

INCH-POUND

MIL-DTL-55302/118E
9 January 2004
SUPERSEDING
MIL-C-55302/118D
7 June 1993

DETAIL SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES:
PLUG, DECADE INCREMENT 20 THROUGH 110 AND 128 CONTACT POSITIONS,
FOR PRINTED WIRING BOARDS (.050 SPACING)

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.

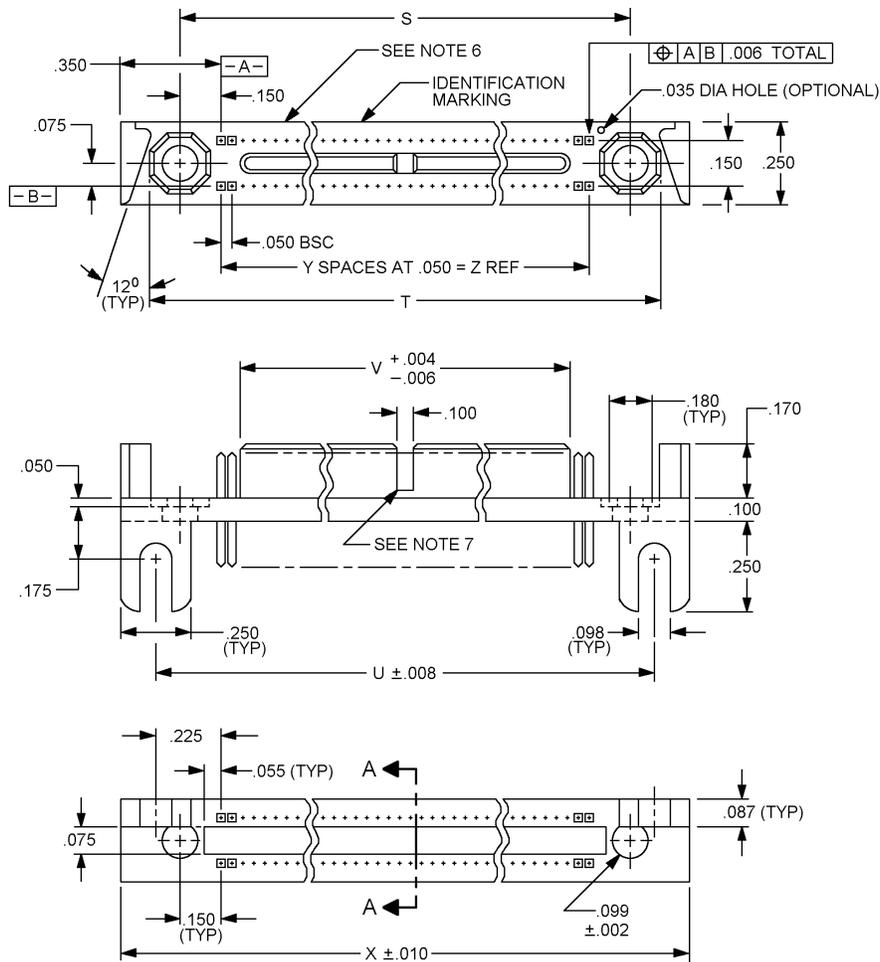
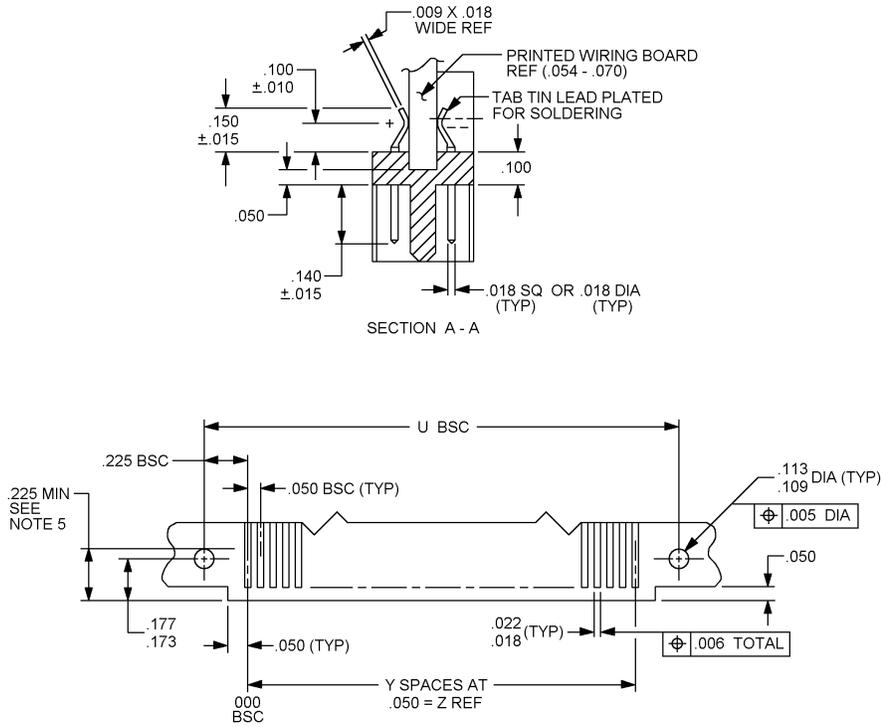


