



## DEFENSE LOGISTICS AGENCY

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IN REPLY

REFER TO DSCC -VAI (Mr. Antonelli/ (DSN 850) 614-692-0576/ra)

May 10, 2004

SUBJECT: Initial Drafts of MIL-DTL-55302/102E, /110H, /111B, /113F, Connectors, Printed Circuit Subassembly and Accessories, Plug and Receptacle, Various, for Printed Wiring Boards (.100 inch spacing), Project number 5935-4504-000, -4447-000, -4448-000 and -4449-000

### Military/Industry Distribution

The initial drafts for the subject documents, which are being revised for conversion to detail status in accordance with acquisition reform and to replace obsolete references, have been placed on the DSCC-VAI website for you to review and comment. The website address is;  
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Please return comments to this Center no later than 45 days from the date of this letter. Any further coordination concerning this document will be circulated only to firms and organizations that furnish comments or reply that they have an interest.

If you do not have access to the world wide web or you have problems downloading this document, please notify Mr. Ralph Antonelli at either the above e-mail address or fax number or by telephone at (614) 692-0576.

Sincerely,

/ signed /

RICHARD L. TAYLOR  
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AF -11 (Jim Arnold - 88 OSS/OSE)

Note: This draft dated 28 April 2004, prepared by Defense Supply Center Columbus (DSCC-VAI) has not been approved and is subject to modification. DO NOT USE PRIOR TO APPROVAL. (Project 5935-4448-000)

INCH-POUND  
MIL-DTL-55302/111B  
DRAFT  
SUPERSEDING  
MIL-C-55302/111A  
12 December 1979

DETAIL SPECIFICATION SHEET

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

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

The requirements for acquiring the product described herein shall consist of this specification and MIL-DTL-55302.

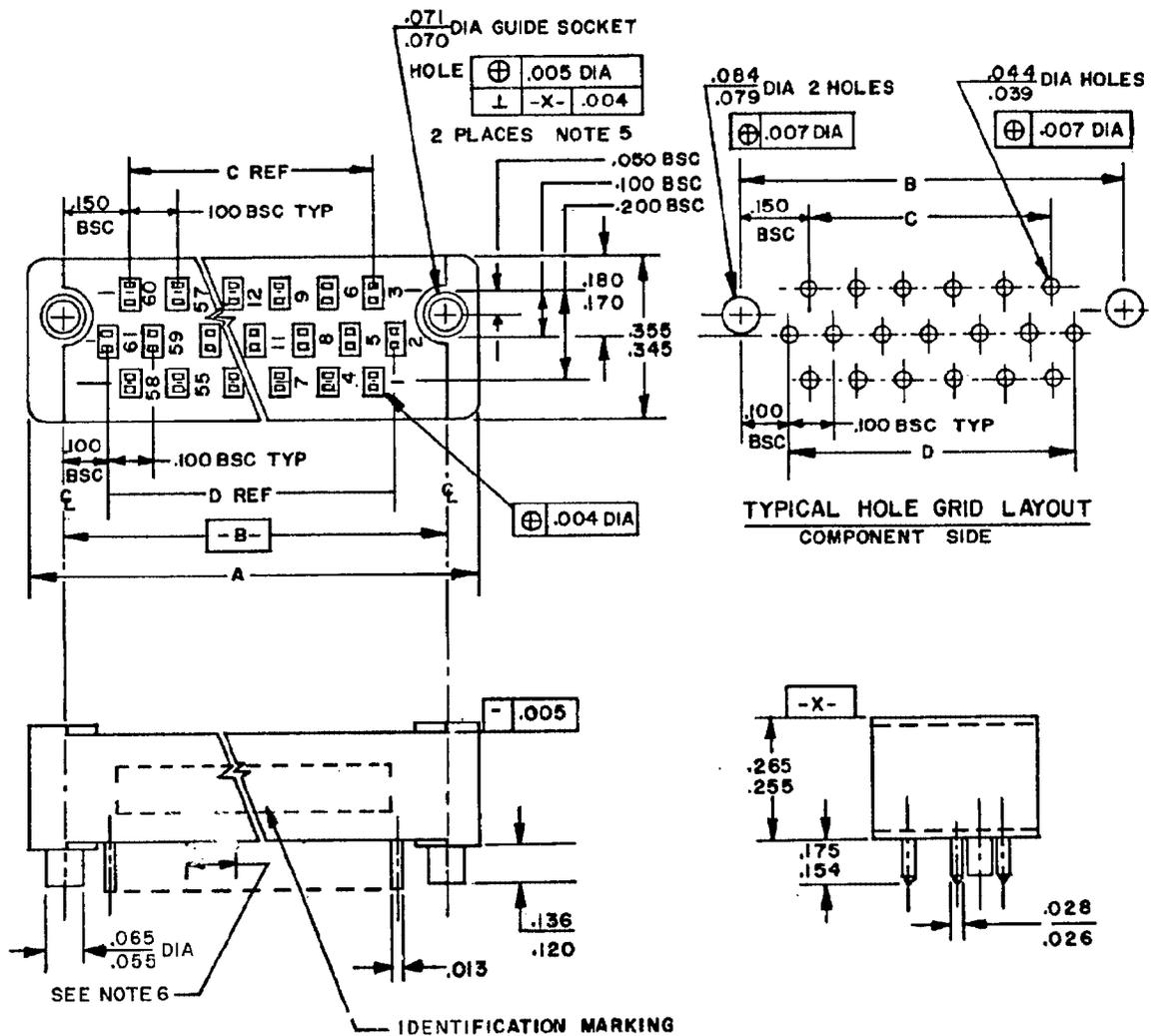


FIGURE 1. Connectors receptacle, .100 (2.54 mm) spacing.

