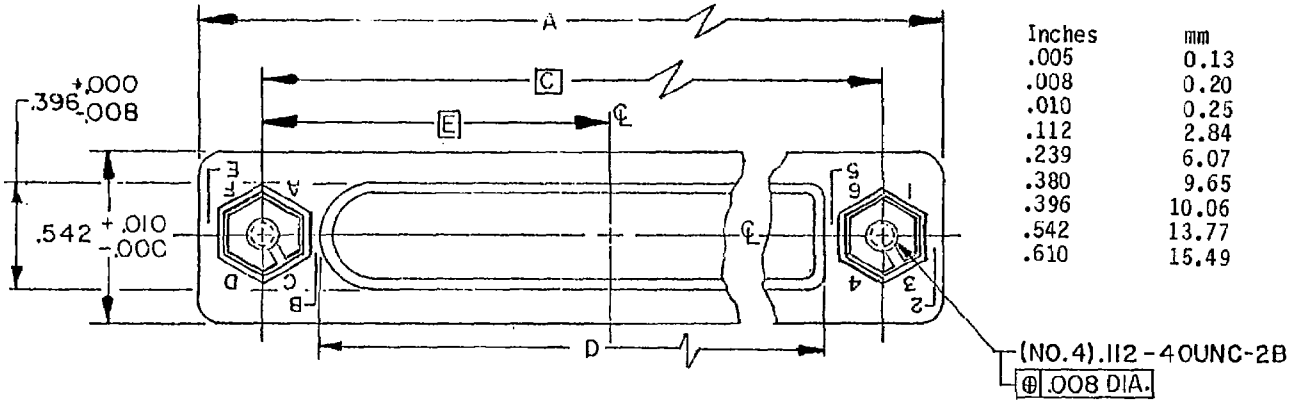
MILITARY SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES, SOCKET ENVIRONMENTAL RESISTANT, RECEPTACLE, ELECTRICAL, POLARIZED (.150 SPACING), REMOVABLE CRIMP CONTACTS

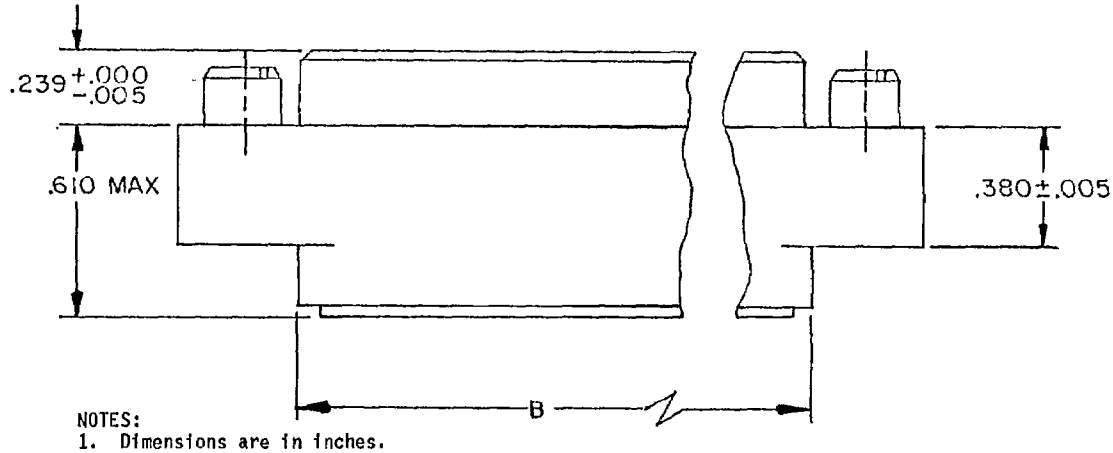
(C) This specification inactive for new design after 1 October 1986

This specification is approved for use within the Department of the Air Force and is available for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the connector described herein shall consist of this specification and the latest issue of MIL-C-55302.



Inches	mm
.005	0.13
.008	0.20
.010	0.25
.112	2.84
.239	6.07
.380	9.65
.396	10.06
.542	13.77
.610	15.49

