

INCH-POUND

MIL-DTL-55302/8F
w/AMENDMENT 2
26 April 2013
SUPERSEDING
MIL-DTL-55302/8F
w/AMENDMENT 1
5 December 2012

DETAIL SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES:
RECEPTACLE, SOCKET CONTACTS, STRAIGHT-THRU, FOR MULTILAYERED PRINTED WIRING BOARDS
(.100 SPACING)

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-DTL-55302.

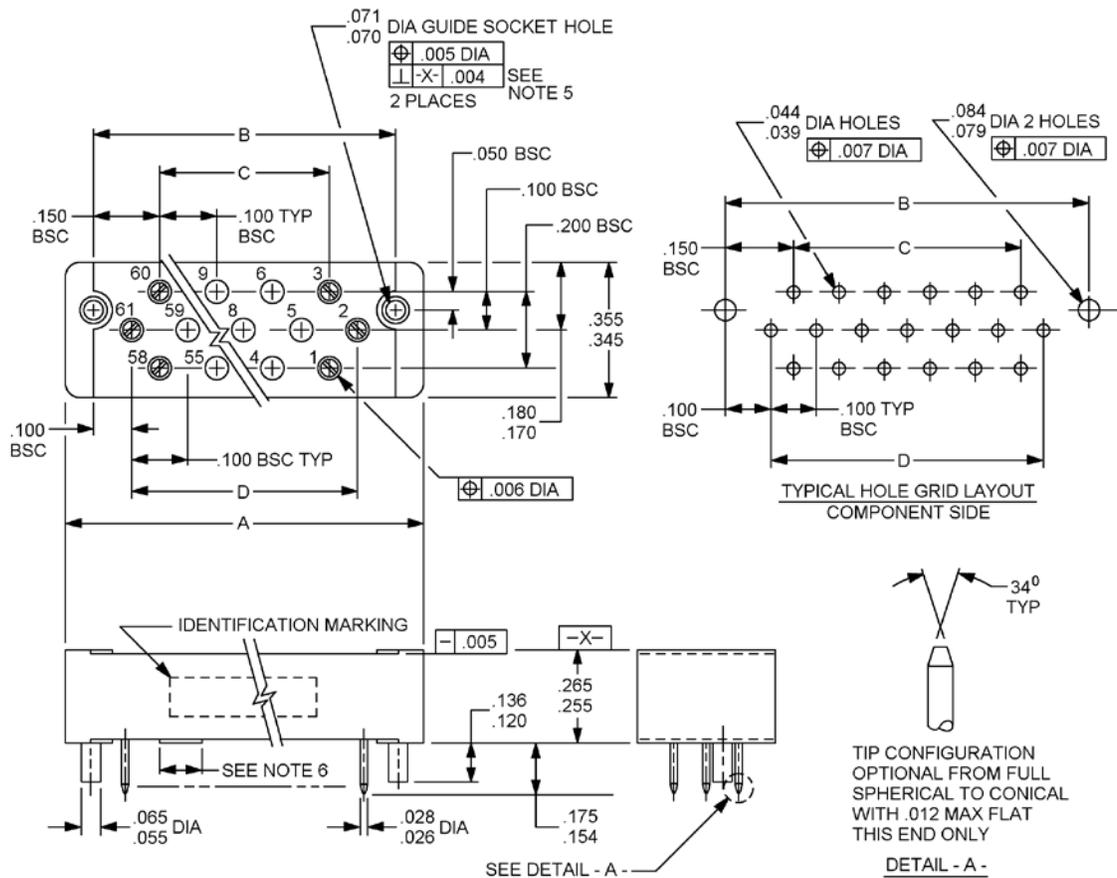


FIGURE 1. Connectors, receptacle (.100 spacing).

