

INCH-POUND

MIL-DTL-83513/1G
25 June 2002
SUPERSEDING
MIL-PRF-83513/1F
15 August 1997

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, RECTANGULAR, PLUG, MICROMINIATURE,
POLARIZED SHELL, PIN CONTACTS, CLASS M, SOLDER TYPE

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 and
MIL-DTL-83513.

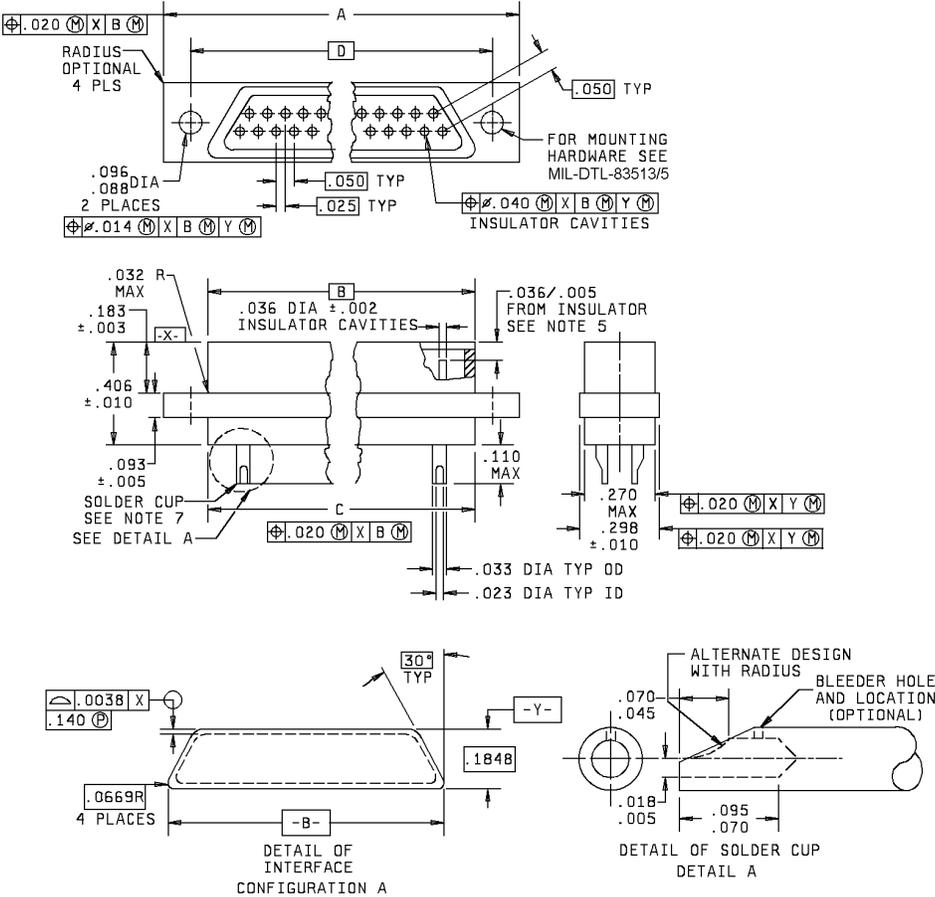


FIGURE 1. Connector, plug, .050 spacing.