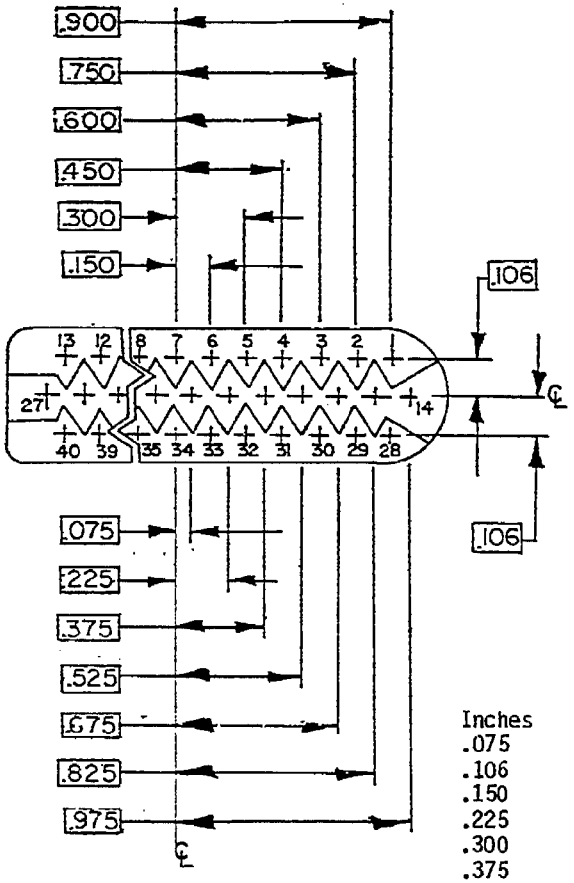


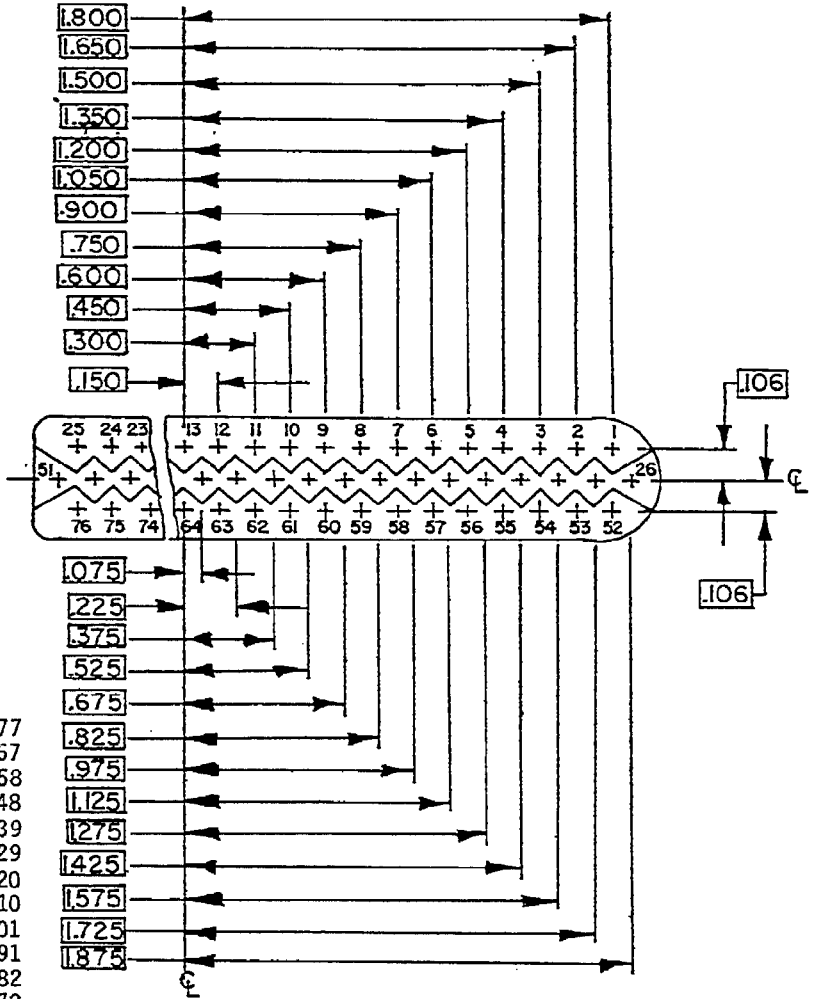
NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Nominal spacing between any two adjacent socket contacts shall be .150.
4. Unless otherwise specified, tolerance is ±.010 (0.25 mm).
5. For dimensions A through E, see table II.
6. A quantity of MS27492-20 socket crimp contacts consisting of the normal complement plus one spare contact for connector arrangements having 26 contacts or less and two spares for arrangements having over 26 contacts shall be supplied with each connector.
7. Mating connectors provide a total of 36 different polarization positions. Polarization components conforming to MIL-C-55302/78-01 are supplied installed in connectors - A1 through F6 and are supplied unintalled with connector -1S. See table III.
8. When properly mated with MIL-C-55302/73 or equivalent this connector has the capability of meeting the environmental requirements of MIL-C-38999, Class T.
9. Quality assurance provisions for MS27492-20 socket are in accordance with MIL-C-38999..

