

INCH-POUND

MIL-DTL-28754/100A
29 December 2015
SUPERSEDING
MIL-C-28754/100(SH)
31 October 1989

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, MODULAR, TYPE IV,
CONNECTOR, 200 CONTACT, CENTER

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-C-28754.

AMSC N/A

FSC 5935



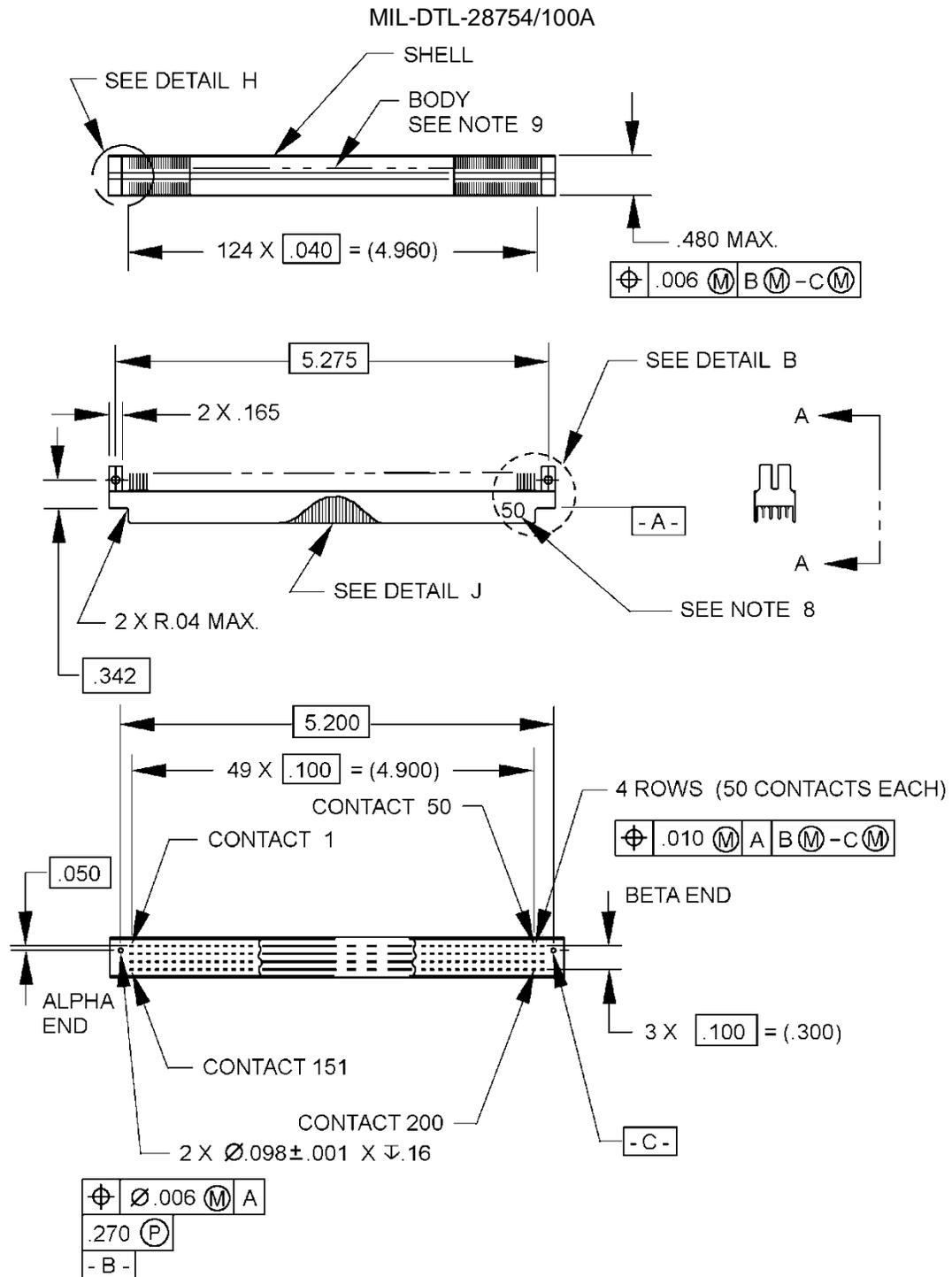
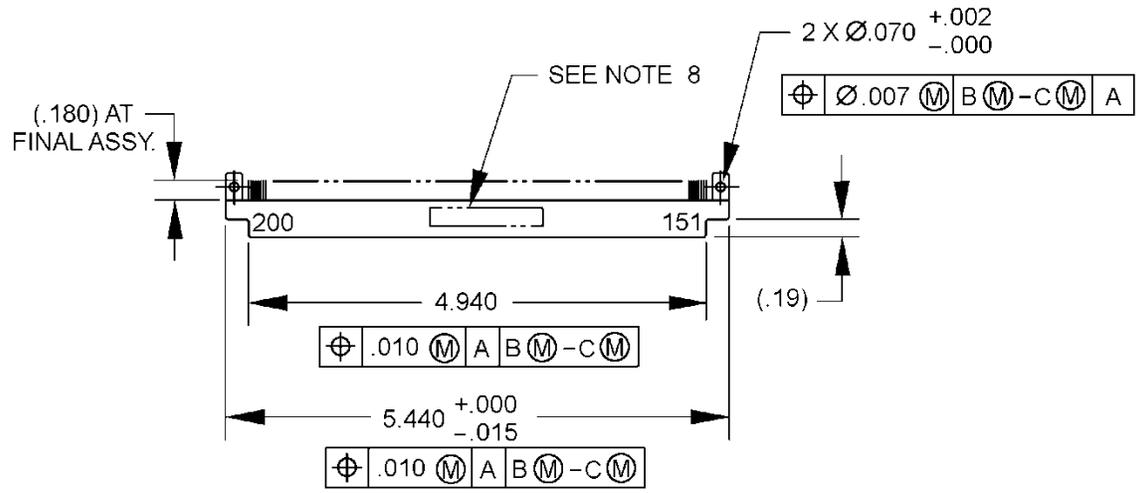


