

INCH-POUND

MIL-DTL-55302/110H

22 May 2006

SUPERSEDING

MIL-C-55302/110G

7 June 1993

DETAIL SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES:  
PLUG, RIGHT ANGLE, 30 thru 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 MIL-DTL-55302.

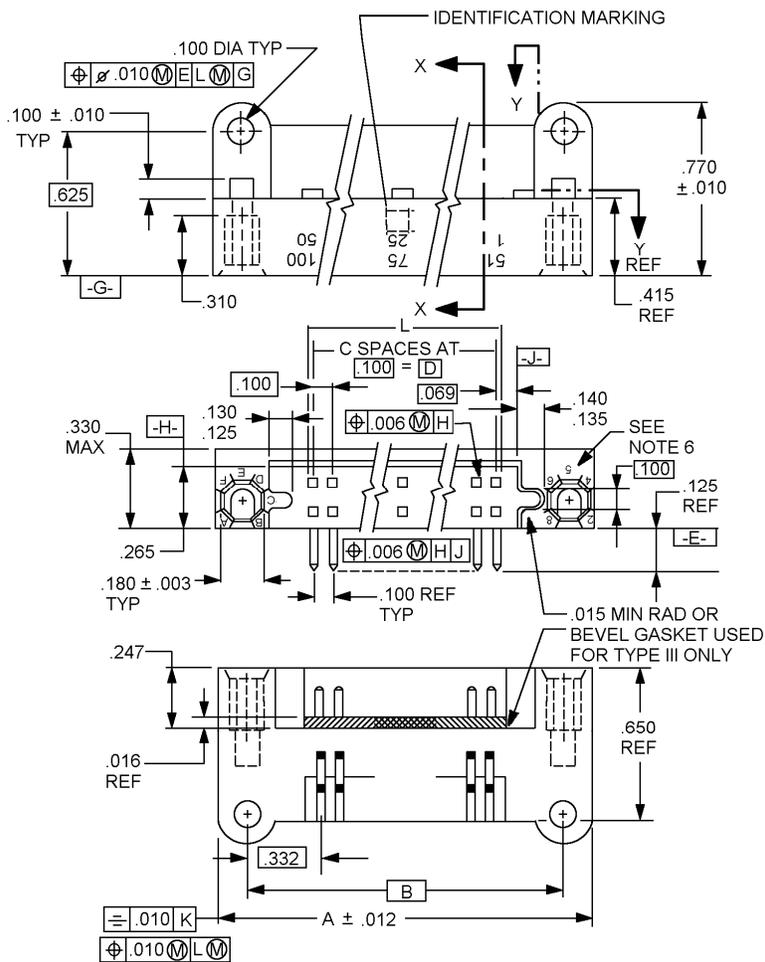


FIGURE 1. Connectors, plug, .100 (2.54 mm) square grid.

