

MILITARY SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES:  
 RECEPTACLE, STRAIGHT-THRU, HERMAPHRODITIC CONTACT,  
 CRIMP REMOVABLE, FOR PRINTED WIRING BOARDS (.100 INCH SPACING)

This specification is approved for use by the Communications Research and Development Command, Department of the Army and is available for use by all Departments and Agencies of the Department of Defense.

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

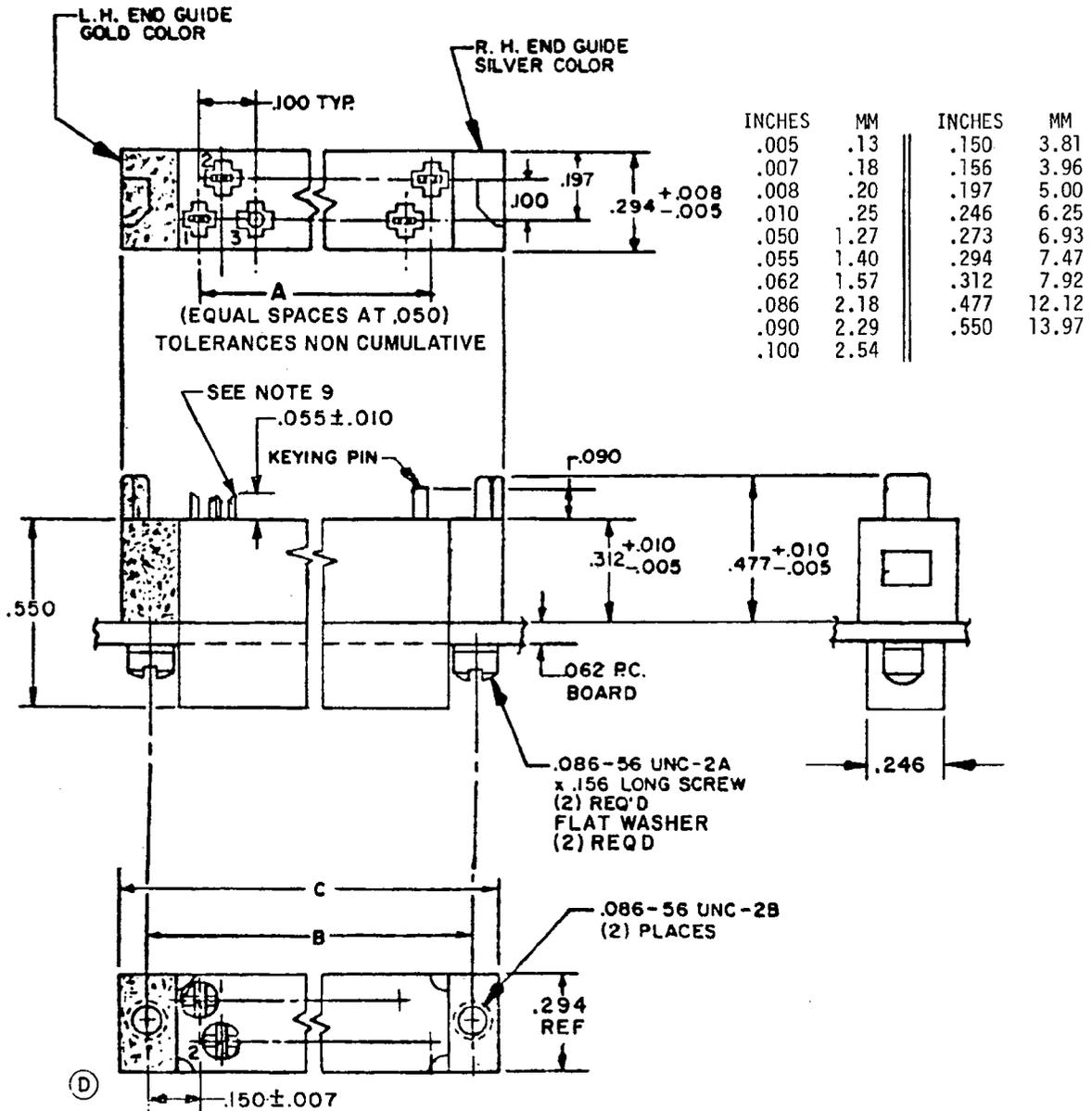


FIGURE 1. Connector, receptacle (.100 spacing).

