



## MIL-DTL-55302/24G

Dash <u>1</u> / numbers	Number of contacts	Type	Dimensions					Contact identification numbers
			A	B	C	D	E	
45 46 47 48	10	I II III IV	1.255 (31.88)	.965 (24.51)	4	.300 (7.62)	.565 (14.35)	1 - 5 6 - 10
49 50 51 52	20	I II III IV	1.630 (41.40)	1.340 (34.04)	9	.675 (17.15)	.940 (23.88)	1 - 10 11 - 20
53 54 55 56	30	I II III IV	2.005 (50.93)	1.715 (43.56)	14	1.050 (26.67)	1.315 (33.40)	1 - 15 16 - 30
57 58 59 60	40	I II III IV	2.380 (60.45)	2.090 (53.09)	19	1.425 (36.20)	1.690 (42.93)	1 - 20 21 - 40
61 62 63 64	50	I II III IV	2.755 (69.98)	2.465 (62.61)	24	1.800 (45.72)	2.065 (52.45)	1 - 25 26 - 50
65 66 67 68	60	I II III IV	3.130 (79.50)	2.840 (72.14)	29	2.175 (55.25)	2.440 (61.98)	1 - 30 31 - 60
69 70 71 72	70	I II III IV	3.505 (89.03)	3.215 (81.66)	34	2.550 (64.77)	2.815 (71.50)	1 - 35 36 - 70
73 74 75 76	80	I II III IV	3.880 (98.55)	3.590 (91.19)	39	2.925 (74.30)	3.190 (81.03)	1 - 40 41 - 80
77 78 79 80	90	I II III IV	4.255 (108.08)	3.965 (100.71)	44	3.300 (83.82)	3.565 (90.55)	1 - 45 46 - 90
81 82 83 84	100	I II III IV	4.630 (117.60)	4.340 (110.24)	49	3.675 (93.35)	3.940 (100.08)	1 - 50 51 - 100
85 86 87 88	110	I II III IV	5.005 (127.13)	4.715 (119.76)	54	4.050 (102.87)	4.315 (109.60)	1 - 55 56 - 110

FIGURE 1. Connectors, receptacle, .075 (1.90 mm) spacing - Continued.

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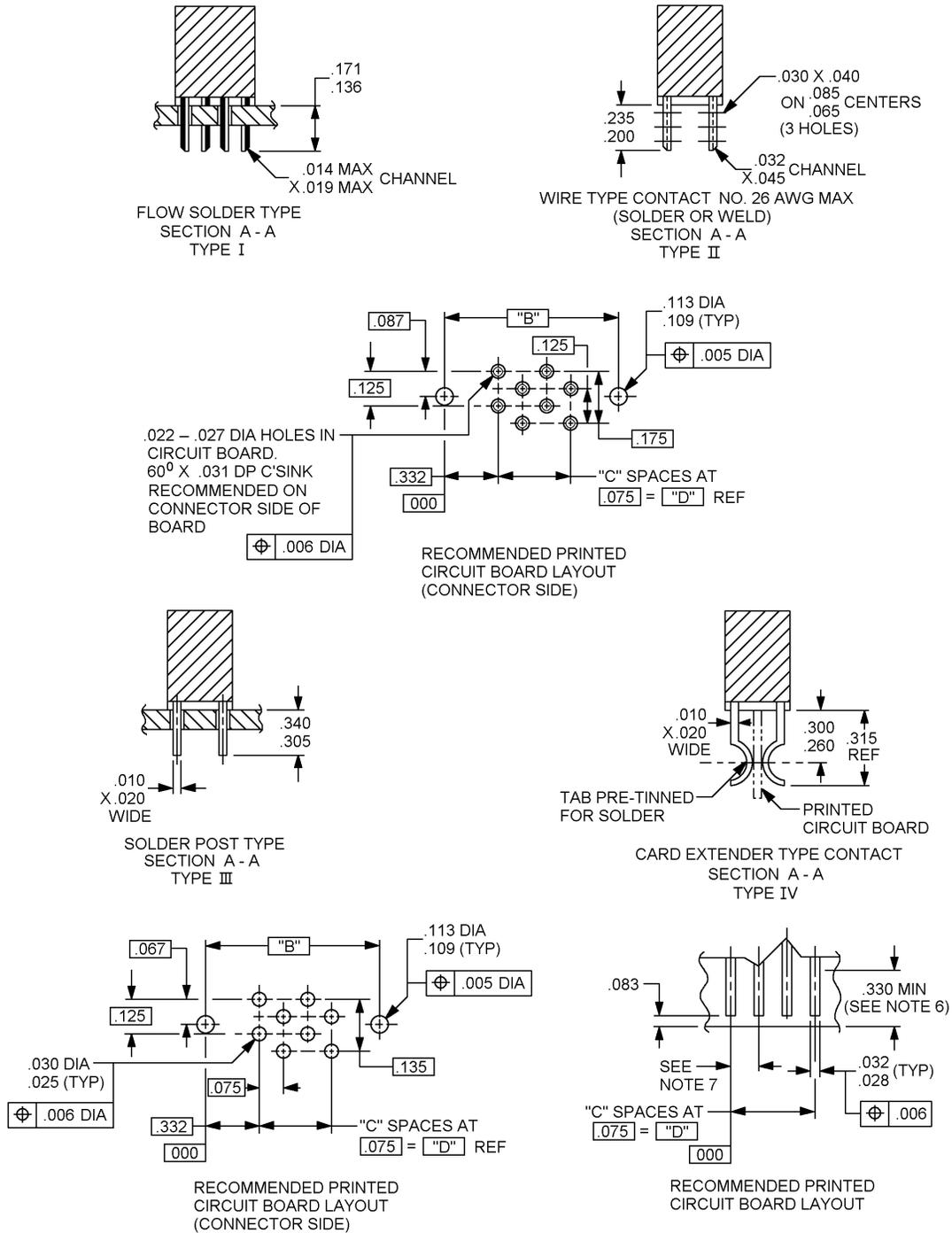