MIL-DTL-55302/111B

TABLE I. Dash numbers and dimensions for types II and III.

| Dash numbers | Number of contacts | A           | B Basic | C Ref. | D Ref |
|--------------|--------------------|-------------|---------|--------|-------|
| 01           | 13                 | .800 ±.005  | .600    | .300   | .400  |
| 02           | 25                 | 1.200 ±.005 | 1.000   | .700   | .800  |
| 03           | 37                 | 1.600 ±.005 | 1.400   | 1.100  | 1.200 |
| 04           | 49                 | 2.000 ±.005 | 1.800   | 1.500  | 1.600 |
| 05           | 61                 | 2.400 ±.005 | 2.200   | 1.900  | 2.000 |

| Inches | mm   | Inches | mm   | Inches | mm   | Inches | mm    | Inches | mm    |
|--------|------|--------|------|--------|------|--------|-------|--------|-------|
| .004   | 0.10 | .050   | 1.27 | .136   | 3.45 | .300   | 7.62  | 1.200  | 30.48 |
| .005   | 0.13 | .055   | 1.40 | .150   | 3.81 | .345   | 8.76  | 1.400  | 35.56 |
| .007   | 0.18 | .065   | 1.65 | .154   | 3.92 | .355   | 9.02  | 1.500  | 38.10 |
| .008   | 0.20 | .070   | 1.78 | .170   | 4.32 | .400   | 10.16 | 1.600  | 40.64 |
| .013   | 0.33 | .071   | 1.80 | .175   | 4.45 | .600   | 15.24 | 1.800  | 45.72 |
| .026   | 0.66 | .079   | 2.01 | .180   | 4.57 | .700   | 17.78 | 1.900  | 48.26 |
| .028   | 0.71 | .084   | 2.13 | .200   | 5.08 | .800   | 20.32 | 2.000  | 50.80 |
| .039   | 0.99 | .100   | 2.54 | .255   | 6.48 | 1.000  | 25.40 | 2.200  | 55.88 |
| .044   | 1.12 | .120   | 3.05 | .265   | 6.73 | 1.100  | 27.94 | 2.400  | 69.96 |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only and are based upon 1.00 inch=25.4mm..
3. Unless otherwise specified, tolerances are ±.005 (0.13 mm) on three place decimals and ±2° 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 (2.54 mm) spacing - Continued.

MIL-DTL-55302/111B

REQUIREMENTS:

Design and construction:

Dimensions and configuration: See figure 1 and table I.

Material:

Guide sockets and guide bushings: Brass composition B, 60,000 to 70,000 PSI tensile, as specified in ASTM B134 or FC brass as specified in ASTM B16.

Plating:

Guide sockets and guide bushings: Gold over copper type II, code C, as specified in ASTM B488.

Contacts:

Gold in accordance with ASTM B488, type II, code C, class 1.27, over nickel plating in accordance with SAE-AMS-QQ-P-290, Class 2, 50 to 150 microinches.

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

Socket size: 23

Wire size: 22

Current rating: 5 amperes, maximum.

Oversize pin exclusion Not applicable.

Mating and unmating: The maximum insertion force, in pounds shall not exceed a value equal to .5 times the number of contacts.

Contact engagement and separation force: The individual contact withdrawal force shall be .5 ounce minimum when tested with a minimum diameter test pin in accordance with 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.

Probe damage: EIA 364, test procedure 025.

Contact size: 23

Test probe: .027 diameter.

Bending moment: .125 inch pounds.

Depth of insertion: 5/32 from connector face.

Dielectric withstanding voltage:

Sea level: 1000 volts rms, 60 Hz, ac.

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

200 volts rms.

Part or Identifying Number (PIN): M55302/111-(dash number from figure I).

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

MIL-DTL-55302/111B

Referenced documents. In addition to MIL-DTL-55302, this specification sheet references the following documents.

MIL-DTL-55302/7  
ASTM B16  
ASTM B134  
ASTM B488  
EIA 364  
SAE-AMS-QQ-P-290  
SAE-AS31971

CONCLUDING MATERIAL

Custodians:  
Army - CR  
Navy - EC  
Air Force - 11  
DLA - CC

Preparing activity:  
DLA - CC

(Project 5935-4448-000)

Review activities:  
Army - AR, 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 [www.dodssp.daps.mil](http://www.dodssp.daps.mil).

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