECTOR MANUFACTURER'S RECOMMENDATIONS.
  - 1.3.6. ALL CRIMPED CONNECTORS SHALL MEET PULL TEST AND CRIMP HEIGHT REQUIREMENTS OF THE CONNECTOR MANUFACTURER'S SPECIFICATIONS.
  - 1.3.7. WORKMANSHIP: THE FOLLOWING CONDITIONS WILL BE CONSIDERED WORKMANSHIP DEFICIENCIES OR DEFECTS AND ARE NOT ACCEPTABLE FOR ANY PRODUCTION SHIPMENT.
    - 1.3.7.1. INSULATION THAT IS BURNED, DAMAGED, OR MISSING (EXCLUDING THERMALLY STRIPPED SECTIONS).
    - 1.3.7.2. INSULATION THAT IS STRIPPED BACK IN A MANNER THAT ALLOWS THE CONDUCTOR OR SHIELD TO BE VISIBLE.
    - 1.3.7.3. INSULATION THAT IS NOT STRIPPED BACK IN A MANNER TO AVOID BEING INCLUDED IN THE SOLDER OR CRIMP AREA.
    - 1.3.7.4. CRIMP CONNECTORS THAT ARE LOOSE, OR EXHIBIT RELATIVE MOTION BETWEEN THE CONNECTOR AND THE CABLE.
  - 1.3.8. ALL CABLE ASSEMBLIES ARE TO BE SUPPLIED WITH AN IP50 RATED DUST CAP INSTALLED ON CONNECTOR "B".
- 1.4. ELECTRICAL:
  - * [X] 1.4.1. RETURN LOSS: SEE TABLE 1.
  - * [X] 1.4.2. INSERTION LOSS: SEE TABLE 1.
  - 1.4.3. TEST PROCEDURE: SAMPLE TESTING. SAMPLE TESTING FOR NOTES 1.4.1. AND 1.4.2. PER 1.4.3.1. IS REQUIRED.
    - 1.4.3.1. THE SUPPLIER IS TO MEASURE AND NOTE THE INSERTION LOSS AND VSWR ON EVERY TENTH ASSSEMBLY AND DETERMINE THE RUNNING Cpk LEVEL. IF THE Cpk IS LESS THAN 1.5, THE SUPPLIER WILL PERFORM 100% TESTING ON THE PREVIOUS NINE UNITS. THEN THE SUPPLIER MUST RESOLVE THE CABLE PERFORMANCE ISSUE AND PROCEED AS PREVIOUSLY DESCRIBED. ALL TESTED CABLES MUST MEET THE SPECIFICATIONS IN 1.4.1. AND 1.4.2.

2.0. QUALITY ASSURANCE PROVISIONS.
- 2.1. IT IS THE SUPPLIER'S RESPONSIBILITY TO SUPPLY A CERTIFICATE OF COMPLIANCE (COC) CERTIFYING THAT THE MATERIALS AND FINISHES USED IN THE PART MEET THE PRINT REQUIREMENTS. THE SUPPLIER WILL FURNISH NSN WITH A COC UPON REQUEST.
- 2.2. CONTINUITY: SUPPLIER MUST 100% TEST CABLES FOR DC CONTINUITY.

3.0. EXCEPTIONS: NO CHANGE SHALL BE ALLOWED ON PRODUCTION MATERIAL REGARDLESS OF WHETHER SUCH CHANGE AFFECTS REQUIREMENTS SPECIFIED, WITHOUT PRIOR WRITTEN APPROVAL FROM NSN.