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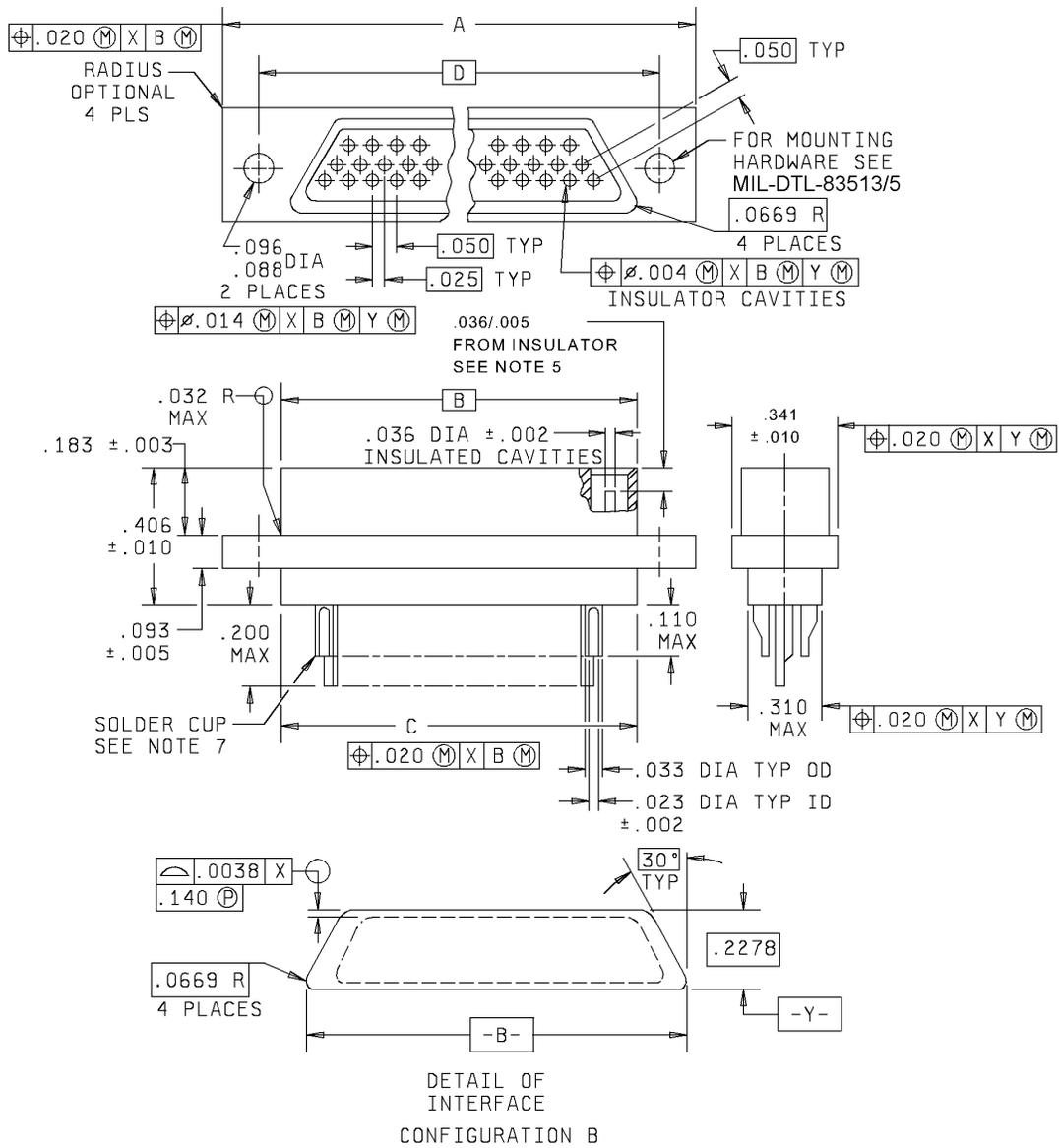


FIGURE 1. Connector, plug, .050 spacing. - Continued

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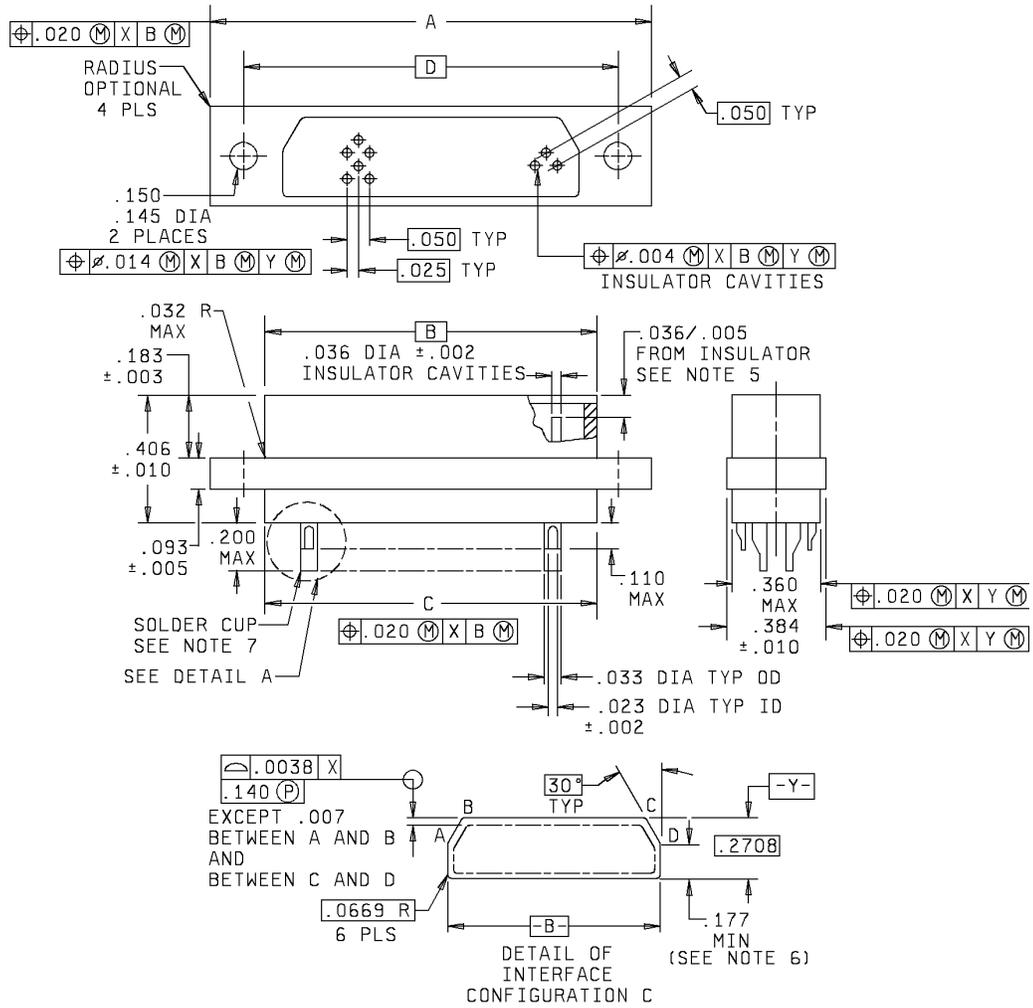


