INCH-POUND

MIL-DTL-28754/97A
29 December 2015
SUPERSEDING
MIL-C-28754/97(SH)
31 October 1989

DETAIL SPECIFICATION SHEET

# CONNECTORS, ELECTRICAL, MODULAR, TYPE IV, CONNECTOR, 150 CONTACT, RIGHT ANGLE, CONTACT TAILS ON 0.100 CENTERS

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

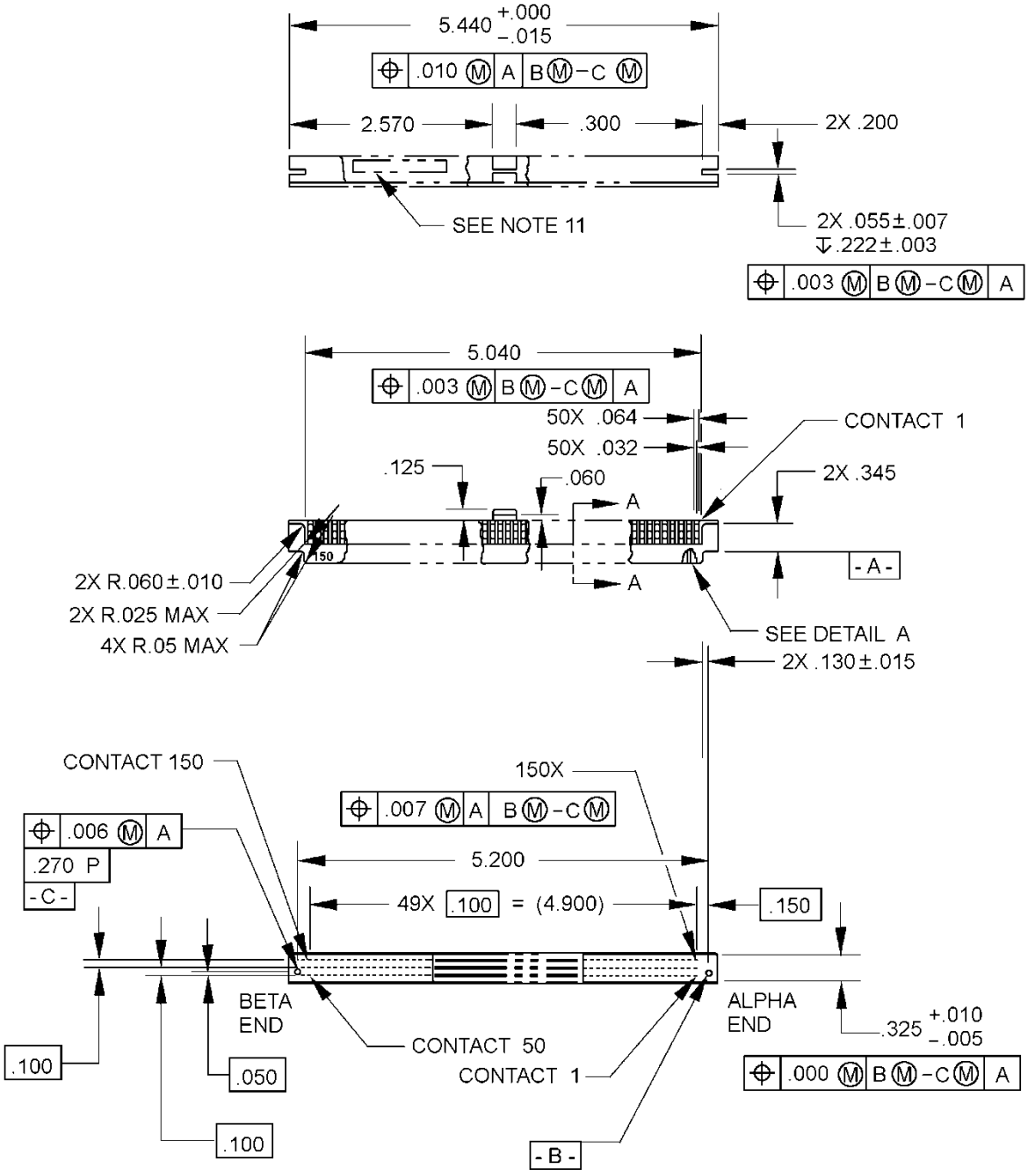


FIGURE 1. Dimensions and configurations.