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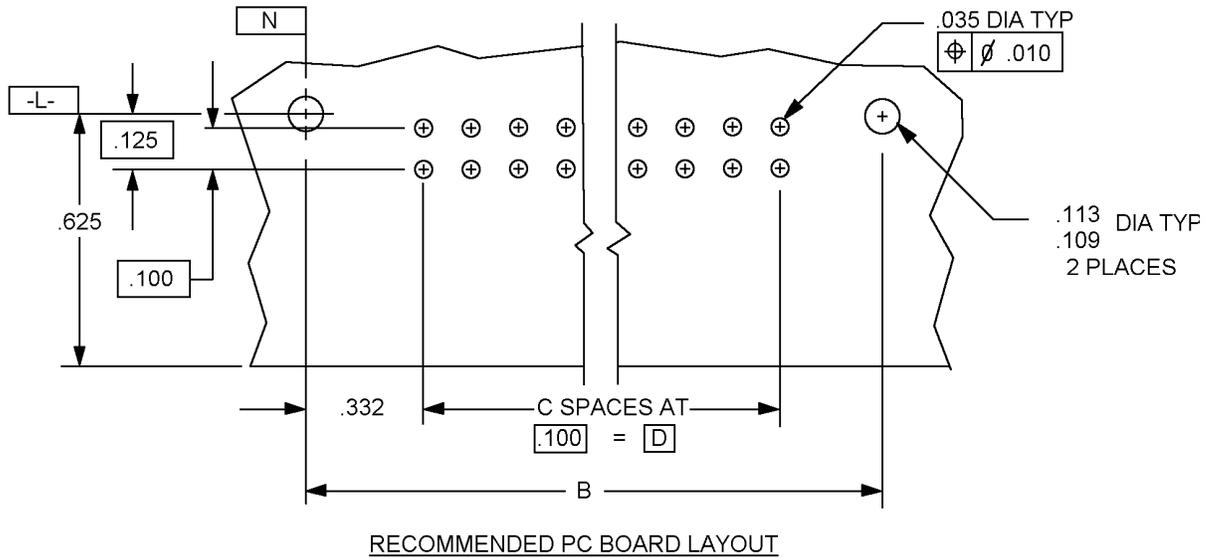
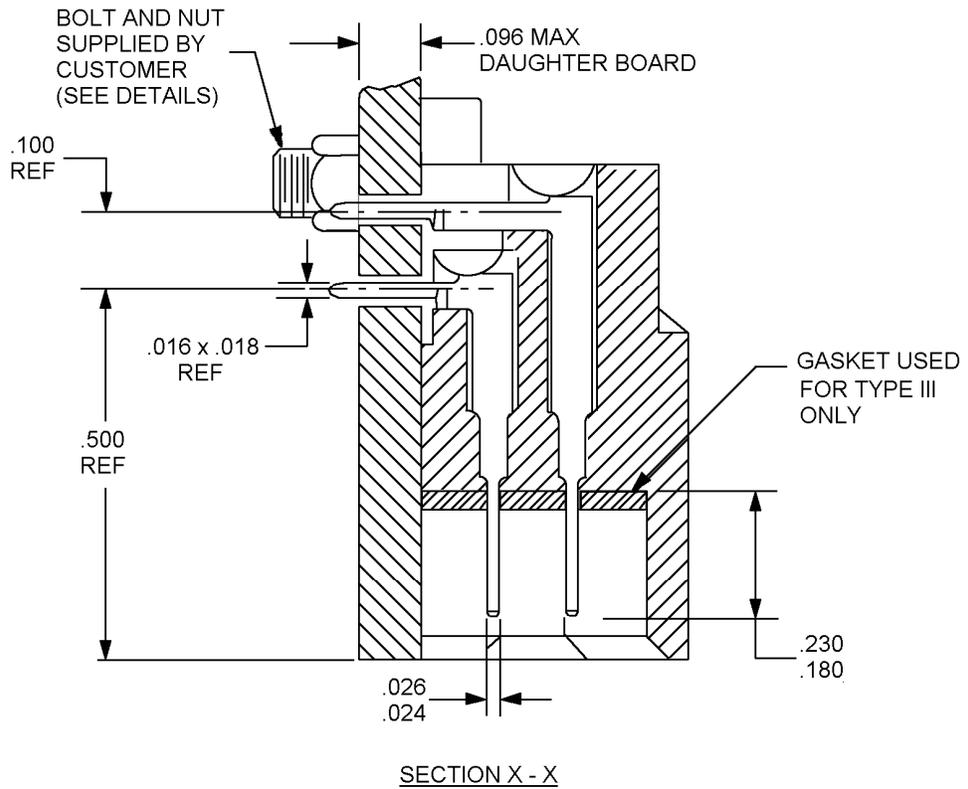
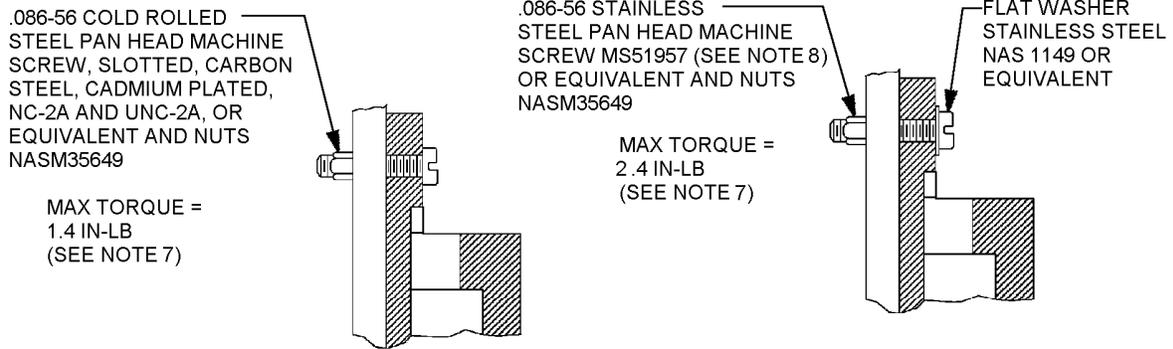
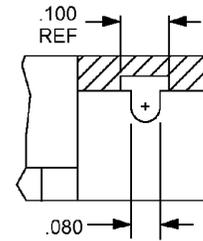
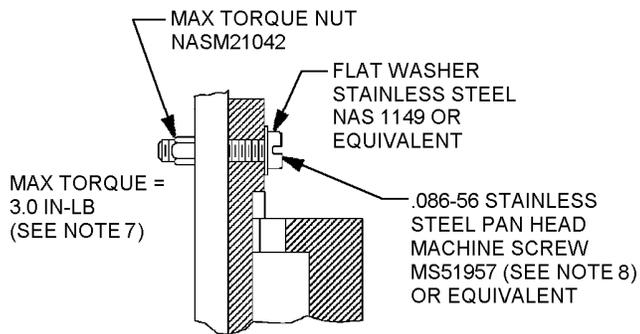