Ⓛ denotes changes

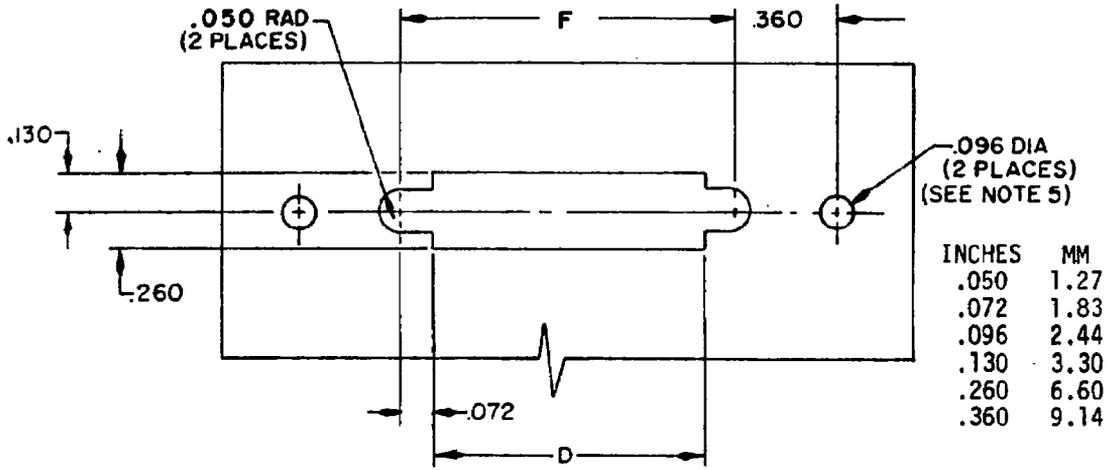


FIGURE 2. Typical cutout for receptacle in nonconductive chassis.

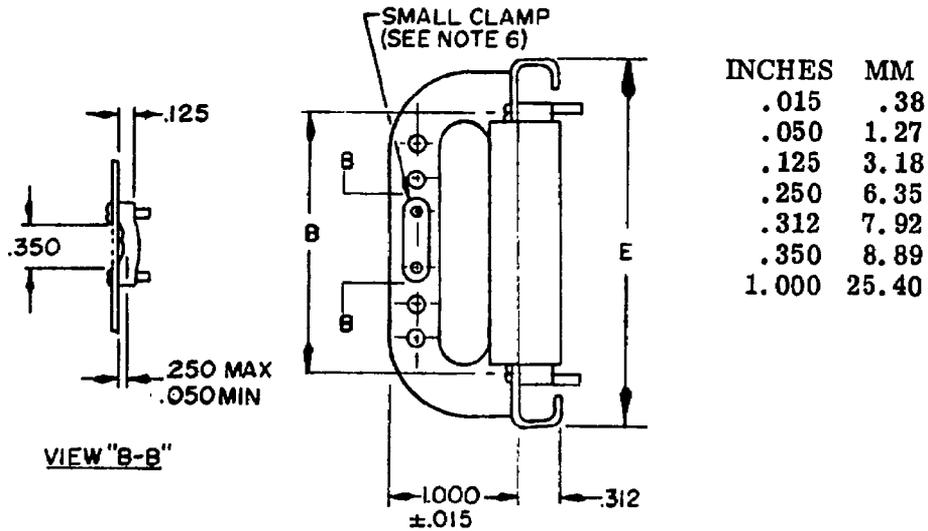


FIGURE 3. Mounting bracket assembly with small clamp.