FIGURE 1. Connector, receptacle, .150 (3.81 mm), contact spacing, removable crimp socket.

(C) Denotes changes

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.





Inches	mm	Inches	mm
.075	1.91	.975	24.77
.106	2.69	1.050	26.67
.150	3.81	1.125	28.58
.225	5.72	1.200	30.48
.300	7.62	1.275	32.39
.375	9.53	1.350	34.29
.450	11.43	1.425	36.20
.525	13.34	1.500	38.10
.600	15.24	1.575	40.01
.675	17.15	1.650	41.91
.750	19.05	1.725	43.82
.825	20.96	1.800	45.72
.900	22.86	1.875	47.63

NOTES:

1. Contacts 1 thru 14, and 27 thru 40 (left of page) are identified on the front and rear of the connector per the insert arrangement.
2. Contacts 1 thru 26, and 51 thru 76 (right of page) are identified on the front and rear face of the connector per the insert arrangement.

FIGURE 2. Insert arrangement for .150 (3.81 mm) connector. (Female engaging face)

REQUIREMENTS:

Dimensions and configuration: See figure 1 and table II.

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

Body - reinforced epoxy resin or equivalent.

Grommet - silicon rubber, ZZ-R-765, class IIb, grade 50.

Bushing - monel, QQ-N-281, class B, cold drawn.

Plating: In accordance with MS27492-20.

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

Mating and unmating: The mating force shall be 35 ±5 pounds for the 40-contact connector and 65 ±5 pounds for the 76-contact connector. The unmating force shall be a minimum of 0.125 times the number of contacts and shall not exceed the measured insertion force.

Contact engagement and separation force: 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 of 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)
20	$0.0410^{+0.0002}_{-0.0000}$	18	$0.0390^{+0.0000}_{-0.0002}$	0.75

Contact resistance: With a test current of 5 A dc, the average resistance of all contact pairs measured shall not exceed 0.008 ohm, and no individual contact pair shall have a resistance exceeding 0.016 ohm.

Oversize pin: The connectors shall exclude a .048 minimum diameter pin.

Dielectric withstanding voltage:

Sea level: 1,300 V rms, 60 Hz, ac.

High altitude: 350 V rms, 60 Hz, ac.

Contact current rating: 5.0 amperes.

Insertion arrangement: See figure 2.

Contact insertion and removal tool:

MS27534A20
MS27534R20

Mating connectors: See MIL-C-55302/73.

Quality conformance inspection:

Group A inspection: Delete mating and unmating.

Group B inspection: Add mating and unmating.

Part number:

M55302 /72 -01 -A 1

Military designator

Military specification sheet

See table II

Polarization (see table III)

Position (see table III)

TABLE II. Dash number and dimensions.

Dash number	Dimensions 1/					No. of contacts
	A +.010 A (.25)	B max	C	D	E	
01	2.900 (73.66)	2.260 (57.40)	2.522 (64.06)	2.124 (53.95) +.000 -.008 (.20)	1.261 (32.03)	40
02	4.650 (118.11)	4.060 (103.12)	4.288 (108.92)	3.914 (99.42) +.000 -.010 (.25)	2.144 (54.46)	76

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

TABLE III. Dash number, polarization and position. 1/

Dash number		Dash number	
01	02	01	02
01-A1	02-A1	01-D1	02-D1
01-A2	02-A2	01-D2	02-D2
01-A3	02-A3	01-D3	02-D3
01-A4	02-A4	01-D4	02-D4
01-A5	02-A5	01-D5	02-D5
01-A6	02-A6	01-D6	02-D6
01-B1	02-B1	01-E1	02-E1
01-B2	02-B2	01-E2	02-E2
01-B3	02-B3	01-E3	02-E3
01-B4	02-B4	01-E4	02-E4
01-B5	02-B5	01-E5	02-E5
01-B6	02-B6	01-E6	02-E6
01-C1	02-C1	01-F1	02-F1
01-C2	02-C2	01-F2	02-F2
01-C3	02-C3	01-F3	02-F3
01-C4	02-C4	01-F4	02-F4
01-C5	02-C5	01-F5	02-F5
01-C6	02-C6	01-F6	02-F6
		01-1S Nonpolarized	02-1S Nonpolarized

1/ See MIL-C-55302/73 for polarization example.

Custodian:
Air Force - 17

Review activities:
Air Force - 11, 17, 85
DLA - ES

User activity:
Air Force - 19

Preparing activity:
Air Force - 17

Agent:
DLA - ES

(Project 5935-F294-6)-