FIGURE 1. Connector, plug .050 spacing - Continued.

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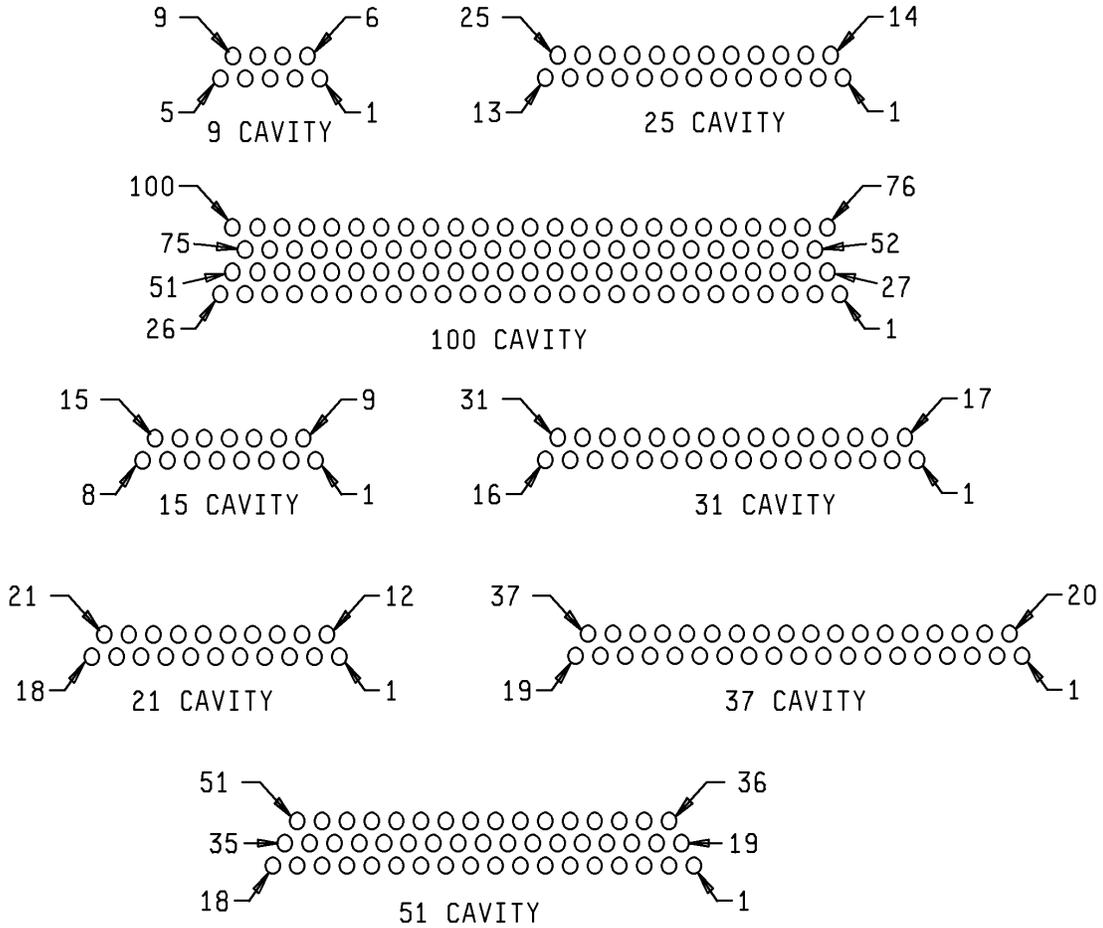
Number of cavities	A \pm .010 (.25)	B BSC	C \pm .010 -.018 + (.25) - (.46)	D BSC	Configuration letter
9	.775 (19.68)	.3338 (8.48)	.390 (9.91)	.565 (14.35)	A
15	.925 (23.50)	.4838 (12.29)	.540 (13.72)	.715 (18.16)	A
21	1.075 (27.30)	.6338 (16.10)	.690 (17.53)	.865 (21.97)	A
25	1.175 (29.84)	.7338 (18.64)	.790 (20.07)	.965 (24.51)	A
31	1.325 (33.66)	.8838 (22.45)	.940 (23.88)	1.115 (28.32)	A
37	1.475 (37.46)	1.0338 (26.26)	1.090 (27.69)	1.265 (32.13)	A
51	1.425 (36.20)	.9838 (24.99)	1.040 (26.42)	1.215 (30.86)	B
100	2.160 (54.86)	1.3838 (35.15)	1.432 (36.37)	1.800 (45.72)	C