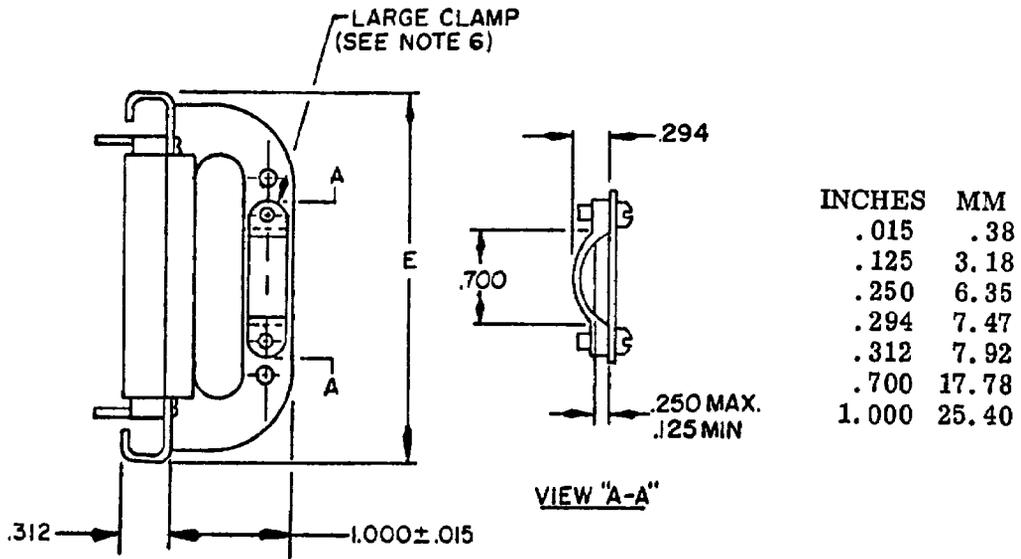


FIGURE 4. Mounting bracket assembly with large clamp.

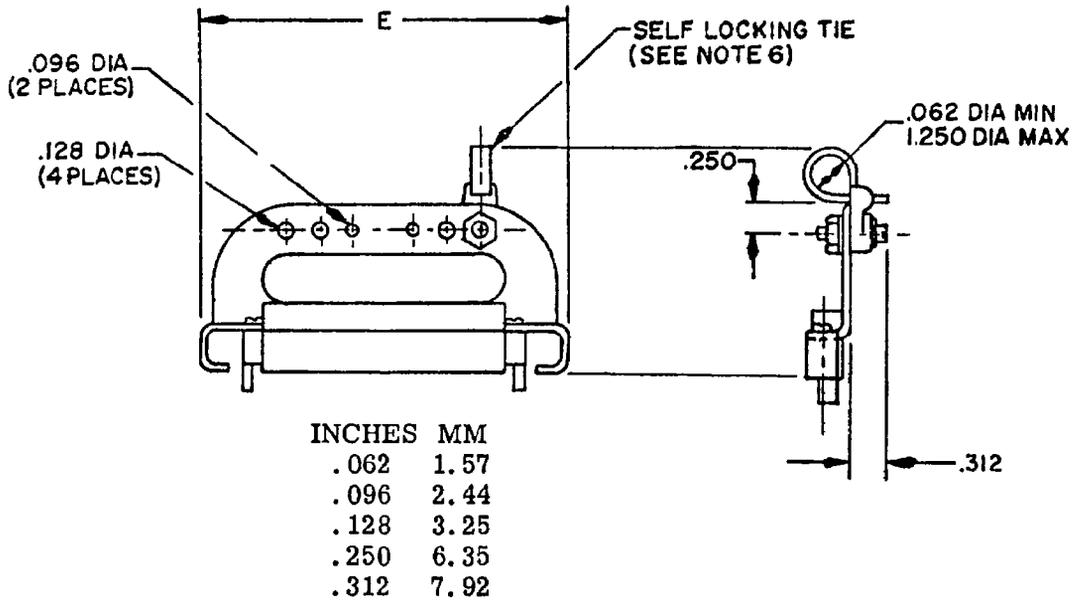


FIGURE 5. Mounting bracket assembly with self locking tie.

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Unless otherwise specified, tolerance is  $\pm .005$  (.13 mm).
4. When keying, mounting bracket or mounting bracket and keying is required, refer to the applicable dash and figure number in table I.
5. When bracket assembly (see figures 3, 4, or 5) to chassis mounting is required, it is suggested that support pins per MIL-C-55302/107 be used.
6. Mounting brackets assembled with the insulator will have the clamping hardware shipped loose.
7. Contacts (class A per MIL-C-55302/97-01) are shipped loose in a plastic bag with each connector unless otherwise specified. When contacts are furnished separately, the letters "WO" shall appear immediately after the military part number marking on the connector (i.e., M55302/102-02 WO).
8. For direct government procurements connectors shall be furnished with contacts in a plastic bag with each connector.
9. With connectors fully engaged the mating contacts shall have a minimum overlap distance of .062. As a minimum the contacts shall exhibit a wiping action through this distance.

