

INCH-POUND

MIL-DTL-55302/76D
w/AMENDMENT 1
26 July 2010
SUPERSEDING
MIL-DTL-55302/76D
12 November 2004

DETAIL SPECIFICATION SHEET

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

Inactive for new design after 1 October 1986.

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.

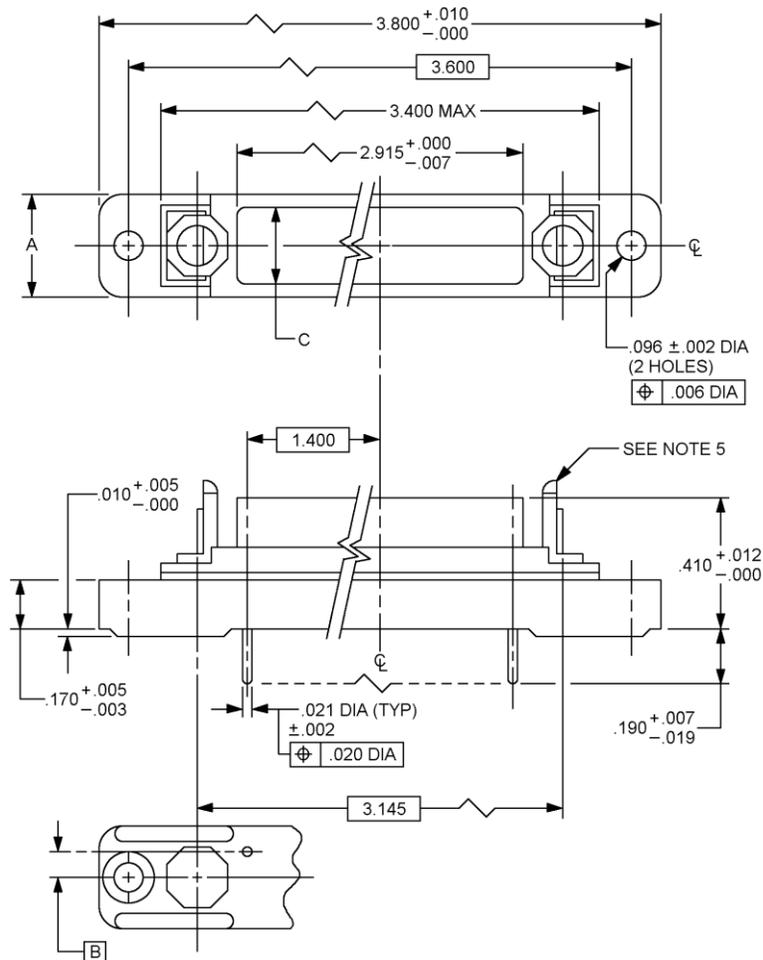


FIGURE 1. Connectors, socket, straight-thru, for multilayered printing wiring boards, .100 (2.54 mm) spacing.

MIL-DTL-55302/76D
w/AMENDMENT 1

Inches	mm	Inches	mm
.001	0.03	.096	2.44
.002	0.05	.170	4.32
.003	0.08	.190	4.83
.005	0.13	.410	10.41
.006	0.15	1.400	35.56
.007	0.18	2.915	74.04
.010	0.25	3.145	79.88
.012	0.30	3.400	86.36
.019	0.48	3.600	91.44
.020	0.51	3.800	96.52

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are $\pm .010$ (0.25 mm).
4. Their connectors mate with connectors specified in MIL-DTL-55302/77 and are primarily for use with single sided, double-sided, or multilayered printed wiring boards. When mated, connectors will allow .010 min. total diametrical float between mating dielectric surfaces.
5. Mating connectors provide a total of 64 different polarization positions. Polarization components conforming to M55302/78-04 are supplied uninstalled with the connector.
6. For dimensions A through C, see table II.
7. All contacts are on .100 spacing between contacts and between contact rows, square grid, 29 contacts in a row.

FIGURE 1. Connectors, socket, straight-thru, for multilayered printing wiring boards, .100 (2.54 mm) spacing - Continued.

MIL-DTL-55302/76D
w/AMENDMENT 1

Requirements:

Dimensions and configuration: See figure 1 and table II.

Material: In accordance with MIL-DTL-55302.

Plating: The contact plating shall be gold in accordance with ASTM B488, type II, code C, class 1 over 100 microinches of copper in accordance with SAE-AMS2418.

Contact identification: Numbers shall be molded as follows, front face: End of contact rows, 1, 29, 30, 58 on -01 and 1, 29, 59, 87 on -02. Rear of connector contact rows, 1, 29, 30, 58 on -01 and 1, 29, 58, 59, 87 on -02.

Mating and unmating: The maximum mating force, in pounds, shall be 0.5 times the number of contacts, and the withdrawal force, in pounds, shall be a minimum of 0.08 times the number of contacts and shall not exceed the measured insertion force.

Contact engagement and separation forces: When tested as specified herein, the engaging and separation forces shall be within the applicable limits specified in table I. Cylindrical steel or tungsten carbide test pins having spherical tips and a surface finish not exceeding 3 microinches roughness for steel pins or 10 microinches for tungsten carbide pins shall be engaged with and separated from the socket contacts. The forces necessary to insert the maximum diameter pin and withdraw the minimum diameter pin shall be measured and shall meet the requirements specified in table I. The depth of insertion shall be not less than 0.205 inch measured from the face of the insert or 0.140 inch measured from the end of the socket body, but the pins shall not bottom in the socket.

TABLE I. Engaging and separating forces.

Mating end size	Engaging test pin diameter in inches	Maximum engagement force (ounces)	Separating test pin diameter in inches	Minimum separation force (ounces)
22	0.0305 +0.0002 -0.0000	12	0.0295 +0.0000 -0.0002	0.75

Contact resistance: With a test current of 3 A dc, the average resistance of all contact pairs measured shall not exceed 0.010 ohm, and no individual contact pair shall have a resistance exceeding 0.020 ohm.

Oversize pin: The connectors shall exclude a .052 minimum diameter pin.

Dielectric withstanding voltage:

Sea level: 1,300 volts rms, 60 Hz, ac.
High altitude: 325 volts rms, 60 Hz, ac.

Socket size: 22.

Current rating: 3.0 amperes.

Mating connectors: See MIL-DTL-55302/77.

Part or Identifying Number (PIN): M55302/76-(dash number from table II).

MIL-DTL-55302/76D
w/AMENDMENT 1

TABLE II. Dash number and dimension.

Dash number	Number of contacts	Dimensions 1/			Weight pounds max
		A Max	B	C +.005 (0.13) -.000	
01	58	.350 (8.89)	.050 (1.27)	.240 (6.10)	.033 (14.97 grams)
02	87	.450 (11.43)	.100 (2.54)	.340 (8.640)	.043 (19.50 grams)

1/ Metric equivalents are given for information only. Millimeters are in parentheses.

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

MIL-DTL-55302/77
ASTM B488
SAE-AMS2418

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

CONCLUDING MATERIAL

Custodians:
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-2010-111)

Review activity:
Air Force - 19

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