

INCH-POUND

MIL-DTL-55302/7E
w/AMENDMENT 1
5 December 2012
SUPERSEDING
MIL-DTL-55302/7E
18 May 2006

DETAIL SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES:
PLUG, PIN CONTACTS, RIGHT-ANGLE, 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.

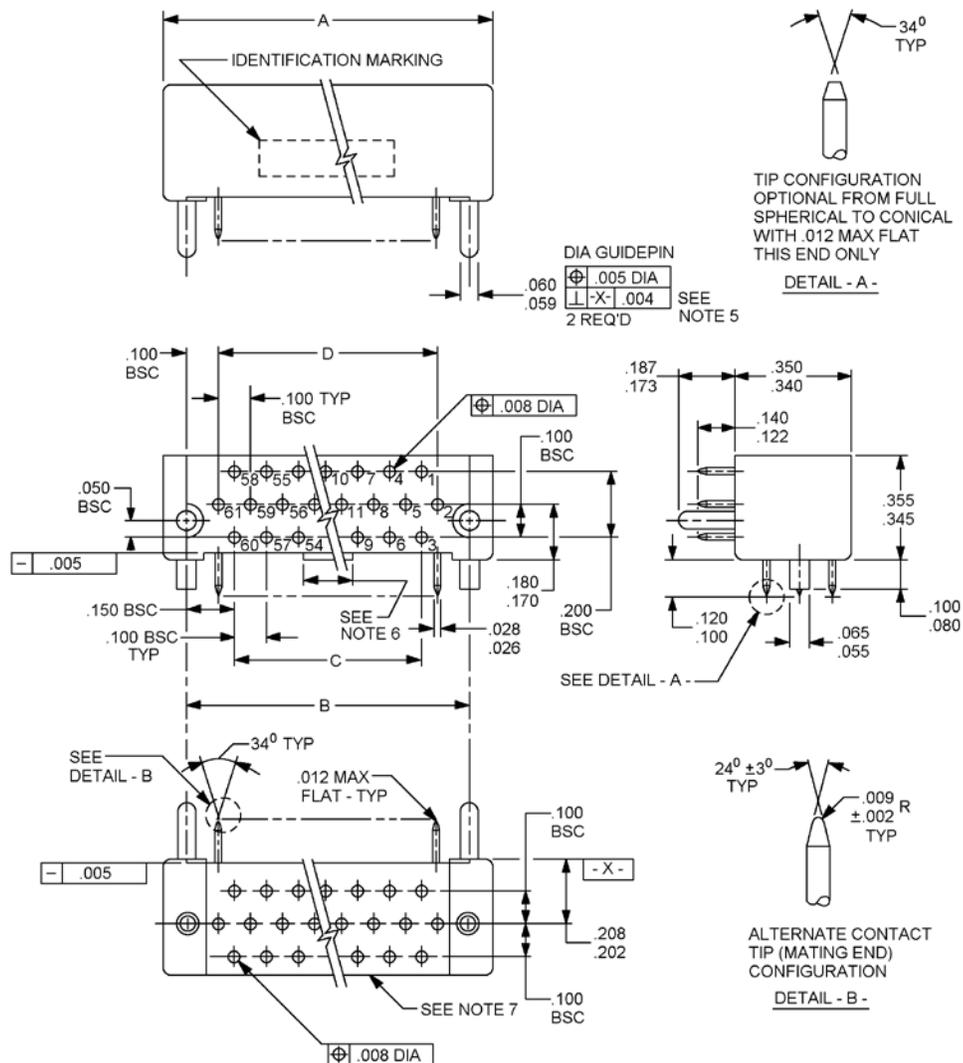
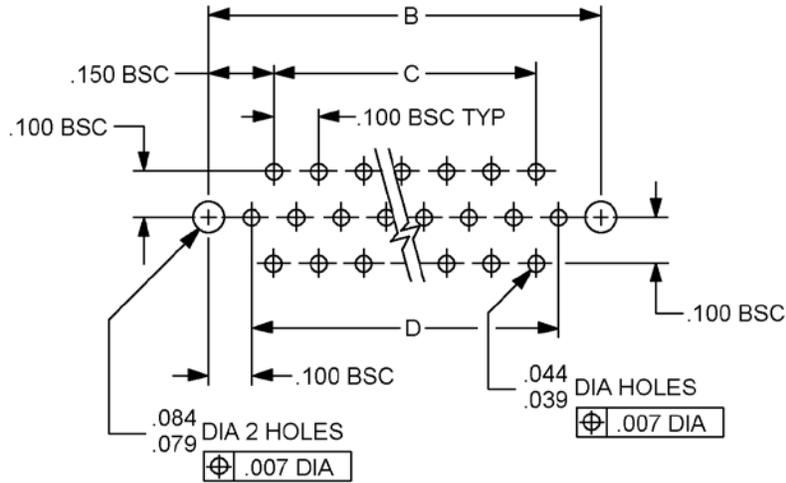


FIGURE 1. Connectors, plug (.100 spacing).

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TYPICAL HOLE GRID LAYOUT
COMPONENT SIDE

Inches	mm	Inches	mm	Inches	mm
.002	0.05	.039	0.99	.080	2.03
.004	0.10	.044	1.12	.187	4.75
.005	0.13	.050	1.27	.200	5.08
.007	0.18	.055	1.40	.202	5.13
.008	0.20	.059	1.50	.208	5.28
.009	0.23	.060	1.52	.340	8.64
.012	0.30	.065	1.65	.345	8.76
.026	0.66	.069	1.75	.350	8.89
.028	0.71	.070	1.78	.355	9.02

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 in accordance with MIL-DTL-55302/8 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.
7. The terminating side and the side opposite mating face of the plug may be open or solid construction.

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

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

Dash no.	No. of contacts	A	B basic	C ref	D ref
01	13	.800 ± .005 (20.32 ± 0.127)	.600 (15.24)	.300 (7.62)	.400 (10.16)
02	25	1.200 ± .005 (30.48 ± 0.127)	1.000 (25.40)	.700 (17.78)	.800 (20.32)
03	37	1.600 ± .005 (40.64 ± 0.127)	1.400 (35.56)	1.100 (27.94)	1.200 (30.48)
04	49	2.000 ± .008 (50.80 ± .203)	1.800 (45.72)	1.500 (30.10)	1.600 (40.64)
05	61	2.400 ± .008 (60.96 ± .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.

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 in accordance with ASTM B16/B16M, or Alloy C33500 in accordance with ASTM B453/B453M, or stainless steel in accordance with ASTM A484/A484M and ASTM A582/A582M passivated in accordance with SAE-AMS2700.

Plating:

Guide pins and guide bushings: Gold over copper, type II, class 1, 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.

Pin 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, and the withdrawal force, in pounds, shall be a minimum of 0.11 times the number of contacts, and shall not exceed the measured insertion force.

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.

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Dielectric withstanding voltage:

Sea level: 1,000 volts rms, 60 Hz, ac.
High altitude: 500 volts rms, 60 Hz, ac.

Part or Identifying Number (PIN): M55302/7-(dash number from table I).

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-55302/8
MIL-DTL-45204
ASTM A484/A484M
ASTM A582/A582M
ASTM B16/B16M
ASTM B134/B134M
ASTM B453/B453M
SAE-AMS-QQ-N-290
SAE-AMS2700

CONCLUDING MATERIAL

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

Preparing activity:
DLA - CC

(Project 5935-2012-234)

Review activities:
Army - AT, AV
Navy - AS, MC, OS, SH
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/>.