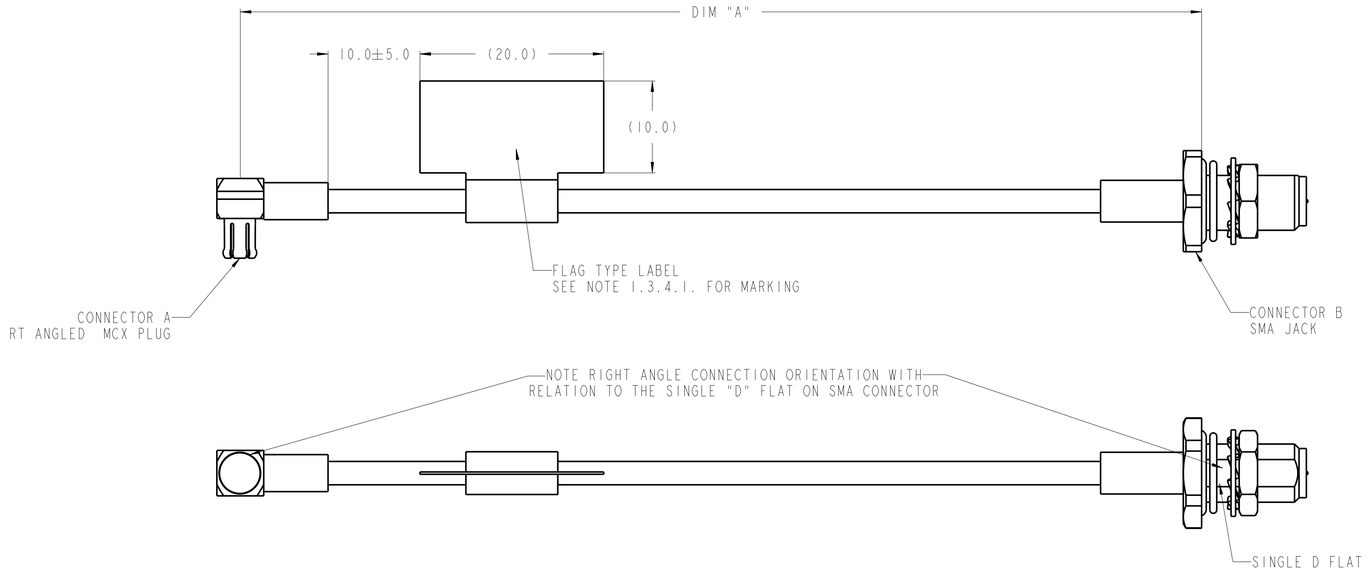
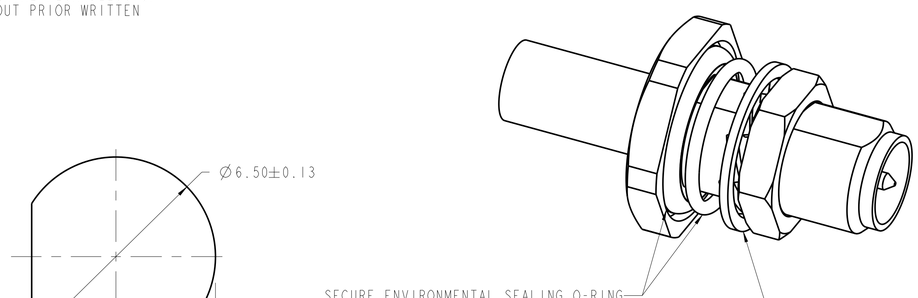
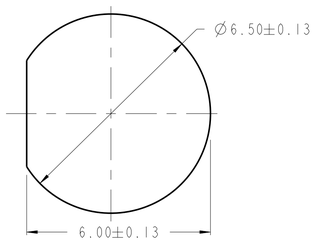


TABLE 1 : PART SPECIFICATION						
NSN P/N	CONNECTOR A.	CONNECTOR B.	CABLE	DIM A ±5.0MM	INSERTION LOSS @2.4GHz	RETURN LOSS @2.4GHz
995611.XI	RADIALL P/N: R113.183.106 ROSENBERGER P/N: 29S211-303N5	RADIALL P/N: R300.124.270 ROSENBERGER P/N: 32RK642-103N5	W	145.0	0.44dB MAX.	>18dB TYP.

TABLE 2 : CABLE SPECIFICATION							
CABLE	EQUIVALENT	SUPPLIER	SUPPLIER P/N	IMP.	MAX ∅	MIN BEND RAD	STYLE
W	DOUBLE SHIELDED RG316 DX	RADIALL	C291.217.020	50Ω	3.15	10.0 MM	BRAIDED
		ROSENBERGER	RG 316 U/D	50Ω	3.0	15.0 MM	BRAIDED



CONNECTOR B DETAILS
SCALE 6:1



PANEL CUTOUT DETAILS
SCALE 10:1

UNITS mm	STANDARD TOLERANCES
INTERPRET DIM AND TOL PER ASME Y14.5M-1994	
6 SIGMA TOLERANCE UNLESS OTHERWISE SPECIFIED	
1 PLACE	X.X ±0.3
2 PLACE	X.XX ±0.13
ANGLE DIM	X° ±1.0
REFERENCE	(X.X) NONE

REV.	DATE	DESCRIPTION	APPROVED
X1	09/05/2013	INITIAL RELEASE	D.WARYCH

ARGON
PDF

SEE TOLERANCE BLOCK

MASS: g
Volume: dm³

995611 | X1 | REF: 133-135948.X1 | SI:

PREP	YATHISH	09/05/2013
CHK	J.WESTFALL	09/05/2013
APP	D.WARYCH	09/05/2013

Scale(s): 3:1

133-135948 X1

Dimension in mm

CABLE ASSEMBLY, BT REVERSE POLARITY

nsn

Sheet(s): 1 / 1

MDL: 10708716 -.3 995611 DRW: 10708715 -.3 133-135948 Pro/ENGINEER Size: A1