Inches	mm	Inches	mm	Inches	mm	Inches	mm
.0015	0.038	.023	0.58	.090	2.29	.181	4.60
.002	0.05	.025	0.64	.0924	2.345	.183	4.65
.003	0.08	.032	0.81	.093	2.36	.1848	4.694
.0035	0.089	.033	0.84	.094	2.39	.200	5.08
.0038	0.097	.036	0.91	.095	2.41	.224	5.69
.004	0.10	.045	1.14	.100	2.54	.2278	5.786
.005	0.13	.050	1.27	.110	2.79	.267	6.78
.010	0.25	.065	1.65	.1139	2.893	.270	6.86
.014	0.36	.0669	1.669	.117	2.97	.298	7.57
.018	0.46	.070	1.78	.123	3.12	.310	7.87
.020	0.51	.088	2.24	.173	4.39		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are \pm .005 (0.13 mm).
4. Metric equivalents are in parentheses or columns.
5. Shell shall be flush to insulator within \pm .005 inch (0.13 mm).
6. Dimension line at point D located the point of intersection of the two adjacent side of the plug interface.
7. 26 AWG wire is the maximum wire size that can be used in the solder cup.

FIGURE 1. Connector, plug, .050 spacing. - Continued



NOTES:

1. Engaging face of pin insert shown.
2. Cavity identification numbers are for reference only and do not appear on part.

FIGURE 2. Insert arrangement.

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REQUIREMENTS:

Dimensions and configurations: See figure 1. This specification sheet describes the pin side of a rectangular metal shell connector. This connector uses reverse gender contact, i.e., the live pin recessed in the insulator with the static socket protruding from a shrouded interface.

Material and finish:

Shell: The requirements for shell materials shall be in accordance with MIL-DTL-83513.

Contact identification: See figure 2 for contact layout identification.

Contact connection: The pin contact (being recessed in the insulator) is normally connected to the live side of the circuit.

Current rating, maximum: 3 amperes per contact.

Mounting and mating hardware: Mounting hardware is to be ordered separately. For insert arrangements A through G, use MIL-DTL-83513/5, configurations A and B. For insert arrangement H, use MIL-DTL-83513/5, configuration C.

Mating receptacle: Shall conform to MIL-DTL-83513/2 or MIL-DTL-83513/4.

Part or Identifying Number (PIN): PIN shall consist of the letter M, the basic number of the specification sheet, a letter from the insert column and the shell finish.

M83513/01 -
Specification sheet

A
Insert arrangement
(see figure 2)

- A = 9
- B = 15
- C = 21
- D = 25
- E = 31
- F = 37
- G = 51
- H = 100

C
Shell finish
(Interface critical)

- C = Cadmium
- N = electroless nickel
(space applications only)
- P = Passivated Stainless Steel

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA - CC

(Project: 5935-4310-01)

Review activities:

- Army - AT, MI
- Navy - AS, CG, MC, SH
- Air Force - 99