FIGURE 1. Connectors, plug without pin protectors, .050 (1.27 mm) spacing for style 1.

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Inches	mm	Inches	mm	Inches	mm
.001	0.03	.050	1.27	.140	3.56
.004	0.10	.054	1.37	.150	3.81
.005	0.13	.055	1.40	.170	4.32
.006	0.15	.070	1.78	.173	4.39
.008	0.20	.075	1.90	.175	4.44
.009	0.23	.087	2.21	.177	4.50
.010	0.25	.098	2.49	.180	4.57
.015	0.38	.100	2.54	.225	5.72
.018	0.46	.109	2.77	.250	6.35
.022	0.56	.113	2.87	.350	8.89
.035	0.89	.035	0.89		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are ± 0.005 (0.13 mm) and $\pm 2^\circ$ on angles.
4. These connectors mate with connectors specified in MIL-DTL-55302/119.
5. Minimum pad length on printed wiring board.
6. Numbers indicating end positions stamped this side only.
7. Except 20 through 50 positions.

FIGURE 1. Connectors, plug without pin protectors, .050 (1.27 mm) spacing for style 1 - Continued.

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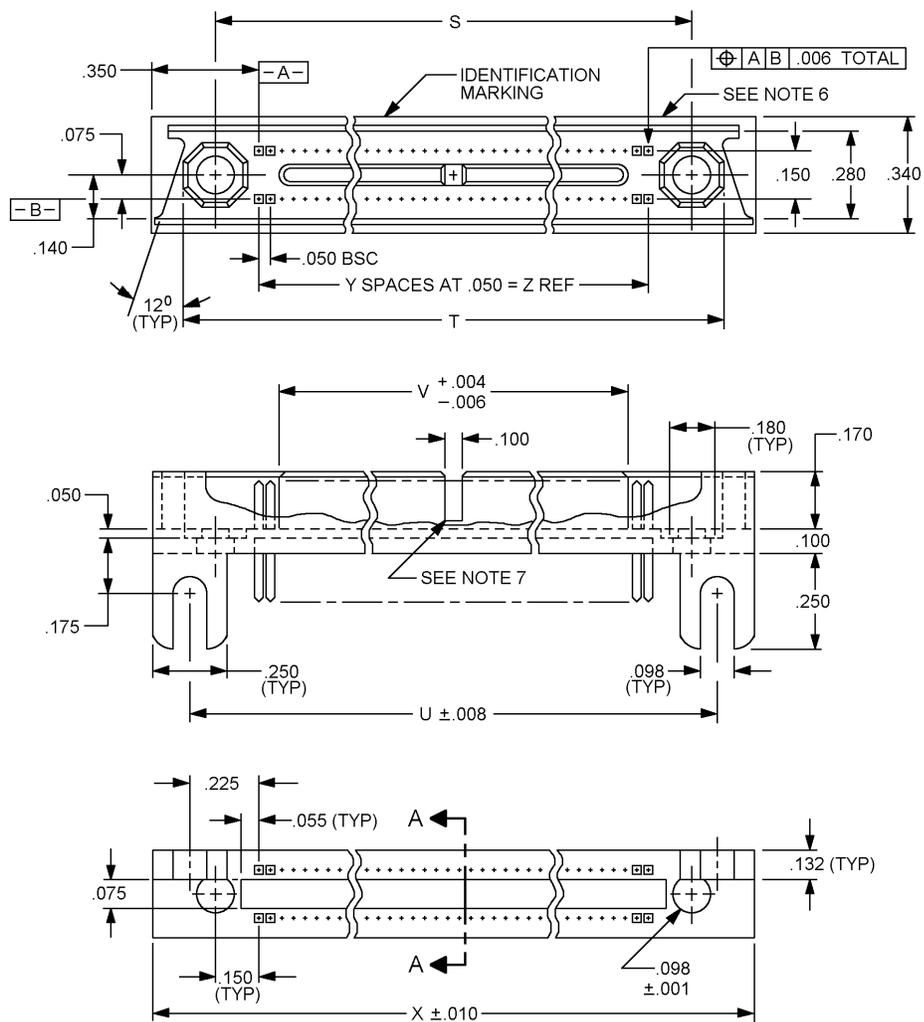
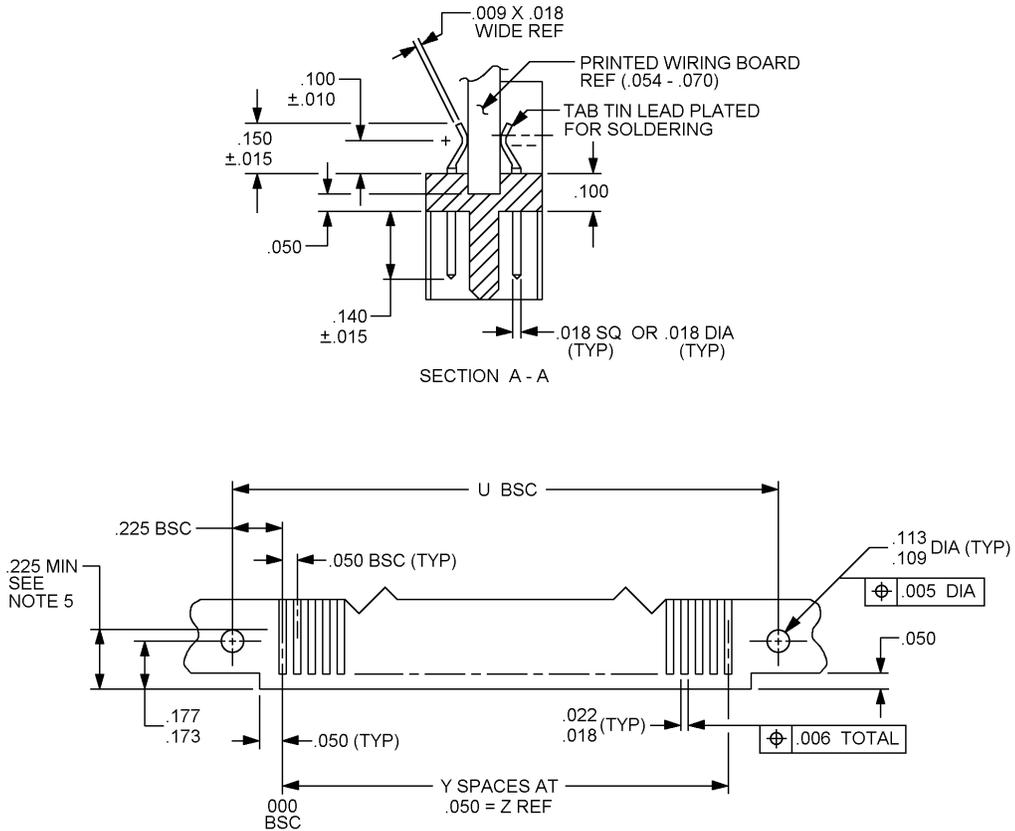


FIGURE 2. Connectors, plug without pin protectors, .050 (1.27 mm) spacing for style 2.

