

INCH-POUND

MIL-DTL-55302/68D
24 March 2004
SUPERSEDING
MIL-C-55302/68C
17 October 1986

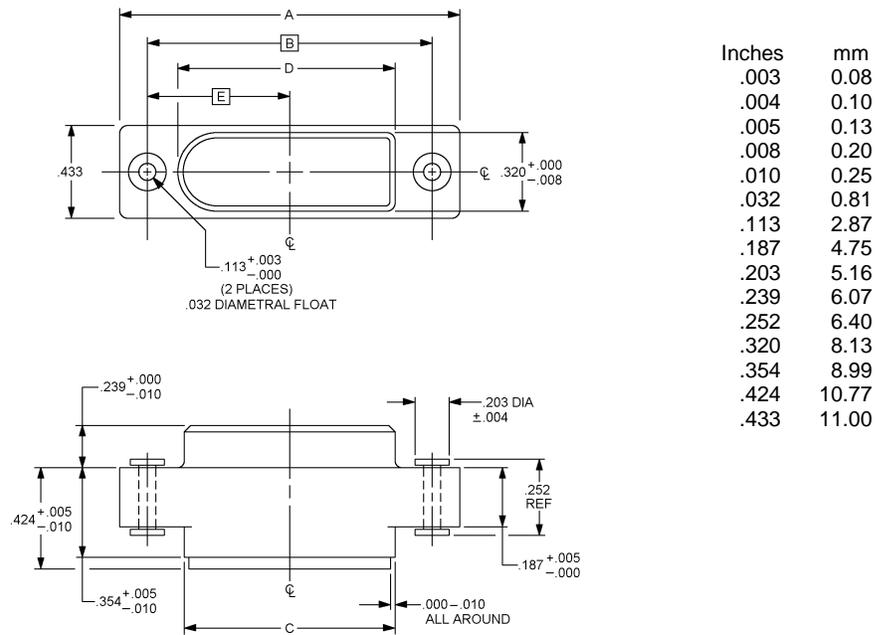
DETAIL SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES:
SOCKET, RECEPTACLE, ELECTRICAL, POLARIZED
(.090 SPACING) REMOVABLE CRIMP CONTACTS

MIL-DTL-55302/68D is inactive for new design after 1 October 1986.

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 sheet and MIL-DTL-55302.