FIGURE 1. Dimensions and configurations.

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VIEW A-A

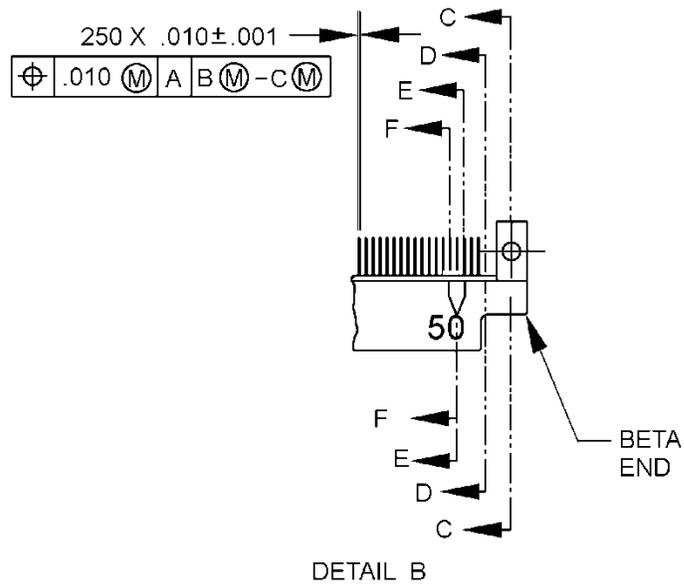


FIGURE 1. Dimensions and configurations – Continued.