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| | | | | | | | | | |
|--------|------|--------|------|--------|-------|--------|-------|--------|-------|
| Inches | mm | Inches | mm | Inches | mm | Inches | mm | Inches | mm |
| .004 | 0.10 | .039 | 0.99 | .180 | 4.57 | .600 | 15.24 | 1.600 | 40.64 |
| .005 | 0.13 | .044 | 1.12 | .200 | 5.08 | .700 | 17.78 | 1.800 | 45.72 |
| .006 | 0.15 | .050 | 1.27 | .255 | 6.48 | .800 | 20.32 | 1.900 | 48.26 |
| .007 | 0.18 | .055 | 1.40 | .265 | 6.73 | 1.000 | 25.40 | 2.000 | 50.80 |
| .008 | 0.20 | .065 | 1.65 | .300 | 7.62 | 1.100 | 27.94 | 2.200 | 55.88 |
| .012 | 0.30 | .070 | 1.78 | .345 | 8.76 | 1.200 | 30.48 | 2.400 | 60.96 |
| .026 | 0.66 | .071 | 1.80 | .355 | 9.02 | 1.400 | 35.56 | | |
| .028 | 0.71 | .079 | 2.01 | .400 | 10.16 | 1.500 | 38.10 | | |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are $\pm .005$ (0.13 mm) on three place decimals and $\pm 2^\circ$ on angles.
4. These connectors mate with connectors specified in MIL-DTL-55302/7 and are primarily for use with multilayered printed wiring boards.
5. Positional tolerances of guide pins shall apply at datum plane X.
6. Pad(s) suitable for printed circuit board support are required. Dimensions and location(s) are optional.

FIGURE 1. Connectors, receptacle (.100 spacing) - Continued.

TABLE I. Dimensions and dash numbers. 1/ 2/

| Dash no. | No. of contacts | A | B basic | C ref | D ref |
|----------|-----------------|---|------------------|------------------|------------------|
| 01 | 13 | .800 \pm .005 (20.32 \pm 0.127) | .600 (15.24) | .300 (7.62) | .400 (10.16) |
| 02 | 25 | 1.200 \pm .005 (30.48 \pm 0.127) | 1.000 (25.40) | .700 (17.78) | .800 (20.32) |
| 03 | 37 | 1.600 \pm .005 (40.64 \pm 0.127) | 1.400 (35.56) | 1.100 (27.94) | 1.200 (30.48) |
| 04 | 49 | 2.000 \pm .008 (50.80 \pm .203) | 1.800 (45.72) | 1.500 (38.10) | 1.600 (40.64) |
| 05 | 61 | 2.400 \pm .008 (60.96 \pm .203) | 2.200 (55.88) | 1.900 (48.26) | 2.000 (50.80) |

1/ Dimensions are in inches.

2/ Metric equivalents in parentheses are given for information only.

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REQUIREMENTS:

Design and construction:

Dimensions and configurations: See figure 1 and table I.

Material:

Guide pins and guide bushing: Brass composition B, 60,000 to 70,000 psi tensile, in accordance with ASTM B134/B134M, or FC brass as specified in ASTM B16/B16M or Alloy C33500 in accordance with ASTM B453/B453M.

Plating:

Guide pins and guide bushings: Gold over copper, type II, class 1 or equivalent, grade C, in accordance with MIL-DTL-45204 or equivalent.

Contact: Gold in accordance with MIL-DTL-45204, type II, grade C, class 1 or equivalent, over nickel plating in accordance with SAE-AMS-QQ-N-290, class 2, 50 to 150 microinches.

Contact identification: Shall be numerical and sequential in the pattern indicated.

Socket size: 23.

Wire size: 22.

Current rating: 5 amperes, maximum.

Mating and unmating: The maximum insertion force, in pounds shall not exceed a value equal to 0.5 times the number of contacts for standard force contacts and .25 times the number of contacts for low insertion force contacts times the number of contacts.

Contact engagement and separation force: The individual contact withdrawal force shall be .5-ounce minimum for standard force contacts and .25 ounce minimum for low insertion force contacts when tested with minimum diameter test pin SAE-AS31971-23X1.

Contact resistance: The average resistance of all contact pairs measured shall not exceed .010 ohm, and no individual contact pair shall have a resistance exceeding .020 ohm.

Dielectric withstanding voltage:

Sea level: 1,000 volts rms, 60 Hz, ac.

High altitude: 500 volts rms, 60 Hz, ac.

Example of Part or Identifying Number (PIN): M55302/8 - 01

Basic number of specification sheet _____

Type of contacts _____

- = Standard insertion force contacts
- L = Low insertion force contacts

Dash number (see table I) _____

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Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. 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.

Referenced documents. In addition to MIL-DTL-55302, this document references the following:

MIL-DTL-55302/7
MIL-DTL-45204
ASTM B16/B16M
ASTM B134/B134M
ASTM B453/B453M
SAE-AMS-QQ-N-290

CONCLUDING MATERIAL

Custodians:
Army - CR
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-2013-131)

Review activities:
Army - AT, AV, MI
Navy - AS, MC, OS
Air Force - 19, 99

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/>.