TABLE I. Dash numbers and dimensions.

Dash number <u>1/</u>	No. of contacts	Fig. no.	*Dimensions (inches)					
			A	B $\pm .010$	C Ref.	D	E Ref.	F
01 02 03 04	18	1 3 4 5	8.50 (21.59)	1.150 (29.21)	1.300 (33.02)	1.006 (25.55)	1.990 (50.55)	1.150 (29.21)
05 06 07 08	30	1 3 4 5	1.450 (36.83)	1.750 (44.45)	1.900 (48.26)	1.606 (40.79)	2.590 (65.79)	1.750 (44.45)
09 10 11 12	36	1 3 4 5	1.750 (44.45)	2.050 (52.07)	2.200 (55.88)	1.906 (48.41)	2.890 (73.41)	2.050 (52.07)
13 14 15 16	42	1 3 4 5	2.050 (52.07)	2.350 (59.69)	2.500 (63.50)	2.206 (56.03)	3.190 (81.03)	2.350 (59.69)
17 18 19 20	54	1 3 4 5	2.650 (67.31)	2.950 (74.93)	3.100 (78.74)	2.806 (71.27)	3.790 (96.27)	2.950 (74.93)
21 22 23 24	72	1 3 4 5	3.550 (90.17)	3.850 (97.79)	4.100 (104.14)	3.706 (94.13)	4.690 (119.13)	3.850 (97.79)

1/ See requirements for complete part number when keying pin is required.

\* Metrics are in parentheses.

REQUIREMENTS:

Dimensions and configuration: See figures 1 through 5 and table I.

Material and finish:

Insulator: MIL-M-14, type SDG-F.

D Bracket, mounting: Cold rolled steel, 1/4 HD, per QQ-S-698; cadmium plated per QQ-P-416, class 3, type II.

End guides: Left hand, sintered brass 90/10, clear chromate per MIL-C-5541, class 1A. Right hand, sintered brass 90/10, nickel plate 300 microinches per MIL-F-14072.

Clamps, large and small: Aluminum alloy 380, per QQ-A-591, cadmium plated per QQ-P-416, class 3, type II.

Keying pin: Aluminum alloy 2011-T3 with clear chromate per MIL-C-5541, class 1A.

Self-locking tie: Nylon 6.6.

Mounting screw: Brass, cadmium plated, gold chromate finish.

Flat washer: Stainless steel.

Contact identification: Contact locations are identified in numerical sequence (see figure 1).

Mating and unmating: The maximum insertion force, in pounds, shall not exceed a value equal to .5 times the number of contacts, and the withdrawal force, in pounds, shall be a minimum of .11 times the number of contacts and shall not exceed the measured insertion force.

Contact retention: 6.0 pounds minimum after five insertions and withdrawals from the same connector position.

Contact resistance: The contact resistance shall not exceed 20 milliohms.

Dry circuit: Connectors shall be tested in accordance with method 3002 of MIL-STD-1344. The contact resistance shall not exceed 20 milliohms.

Dielectric withstanding voltage:

Sea level: 1,000 volts rms, 60 hertz.

High altitude: 300 volts rms, 60 hertz.

Current rating, maximum: 5 amperes.

Keying: When required, one of the following codes shall be added to the dash number:

"P" - Specifying location by contact number where keying pin shall be inserted; for example, M55302/102-01P17. (Keying pin inserted in place of contact number 17.)

"H" - Specifying location by contact number where contact shall be omitted for mating; for example, M55302/102-01H17. (Keying pin hole has contact number 17 omitted.)

Contact crimp removable (Class A or B): Shall conform to MIL-C-55302/97.

Contact removal tool: Shall conform to MIL-I-81969/4.

Contact insertion tool: Shall conform to MIL-I-81969/5.

Contact crimp tool: Shall conform to MIL-C-22520/17-02.