

INCH-POUND

MIL-C-55302/110G
7 June 1993
SUPERSEDING
MIL-C-55302/110F
31 October 1988

MILITARY SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES: PLUG, RIGHT ANGLE, 30 THROUGH 140 CONTACT POSITIONS, FOR PRINTED WIRING BOARDS (.100 SQ. GRID)

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 the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-C-55302.

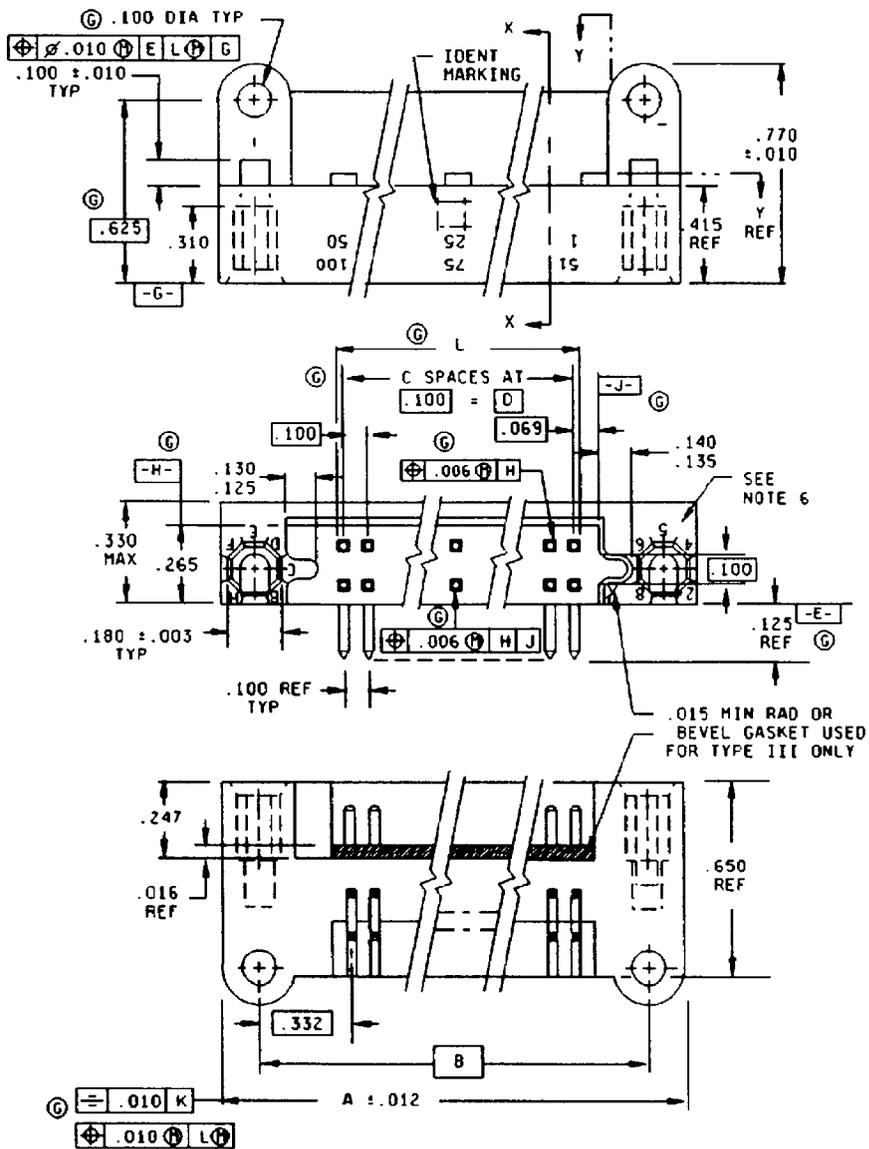
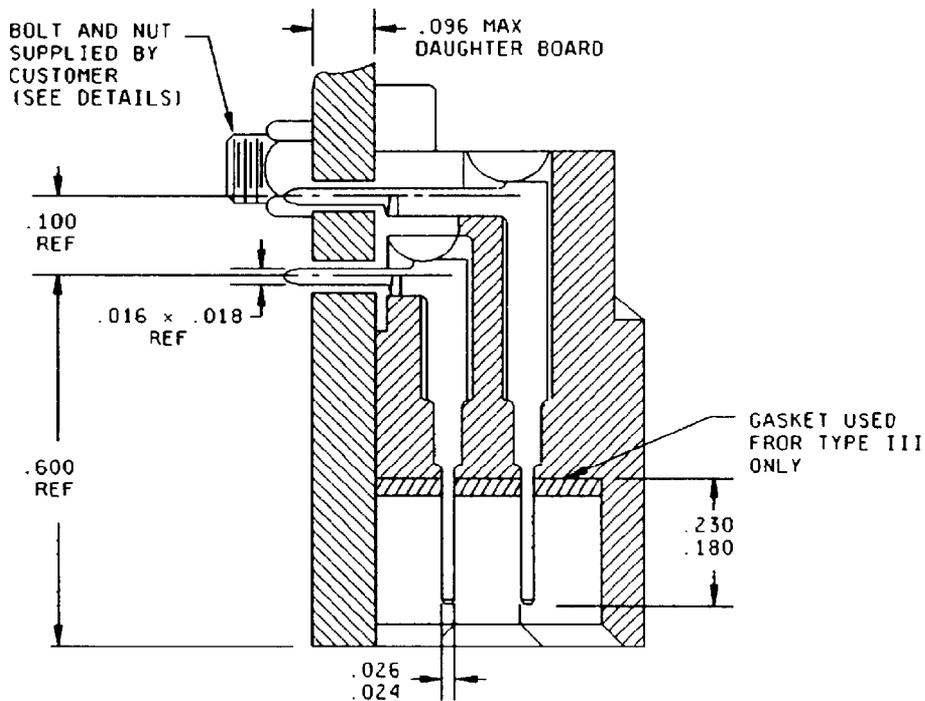
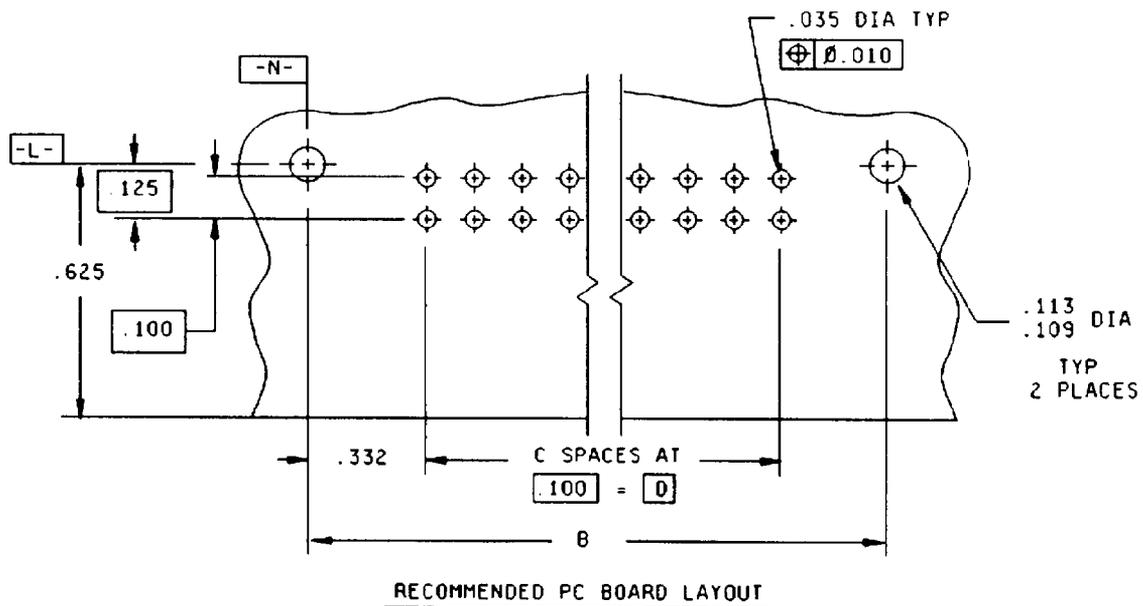