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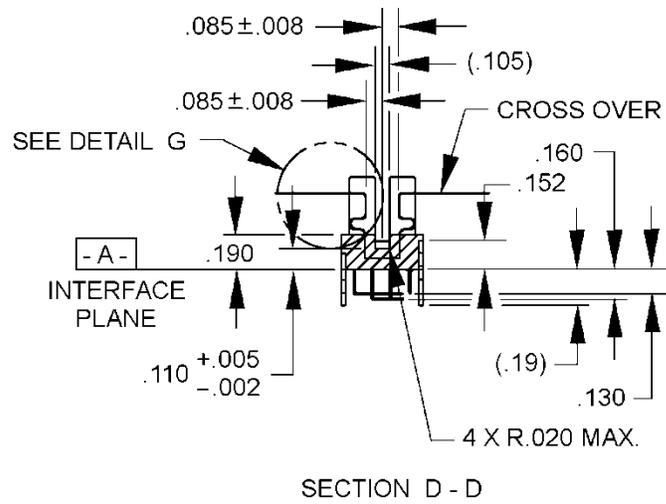
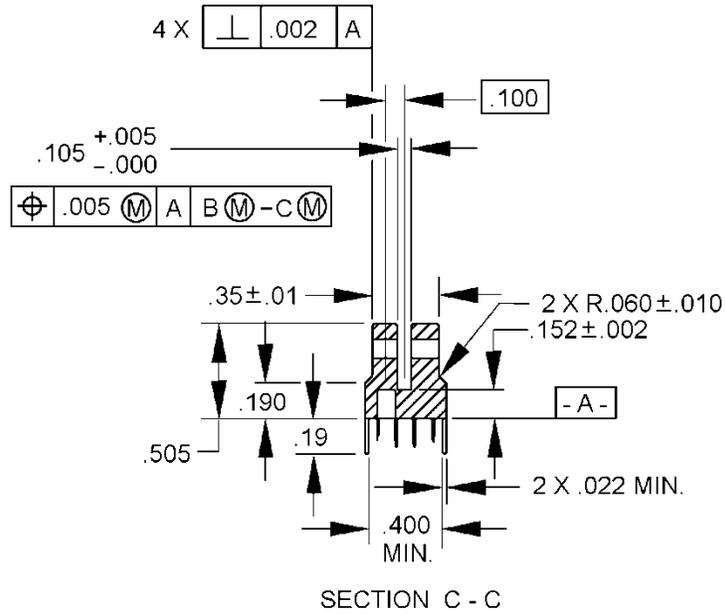


FIGURE 1. Dimensions and configurations – Continued.