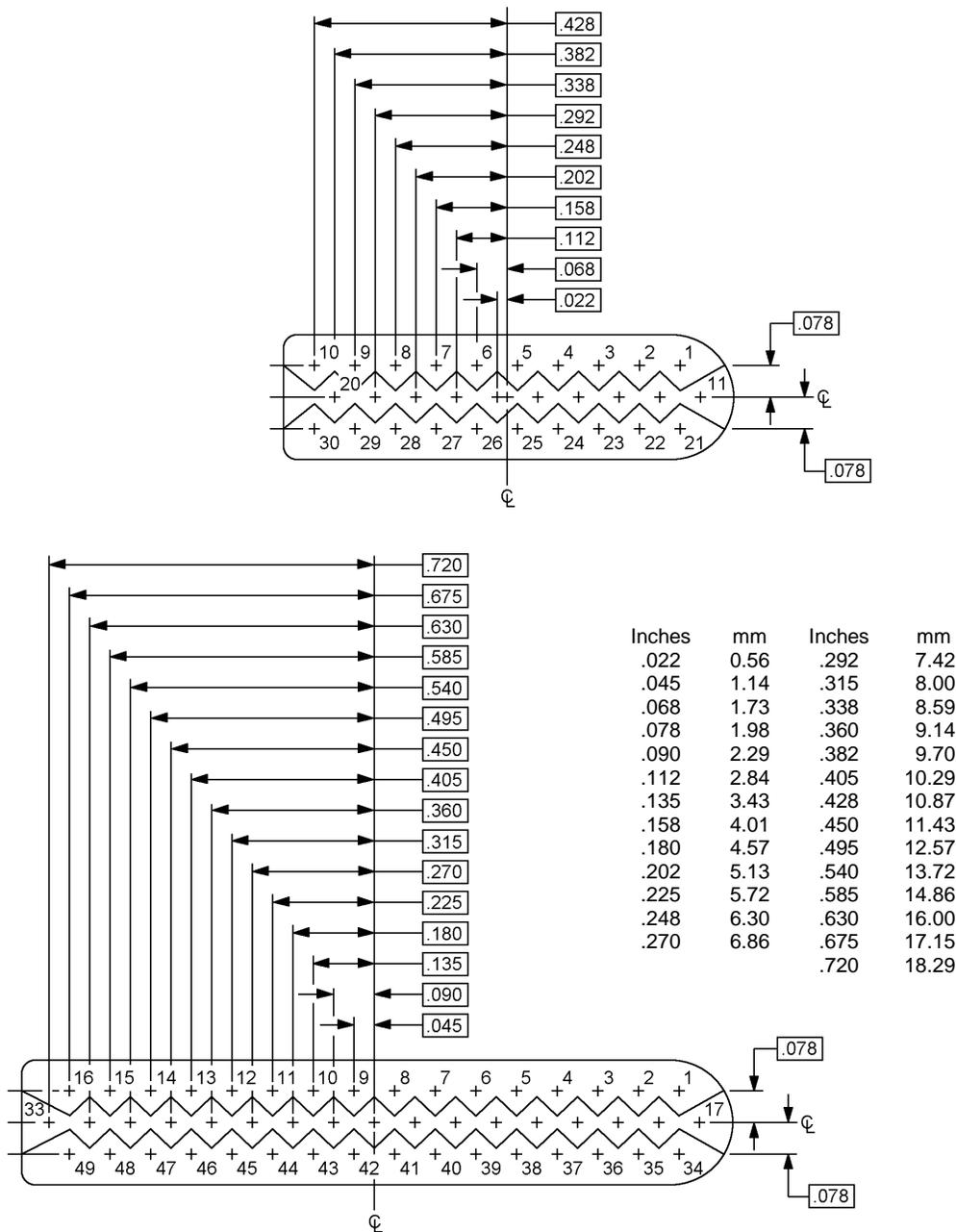


NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Nominal spacing between any two adjacent pin contacts shall be $.090 \pm .003$ ($2.29 \pm .08$ mm).
4. Unless otherwise specified, tolerances are $\pm .010$ (0.25 mm).
5. For dimensions A through E see table I.
7. A quantity of M39029/57-354 socket crimp contacts consisting of the normal complement plus one spare contact for connector arrangements having 26 contacts or less and two spare for arrangements having over 26 contacts shall be supplied with each connector.
8. Quality assurance provisions for M39029/57-354 socket are in accordance with MIL-C-39029.

FIGURE 1. Connectors, receptacle, .090 (2.29 mm) contact spacing removable crimp contacts.

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NOTES:

1. Contacts 1, 20 and 21 (top of page) are identified on the front face of the connector and contacts 1, 10, 11, 20, 21 and 30 are identified on the rear face per the insert arrangement.
2. Contacts 1, 16 and 49 (bottom of page) are identified on the front face of the connector and contacts 1, 16, 17, 33, 34 and 49 are identified on the rear face per the insert arrangement.

FIGURE 2. Insert arrangement for .090 (2.29 mm) contact spacing connector (female engaging face).

Requirements:

Dimensions and configuration: See figure 1 and table I.

Material: In accordance with MIL-DTL-55302, except:

Body - reinforced epoxy resin or equivalent.

Plating: In accordance with MIL-C-39029/57.

Contact identification: Contact locations are identified numerically as shown on figure 2.

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 (5.21 mm) measured from the face of the insert of 0.140 inch (3.56 mm) 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	+0.0002 0.0305 (0.775) -0.0000	12	+0.0000 0.0295 (0.749) -0.0002 (0.005)	0.75

Contact resistance: With a test current of 3A 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.

Dielectric withstanding voltage:

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

High altitude: 275 volts rms, 60 Hz, ac.

Current rating: 3.0 amperes.

Insert arrangement: See figure 2.

Mating connectors: See MIL-DTL-55302/67 and MIL-DTL-55302/69.

Contact insertion and removal tool: See MIL-I-81969/8.

Quality conformance inspection:

Group A inspection: Delete mating and unmating.

Group B inspection: Add mating and unmating.

Part or identification number (PIN): M55302/68-(dash number from table II).

TABLE II. Dash number and dimensions.

Dash number	Dimensions ^{1/}				
	+0.010 A (.25) -.000	B	+0.010 C (.25) -.000	+0.008 D (.20) -.000	E
01	1.661 (42.19)	1.376 (34.95)	1.047 (26.59)	.986 (25.04)	.688 (17.48)
02	2.246 (5.7.05)	1.960 (49.78)	1.632 (41.45)	1.571 (39.90)	.980 (24.89)

^{1/} Metric equivalent are given for information only. Millimeters are in parentheses.

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

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

- MIL-C-39029
- MIL-C-39029/57
- MIL-DTL-55302/67
- MIL-DTL-55302/69
- MIL-I-81969/8

CONCLUDING MATERIAL

Custodians:
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-4425-002)

Review activities:
Air Force - 19

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 <http://www.dodssp.daps.mil>.