FIGURE 1. Connectors, plug (.100 sq. grid).

(G) denotes changes.
L of 7



SECTION X-X

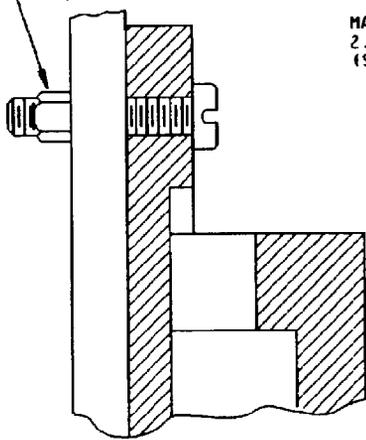


RECOMMENDED PC BOARD LAYOUT

FIGURE 1. Connectors, plug (.100 sq. grid) - Continued.

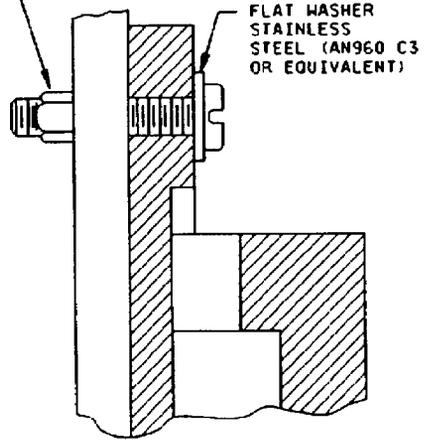
.086-56 COLD ROLLED
STEEL PAN HEAD MACHINE
SCREW (MS35223 SEE NOTE 2
OR EQUIVALENT) AND NUTS
(MS35645-222)

MAX TORQUE =
1.4 IN-LB
(SEE NOTE 1)

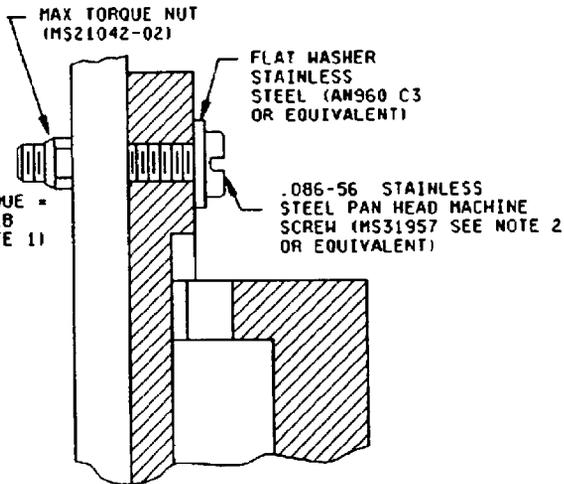


.086-56 STAINLESS
STEEL PAN HEAD MACHINE
SCREW (MS31957 SEE NOTE 2
OR EQUIVALENT) AND NUTS
(MS35649-224)

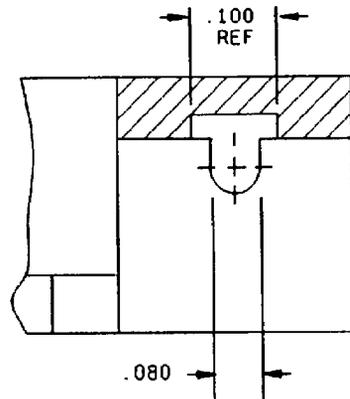
MAX TORQUE =
2.4 IN-LB
(SEE NOTE 1)



MOUNTING RECOMMENDATIONS



MAX TORQUE =
3.0 IN-LB
(SEE NOTE 1)



KEYING RIVET HOLE CONFIGURATION

SECTION Y-Y

NOTES:

1. Torque wrench must be used when fastening connector to printed circuit board.
2. Length to be determined by user.

FIGURE 1. Connectors, plug (.100 sq. grid) - Continued.

Inches	mm	Inches	mm	Inches	mm
.003	0.08	.069	1.75	.230	5.84
.005	0.13	.072	1.83	.247	6.27
.006	0.15	.096	2.44	.265	6.73
.008	0.20	.100	2.54	.310	7.87
.010	0.25	.101	2.57	.323	8.20
.012	0.30	.109	2.77	.332	8.43
.015	0.38	.113	2.87	.377	9.58
.024	0.61	.125	3.18	.415	10.54
.025	0.64	.130	3.30	.500	12.70
.026	0.66	.135	3.43	.77C	19.56
.030	0.76	.140	3.56		
.058	1.47	.180	4.57		

NOTES:

1. Dimensions are in inches.
2. Metric equivalent are given for formation only.
3. Unless otherwise specified, tolerance is ± 0.005 (0.13 mm) on decimals and $\pm 2^\circ$ on angles.
4. These connectors mate with connectors specified in MIL-C-55302/27.
5. Numbers indicating every 5 cavities marked or molded on side. Numbers indicating end cavities and line indicating every 5 cavities marked or molded on mating face.
6. Key locations embossed on indicated surfaces.