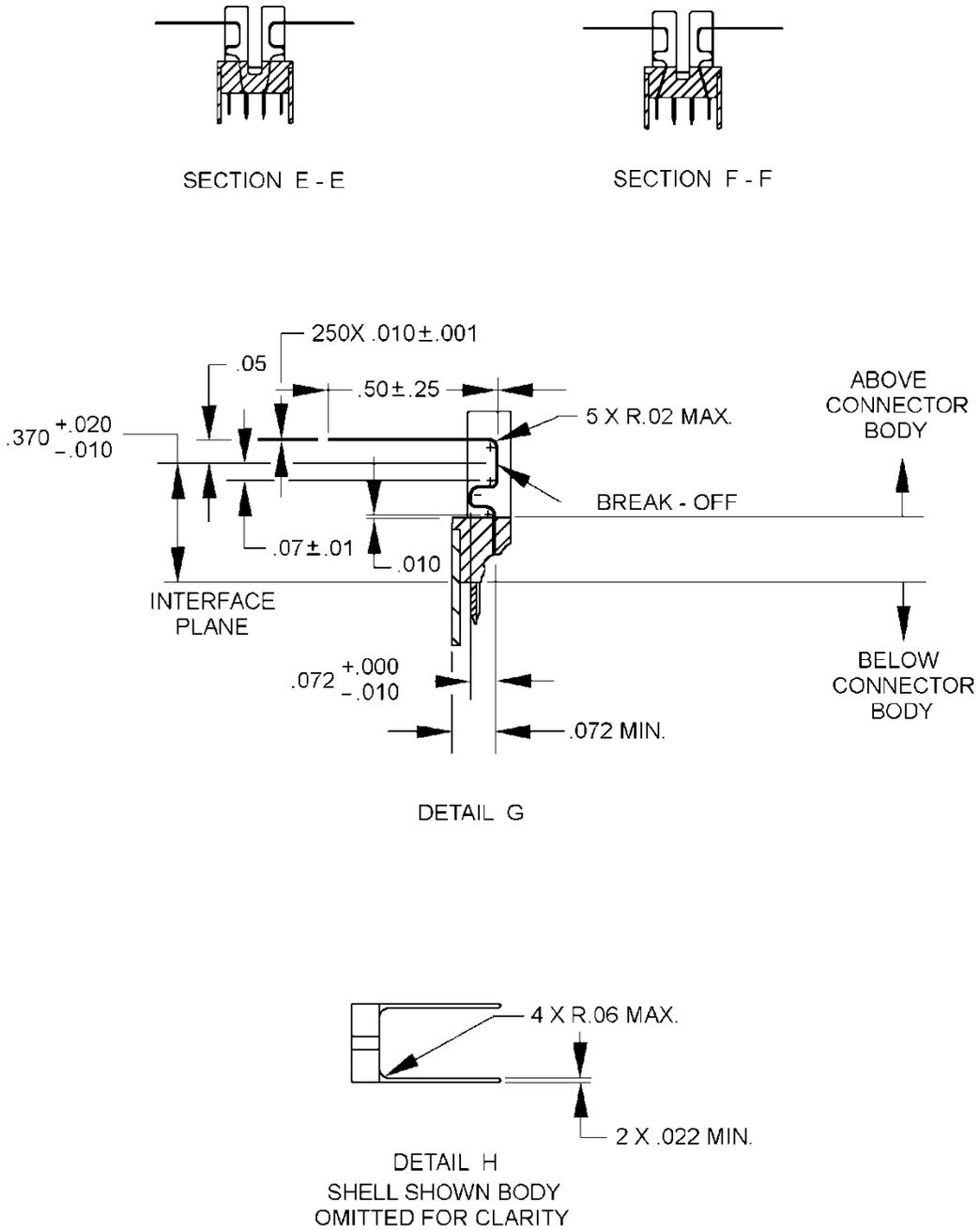


FIGURE 1. Dimensions and configurations – Continued.

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| Inches | mm | Inches | mm | Inches | mm | Inches | mm |
|--------|-------|--------|-------|--------|-------|--------|---------|
| 0.001 | 0.025 | 0.040 | 1.016 | 0.130 | 3.302 | 0.400 | 10.160 |
| 0.002 | 0.051 | 0.050 | 1.270 | 0.0152 | 3.861 | 0.500 | 12.700 |
| 0.003 | 0.076 | 0.060 | 1.524 | 0.160 | 4.064 | 0.505 | 12.827 |
| 0.005 | 0.127 | 0.070 | 1.778 | 0.165 | 4.191 | 4.940 | 125.476 |
| 0.006 | 0.152 | 0.072 | 1.829 | 0.190 | 4.826 | 5.200 | 132.080 |
| 0.007 | 0.178 | 0.083 | 2.108 | 0.225 | 5.715 | 5.275 | 133.985 |
| 0.008 | 0.203 | 0.085 | 2.159 | 0.250 | 6.350 | 5.440 | 138.176 |
| 0.010 | 0.254 | 0.098 | 2.489 | 0.342 | 8.687 | | |
| 0.020 | 0.508 | 0.100 | 2.540 | 0.350 | 8.890 | | |
| 0.022 | 0.559 | 0.110 | 2.794 | 0.370 | 9.398 | | |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only and are based upon 1.00 inch = 25.40 mm.
3. Unless otherwise specified, tolerances are ± 0.005 (0.127 mm) inch for three place decimals, ± 0.01 (0.25 mm) inch for two place decimals and $\pm 5^\circ$ for angles.
4. The carrier strip shall remain attached to the contact tails to facilitate shipping. The conductors shall be scored or thinned at the point indicated to facilitate removal at final assembly, and shall break off in 5 ± 2 flexure cycles or $\pm 45^\circ$ from nominal. The carrier strip is not required to be continuous.
5. Dimensional limits apply after plating.
6. Flash around blade contacts not to exceed 0.010 (0.254 mm) inch from the surface of the insulator and shall be firmly attached.
7. Crossover contacts indicated by "J" in the contact assignment diagram are depicted in section D-D.
8. Contact numbers 1, 50, 151 and 200 shall be marked in contrasting color on the contact shield in characters in 0.06 high using epoxy ink in accordance with A-A-56032. Mark part number, manufacturer's CAGE number and date code in this area with 0.06 (1.52 mm) inch high characters using contrasting color ink, in accordance with A-A-56032. All marking shall be permanently and legibly marked in accordance with MIL-STD-1285.
9. The connector body shall be made of 5 identical sections, each containing 50 contacts.
10. Plating defects on the carrier strip above the break-off line are acceptable, provided that inspection testing of the connector is not effected.