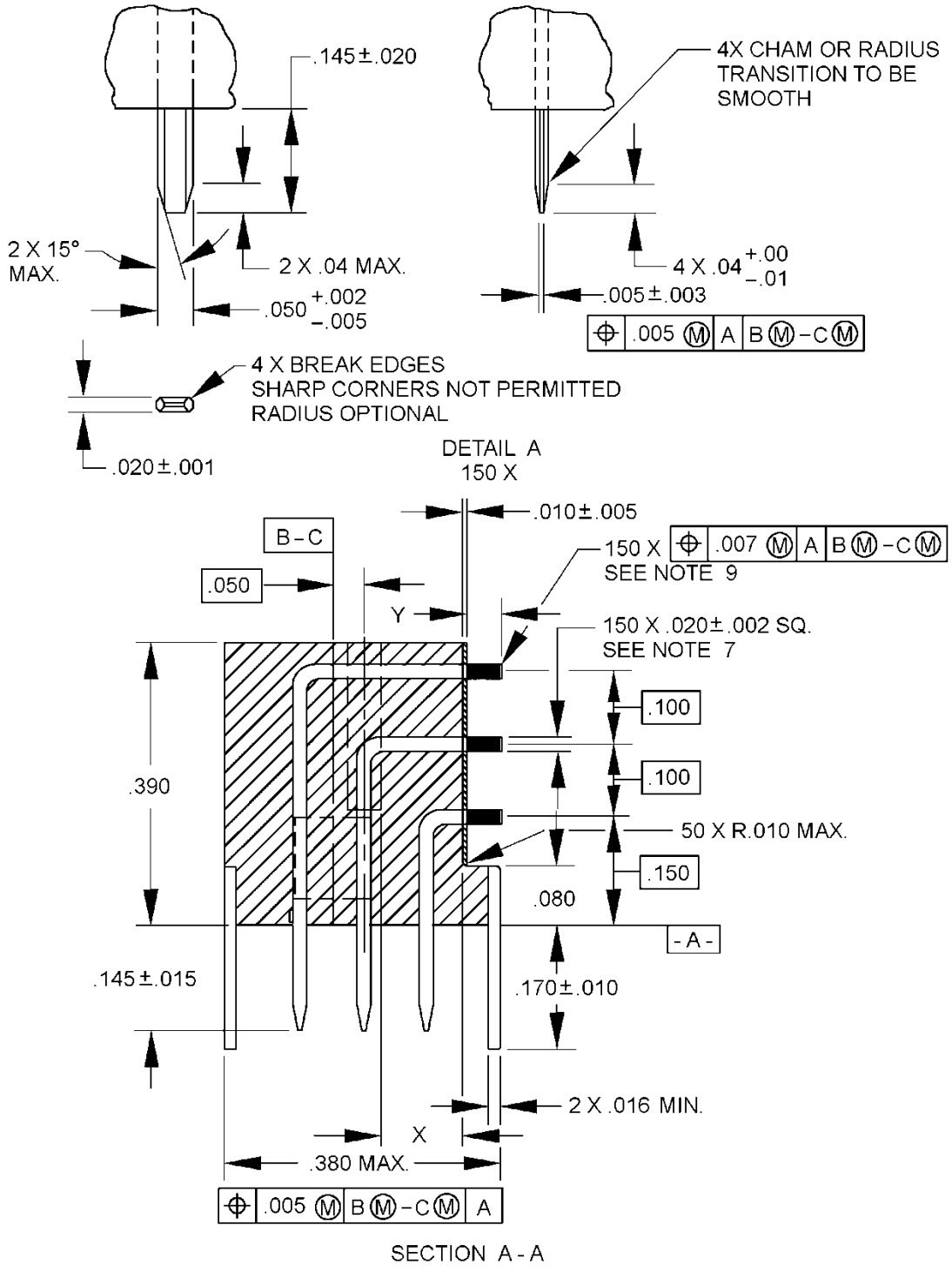


FIGURE 1. Dimensions and configurations – Continued.

| Inches | mm | Inches | mm | Inches | mm | Inches | mm |
|---|---|---|---|---|---|---|---|
| 0.001 | 0.025 | 0.032 | 0.813 | 0.145 | 3.683 | 5.040 | 128.016 |
| 0.002 | 0.051 | 0.040 | 1.016 | 0.150 | 3.810 | 5.200 | 132.080 |
| 0.003 | 0.076 | 0.050 | 1.270 | 0.170 | 4.318 | 5.440 | 138.176 |
| 0.005 | 0.127 | 0.055 | 1.397 | 0.200 | 5.080 | | |
| 0.007 | 0.178 | 0.060 | 1.524 | 0.300 | 7.620 | | |
| 0.010 | 0.254 | 0.064 | 1.626 | 0.325 | 8.255 | | |
| 0.015 | 0.381 | 0.080 | 2.032 | 0.345 | 8.763 | | |
| 0.016 | 0.406 | 0.100 | 2.540 | 0.380 | 9.652 | | |
| 0.020 | 0.508 | 0.125 | 3.175 | 0.390 | 9.906 | | |
| 0.025 | 0.635 | 0.130 | 3.302 | 2.570 | 65.278 | | |