FIGURE 1. Connectors, plug (.100 sq. grid) - Continued.

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

Dash number 2/	Type number	Number of contacts	Dimensions 1/				Contact identification numbers
			A	B	C	D	
10 19	II III	30	2.355 (59.82)	2.065 (52.45)	14	1.400 (35.56)	1, 16
11 20	II III	40	2.855 (72.52)	2.565 (65.15)	19	1.900 (48.26)	1, 21
12 21	II III	50	3.355 (85.22)	3.065 (77.85)	24	2.400 (60.96)	1, 26
13 22	II III	60	3.855 (97.92)	2.565 (90.55)	29	2.900 (73.66)	1, 31
14 23	II III	70	4.355 (110.62)	4.065 (103.25)	34	3.400 (86.36)	1, 36
15 24	II III	80	4.855 (123.32)	4.565 (115.95)	39	3.900 (99.06)	1, 41
16 25	II III	90	5.355 (136.02)	5.065 (128.65)	44	4.400 (111.76)	1, 46
17 26	II III	100	5.855 (148.72)	5.565 (141.35)	49	4.900 (124.46)	1, 51
18 27	II III	110	6.355 (161.42)	6.065 (154.05)	54	5.400 (137.16)	1, 56
28 32	II III	120	6.855 (174.12)	6.565 (166.75)	59	5.900 (149.86)	1, 61
29 33	II III	130	7.355 (186.82)	7.065 (179.45)	64	6.400 (162.56)	1, 66
30 34	II III	134	7.555 (191.90)	7.265 (184.53)	66	6.600 (167.64)	1, 68
31 35	II III	140	7.855 (199.52)	7.565 (192.15)	69	6.900 (175.26)	1, 71

1/ Metric equivalents are in parentheses.

2/ See table II for superseded part numbers.

REQUIREMENTS

Design and construction:

Dimensions and configuration: See figure 1 and table I.

Material: In accordance with MIL-C-55302.

- Ⓒ Insulator body: Insulator material shall be in accordance with MIL-C-55302 or MIL-H-24519, type GLCP-30F.
- Ⓒ Contact material: Insulator material shall be in accordance with MIL-C-55302 or beryllium copper alloy in accordance with ASTM B768.

Gasket: Silicon rubber.

Plating: The contact plating for the engagement area, .150 inch minimum length, shall be gold over nickel in accordance with MIL-C-55302. The contact plating for the solder tail area, .160 inch minimum length, shall be tin lead over nickel in accordance with MIL-C-55302. The remainder of the contact shall be nickel plated in accordance with MIL-C-55302.

Contact identification: See figure 1.

Contact rating: 3.0 amperes maximum per contact, 2.25 amperes continuous per contact at 75°F.

Keying: See MIL-C-55302/31, using the M55302/31-10 rivet.

Mating and unmating: The maximum mating force in pounds shall be the number of contacts multiplied by .25 and the withdrawal force in pounds shall be a minimum of .025 times the number of contacts and shall not exceed the measured insertion force.

Contact resistance: No individual contact pair shall have a resistance exceeding .020 ohm.

Contact retention: 3 pounds minimum.

Dielectric withstanding voltage:

Sea level: 900 volts rms.

High altitude: 200 volts rms.

Part number: M55302/110- (and dash number from table I).

Superseded part numbers: See table II.

TABLE II. Superseded part numbers.

Type I superseded part number M55302/110-	Type II superseding part number M55302/110-
01	10
02	11
03	12
04	13
05	14
06	15
07	16
08	17
09	18

Patent: The Government has a royalty free license under the following patent for the benefit of manufacturers of the item either for the Government or for use in equipment to be delivered to the Government.

US Patent number: 3,404,367

CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - EC
Air Force - 17

Review activities:

Army - AR, MI
Navy - AS, OS
Air Force - 99
DLA - ES

User activities:

Army - AT, AV, ME
Navy - MC
Air Force - 19

Preparing activity:

Army - CR

Agent:

DLA - ES

(Project 5935-3907-03)