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Inches	mm	Inches	mm	Inches	mm
.001	0.03	.054	1.37	.170	4.32
.004	0.10	.055	1.40	.173	4.39
.005	0.13	.070	1.78	.175	4.44
.006	0.15	.075	1.90	.177	4.50
.008	0.20	.098	2.49	.180	4.57
.009	0.23	.100	2.54	.225	5.72
.010	0.25	.109	2.77	.250	6.35
.015	0.38	.113	2.87	.280	7.11
.018	0.46	.132	3.35	.340	8.64
.022	0.56	.140	3.56	.350	8.89
.050	1.27	.150	3.81		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are ± 0.005 (0.13 mm) and $\pm 2^\circ$ on angles.
4. These connectors mate with connectors specified in MIL-DTL-55302/119.
5. Minimum pad length on printed wiring board.
6. Numbers indicating end positions stamped this side only.
7. Except 20 through 50 positions.

FIGURE 1. Connectors, plug without protectors, .050 (1.27 mm) spacing for style 2 - Continued.

TABLE I. Dash numbers and dimensions for style 1.

Dash number	Number of contacts	Dimensions							Contact identification numbers
		S	T	U	V	X	Y	Z	
01	20	.750 (19.50)	.970 (24.64)	.900 (22.86)	.290 (7.37)	1.150 (29.21)	9	.450 (11.43)	1-10
02	30	1.000 (25.40)	1.220 (30.99)	1.150 (29.21)	.540 (13.72)	1.400 (35.56)	14	.700 (17.78)	1-15
03	40	1.250 (31.75)	1.470 (37.34)	1.400 (35.56)	.790 (20.07)	1.650 (41.91)	19	.950 (24.13)	1-20
04	50	1.500 (38.10)	1.720 (43.69)	1.650 (41.91)	1.040 (26.42)	1.900 (48.26)	24	1.200 (30.48)	1-25
05	60	1.750 (44.45)	1.970 (50.04)	1.900 (48.26)	1.290 (32.77)	2.150 (54.61)	29	1.450 (36.83)	1-30
06	70	2.000 (50.80)	2.220 (56.39)	2.150 (54.61)	1.540 (39.12)	2.400 (60.96)	34	1.700 (43.18)	1-35
07	80	2.250 (57.15)	2.470 (62.47)	2.400 (60.96)	1.790 (45.47)	2.650 (67.31)	39	1.950 (49.53)	1-40
08	90	2.500 (63.50)	2.720 (69.09)	2.650 (67.31)	2.040 (51.82)	2.900 (73.66)	44	2.200 (55.88)	1-45
09	100	2.750 (69.85)	2.970 (75.44)	2.900 (73.66)	2.290 (58.17)	3.150 (80.01)	49	2.450 (62.23)	1-50
10	110	3.000 (76.20)	3.220 (81.79)	3.150 (80.01)	2.540 (64.52)	3.400 (86.36)	54	2.700 (68.58)	1-55
11	128	3.450 (87.63)	3.670 (93.22)	3.600 (91.44)	2.990 (75.95)	3.850 (97.79)	63	3.150 (80.01)	1-64

TABLE II. Dash numbers and dimensions for style 2.