FIGURE 1. Dimensions and configurations – Continued.

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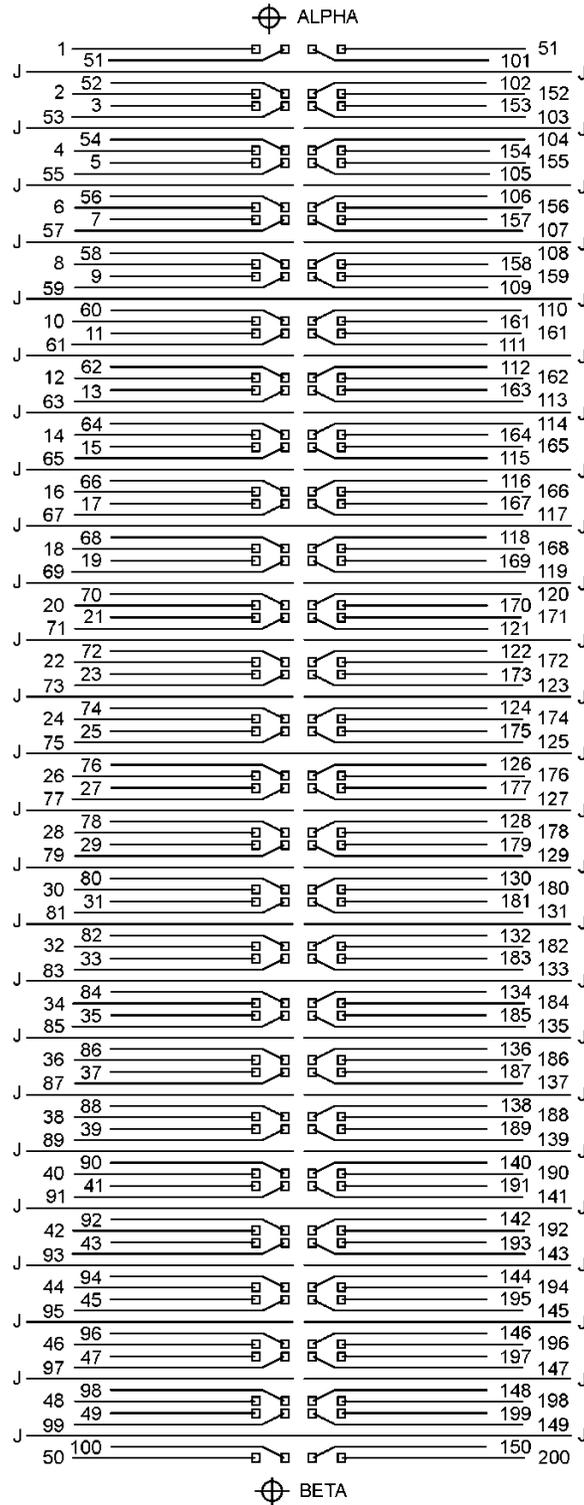


FIGURE 2. Contact assignment diagram.