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 plus or minus 0.005 (0.127 mm) inch for three place decimals, plus or minus 0.01 (0.35 mm) inch for two place decimals and plus or minus 1° for angles.
4. Flash around blade contacts not to exceed 0.010 (0.254 mm) inch from the surface of the insulator and shall be firmly attached.
5. Contact shield shall be marked with contact numbers 1, 50, 101 and 150 in contrasting color ink 0.06 (1.52 mm) inch high.
6. Single or multiple piece construction is optional provided that the end requirements of the drawing are met. It is permissible for the connector body to be installed in either an aluminum or thermoplastic shell which provides the contact shield and key pin hole features. The thermoplastic shall be type GLT-30F. Warning: The GLT-30F may be susceptible to stress cracking when exposed to certain cleaning solvents.
7. Dimension prior to solder coating.
8. Except for solder coating, dimensional limits apply to contact dimensions after plating other than those covered by note 7.
9. On tin leads shaded area shall be solder coated.
10. This connector is not be used with ceramic circuit boards.
11. Connectors shall be marked in approximate location shown with part number, manufacturer's CAGE number and date code with contrasting ink in characteristics 0.06 (1.52 mm) inch high.
12. All markings shall be permanently and legibly marked in accordance with MIL-STD-1285.

FIGURE 1. Dimensions and configurations – Continued.

REQUIREMENTS:

Dimensions and configurations: See figure 1 and table I.

Material: Contacts shall be brass, ASTM B36/B36M, UNS C26000, temper 1/2 hard.

Connector body shall be molded thermoplastic in accordance with ASTM D4067 or molded plastic, diallylphthalate resin, in accordance with ASTM D5948, Type GDI-30F or Type SDG-F.

The contact shield shall be aluminum alloy 5052, SAE-AMS-QQ-A-250/8, H34.

Plating: Contacts shall be finished on all exposed surfaces.

Selectively solder coat the leads as shown in the shaded area with SN60 or SN63, in accordance with J-STD-006, to a thickness of 0.0005 (0.0127 mm) inch to 0.003 (0.076 mm) inch. Use flux, J-STD-004, type RMA.

All aluminum alloy parts shall have an anodic coating in accordance with MIL-A-8625, type III, class 2, black.

Key pin holes:

For M28754/97 material, 0.114 +0.000 -0.005 (2.896 +0.000 -0127 mm) inch diameter X 0.150 (3.810 mm) inch deep.

C'bore 0.134 +0.005 -0.000 (3.404 +0.127 -0.000 mm) inch diameter X

0.020 +0.005 -0.000 (0.508 +0.127 -0.000 mm) inch deep.

Three equally spaced 0.010 (0.254 mm) inch radius beads X 0.150 (3.810 mm) inch deep around the periphery of the 0.114 (2.896 mm) inch diameter shall be utilized.

ELECTRICAL REQUIREMENTS:

Dielectric withstanding voltage: The connector shall meet the requirements of test procedure EIA-364-20, Method B, test condition I for 600 VAC (RMS) 60 Hz, or 850 VDC. The point of measurement shall be between adjacent contacts.

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

Contact resistance: Voltage drop shall not exceed 30 mV at 3 Amps current.

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.

Solderability: In accordance with MIL-C-28754.

Part or Identifying Number (PIN): M28754/97- (Dash number from table I)

TABLE I. Dash numbers.

| Dash number | X | Y | Body material |
|---|---|---|---|
| -1 | 0.112 | 0.050 | Type GDI-30F or SDG-F |
| -2 | 0-.092 | 0.070 | |

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. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the previous issue.

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

MIL-A-8625
MIL-C-28859
MIL-DTL-28754/94
MIL-STD-1285
ASTM D4067
ASTM D5948
ASTM B36/B36M
EIA-364-20
SAE-AMS-QQ-A-250/8
J-STD-004
J-STD-006

CONCLUDING MATERIAL

Custodian:
Army – CR
Navy – AS
DLA - CC

Preparing activity:
DLA – CC

(Project 5935-2015-211)

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/.