Dash number	Number of contacts	Dimensions							Contact Identification numbers
		S	T	U	V	X	Y	Z	
12	20	.750 (19.50)	.970 (24.64)	.900 (22.86)	.290 (7.37)	1.150 (29.21)	9	.450 (11.43)	1-10
13	30	1.000 (25.40)	1.220 (30.99)	1.150 (29.21)	.540 (13.72)	1.400 (35.56)	14	.700 (17.78)	1-15
14	40	1.250 (31.75)	1.470 (37.34)	1.400 (35.56)	.790 (20.07)	1.650 (41.91)	19	.950 (24.13)	1-20
15	50	1.500 (38.10)	1.720 (43.69)	1.650 (41.91)	1.040 (26.42)	1.900 (48.26)	24	1.200 (30.48)	1-25
16	60	1.750 (44.45)	1.970 (50.04)	1.900 (48.26)	1.290 (32.77)	2.150 (54.61)	29	1.450 (36.83)	1-30
17	70	2.000 (50.80)	2.220 (56.39)	2.150 (54.61)	1.540 (39.12)	2.400 (60.96)	34	1.700 (43.18)	1-35
18	80	2.250 (57.15)	2.470 (62.47)	2.400 (60.96)	1.790 (45.47)	2.650 (67.31)	39	1.950 (49.53)	1-40
19	90	2.500 (63.50)	2.720 (69.09)	2.650 (67.31)	2.040 (51.82)	2.900 (73.66)	44	2.200 (55.88)	1-45
20	100	2.750 (69.85)	2.970 (75.44)	2.900 (73.66)	2.290 (58.17)	3.150 (80.01)	49	2.450 (62.23)	1-50
21	110	3.000 (76.20)	3.220 (81.79)	3.150 (80.01)	2.540 (64.52)	3.400 (86.36)	54	2.700 (68.58)	1-55
22	128	3.450 (87.63)	3.670 (93.22)	3.600 (91.44)	2.990 (75.95)	3.850 (97.79)	63	3.150 (80.01)	1-64

REQUIREMENTS:

Design and construction:

Dimensions and configuration: See figures 1 and 2 and tables I and II.

Material:

Insulator body: Insulator material shall be in accordance with MIL-DTL-55302 or ASTM D5138 type LCP0120G30A43430 EA300ED035EE200EF140 or MIL-M-24519 type GLCP-30F.

Contact material: Contact material shall be in accordance with MIL-DTL-55302 or beryllium copper alloy C17400 in accordance with ASTM B768.

Plating: Contact plating shall be gold over nickel in accordance with MIL-DTL-55302 on the contact engagement area for .100 inch (2.54 mm) minimum length. The termination area plating shall be tin lead over nickel in accordance with MIL-DTL-55302 for .100 inch (2.54 mm) minimum length. The remainder of the contact shall be plated with nickel in accordance with MIL-DTL-55302.

Contact identification: See figures 1 and 2.

Contact rating: 1.5 Amperes per contact, maximum.

Operating temperature: -65°C to +125°C.

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Keying: See MIL-DTL-55302/31.

Mating and unmating: The maximum mating force in pounds shall be the number of contacts multiplied by .30 and the withdrawal force in pounds shall be a minimum of .03 times the number of contacts and shall not exceed the measured insertion force.

Contact resistance: The average contact resistance of all contacts measured shall not exceed .015 ohm, and no individual contact pair shall have a resistance exceeding .020 ohm.

Contact retention: .75 pound, minimum.

Dielectric withstanding voltage:

Sea level: 600 volts rms.

High altitude: 150 volts rms.

Solderability: Each connector shall be subjected to method 208 of MIL-STD-202 (solder termination only).

Part or Identifying Number (PIN): M55302/118 - (dash number from tables I and II).

Patent number 3,404,367. The Government has a royalty free license under this patent for the benefit of manufacturers of the item either for the Government or for use in equipment to be delivered to the Government.

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-55302/31	MIL-STD-202
MIL-DTL-55302/119	ASTM B768
MIL-M-24519	ASTM D5138

CONCLUDING MATERIAL

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

Preparing activity:
DLA - CC

(Project 5935-4470-000)

Review activities:
Army - AR, AT, AV, CR4, MI
Navy - AS, MC, OS, SH
Air Force - 19, 99

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 www.dodssp.daps.mil.