FIGURE 1. Connectors, plug, .100 (2.54 mm) square grid - Continued.



MOUNTING RECOMMENDATIONS



KEYING RIVET HOLE CONFIGURATION  
SECTION Y-Y

FIGURE 1. Connectors, plug, .100 (2.54 mm) square grid - Continued.

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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	.086	2.18	.265	6.73
.008	0.20	.096	2.44	.310	7.87
.010	0.25	.100	2.54	.323	8.20
.012	0.30	.101	2.57	.330	8.38
.015	0.38	.109	2.77	.332	8.43
.016	0.41	.113	2.87	.377	9.58
.018	0.46	.125	3.18	.415	10.54
.024	0.61	.130	3.30	.500	12.70
.025	0.64	.135	3.43	.625	15.89
.026	0.66	.140	3.56	.650	16.51
.030	0.76	.180	4.57	.770	19.56
.035	0.89				
.058	1.47				

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are  $\pm 0.005$  (0.13 mm) on three place decimals and  $\pm 2^\circ$  on angles.
4. These connectors mate with connectors specified in MIL-DTL-55302/27.
5. Numbers indicating, every 5 cavities marked or molded on side. Numbers indicating end cavities and lines indicating every 5 cavities molded or marked on mating face.
6. Key locations embossed on indicated surfaces.
7. Torque wrench must be used when fastening connector to printed circuit board.
8. Length to be determined by user.

FIGURE 1. Connectors, plug, .100 (2.54 mm) square grid - Continued.

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

Dash numbers <u>3/</u>	Type	Number of contacts	Dimensions <u>1/</u> , <u>2/</u>				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)	3.565 (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 (174.18)	5.565 (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 <sup>2</sup> (192.15)	69	6.900 (175.26)	1, 71

1/ Dimensions are in inches.

2/ Metric equivalents are given for information only.

3/ See table II for superseded PIN.

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REQUIREMENTS:

Design and construction:

Dimensions and configuration: See figure 1 and table I.

Material: In accordance with MIL-DTL-55302.

Insulator body: Insulator material shall be in accordance with MIL-DTL-55302 or type GLCP-30F in accordance with ASTM D5138 or MIL-M-24519.

Contact material: Contact material in accordance with MIL-DTL-55302 or beryllium copper 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 MIL-DTL-55302. The contact plating for the solder tail area, .160 inch minimum length, shall be tin lad over nickel in accordance with mil-DTL-55302. The remainder of the contact shall be nickel plated in accordance with MIL-DTL-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-DTL-55302/31, using the M55302/31-10 rivet.

Mating and unmating: The maximum mating force in pounds shall 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 or Identifying Number (PIN): M55302/110-(dash number from table I).

Patent. The Government has a royalty free license under the following listed patents 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.

Supersession data: See table II.

TABLE II. Superseded PINs.

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

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

Referenced documents. In addition to MIL-DTL-55302, this document references the following:

- MIL-DTL-55302/27
- MIL-DTL-55302/31
- MIL-M-24519
- MS51957
- ASTM D5138
- ASTM B768
- NAS 1149
- NASM21042
- NASM35649

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CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA - CC

(Project 5935-4447-000)

Review activities:

Army - AR, AT, AV, CR4, MI  
Navy - AS, MC, OS  
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://assist.daps.dla.mil>.