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REQUIREMENTS:

Dimensions and configurations: See figures 1 and 2.

Materials and finishes:

Contacts: The contacts shall be brass, alloy UNS No. C26000 in accordance with ASTM B36/B36M, temper 1/2 hard. The contacts shall be finished as follows:

Above the connector body, the contacts shall be finished by the following steps:

1. Steps 1, 2, 4, 5 and 7 – SAE-AMS--P-81728 cleanliness.
2. Step 3 – Copper plate in accordance with SAE AMS2418, 0.0001 inch (0.0025 mm) minimum.
3. Step 6 – Tin-lead plate (90% Sn – 10% Pb), SAE-AMS-P-81728, 0.0003 – 0.0005 inch (0.0076 – 0.0127 mm) thickness.
4. Step 8 – Embrittlement relief in accordance with SAE-AMS-P-81728.
5. Step 9 – Form the contacts.
6. Step 10 – Reflow in hot (235°C) peanut oil, 30 seconds. Quality assurance of SAE-AMS-P-81728 shall apply. No indication of dewetting or poor solderability shall be allowed.
7. Step 11 – Rinse in mineral spirits, MIL-PRF-680.
8. Step 12 – Selectively coat the area indicated on the drawing with solder, in accordance with J-STD-006, SN60 or SN63, to a thickness of 0.0005 – 0.003 inch (0.0127 – 0.076 mm). Use flux, in accordance with J-STD-004, type RMA, as required.

The connector body shall be molded, plastic, diallylphthalate in accordance with ASTM D5948, type GDI-30F or type SDG-F.

The connector shell shall be aluminum alloy 6061, temper T6 in accordance with SAE AMS4150 or temper T6510 or T6511 in accordance with SAE AMS4173.

Aluminum alloy shall be anodic coating, MIL-A-8625, type III, class 2, dyed black. The inside surface of the 0.098 (2.489 mm) diameter hole shall be 90% free of anodize. The anodic coating shall be 0.0020 plus or minus 0.0005 thick on all flat surfaces. Corners shall have a slight radius to facilitate coverage.

Solderability: In accordance with MIL-C-28754.

ELECTRICAL REQUIREMENTS:

Dielectric withstanding voltage: The connector shall meet the requirements of test procedure EIA-364-20, method B, test condition I for 350 VAC (RMS) 60 Hz, or 500 VDC.

Low level signal contact resistance: Voltage drop shall not exceed 1.2 millivolts. Wire size is not applicable.

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Contact resistance: voltage drop shall not exceed 30 millivolts at 3 Amps current.

Current rating: 3 Amps max per contact.

Voltage rating: 300 Volts, AC (RMS), at sea level.

Durability: In accordance with MIL-C-28754, voltage drop shall not exceed 35 mV after testing.

Part or Identifying Number (PIN): M28754/100.

First article testing: The connector shall meet the tests of MIL-C-28754, table IV, type IV, except for Subgroup IV, Fin/Header torque, Fin cantilever load, and Guide rib strength test.

Number of units to be inspected: Twelve (12) units of each dash number shall be inspected. .

Backplane contacts: Low Insertion Force (LIF) contacts in accordance with MIL-C-28859 or MIL-C-28754 are strongly recommended for use with this connector.

Compatibility: These connectors may be used with the frames described in MIL-DTL-28754/94.

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Referenced documents. In addition to MIL-C-28754, this document references the following:

A-A-56032
MIL-A-8625
MIL-C-28859
MIL-DTL-28754/94
MIL-PRF-680
MIL-STD-1285
SAE AMS 2418
SAE AMS4150
SAE AMS4173
ASTM D5948
ASTM B36/B36M
EIA-364-20
SAE-AMS--P-81728
J-STD-004
J-STD-006

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CONCLUDING MATERIAL

Custodian:
Army – CR
Navy – AS
DLA - CC

Preparing activity:
DLA – CC

(Project 5935-2015-212)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil/>.