FIGURE 1. Connectors, receptacle, .075 (1.90 mm) spacing - Continued.

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Inches	mm	Inches	mm	Inches	mm
.003	0.08	.050	1.27	.136	3.45
.004	0.10	.0625	1.588	.140	3.56
.005	0.13	.063	1.60	.171	4.34
.006	0.15	.065	1.65	.175	4.44
.010	0.25	.067	1.70	.180	4.57
.012	0.30	.073	1.85	.200	5.08
.014	0.36	.075	1.90	.235	5.97
.015	0.38	.080	2.03	.242	6.15
.018	0.46	.081	2.06	.248	6.30
.019	0.48	.083	2.11	.250	6.35
.020	0.51	.085	2.16	.255	6.48
.022	0.56	.087	2.21	.260	6.60
.025	0.64	.096	2.44	.300	7.62
.027	0.69	.101	2.57	.305	7.75
.028	0.71	.109	2.77	.315	8.00
.030	0.76	.113	2.87	.330	8.38
.031	0.79	.125	3.18	.332	8.43
.032	0.81	.130	3.30	.340	8.64
.040	1.02	.135	3.43	.400	10.16
.045	1.14				

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-55302/23.
5. Use printed circuit boards with the type III receptacle.
6. Minimum pad length on printed circuit board.
7. Termination layout on .025 (0.64 mm) modular grid.
8. Numbers indication, every 5 cavities marked or molded on side (except 10 position). Numbers indicating end cavities and lines indicating every 5 cavities molded or marked on mating face.
9. Location indicators embossed on surface.

FIGURE 1. Connectors , receptacle, .075 (1.90 mm) spacing - Continued.

REQUIREMENTS:

Design and construction:

Dimensions and configuration: See figure 1.

Material:

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 alloy C17400 in accordance with ASTM B768.

Plating:

Engagement area: Gold in accordance MIL-DTL-55302 for .100 length, over nickel all over in accordance with MIL-DTL-55302.

Termination area: Tin lead over nickel in accordance with MIL-DTL-55302 for the lengths:

.165 minimum length for type I, .200 minimum length for type II.

.300 minimum length for type III, .140 minimum length for type IV.

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.

Oversized pin exclusions (sockets only): .0465 diameter pin.

Contact separation force: The connector shall meet the requirements of MIL-DTL-55302/29.

Wire size: Number 26 AWG maximum with type II, solder eyelet contact for wire termination.

Resistance to test probe damage: The connector shall meet the requirements of MIL-DTL-55302/30.

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: The average contact resistance of all contact measured shall not exceed .015 ohm, and 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.

Replacement contacts: See MIL-DTL-55302/32.

Contact removal tool: MIL-I-81969/9-01.

MIL-DTL-55302/24G

Part or Identifying Number (PIN): M55302/24-(dash number from figure 1).

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.

Supersession data: See table I.

TABLE I. Style 1 (Internal keying) supersession data.

Style 1 (Internal keying) PIN	Superseding style 2 (External keying) PIN <sup>1/</sup>
M55302/24-01	M55302/24-45
M55302/24-02	M55302/24-46
M55302/24-03	M55302/24-47
M55302/24-04	M55302/24-48
M55302/24-05	M55302/24-49
M55302/24-06	M55302/24-50
M55302/24-07	M55302/24-51
M55302/24-08	M55302/24-52
M55302/24-09	M55302/24-53
M55302/24-10	M55302/24-54
M55302/24-11	M55302/24-55
M55302/24-12	M55302/24-56
M55302/24-13	M55302/24-57
M55302/24-14	M55302/24-58
M55302/24-15	M55302/24-59
M55302/24-16	M55302/24-60
M55302/24-17	M55302/24-61
M55302/24-18	M55302/24-62
M55302/24-29	M55302/24-63
M55302/24-20	M55302/24-64
M55302/24-21	M55302/24-65
M55302/24-22	M55302/24-66
M55302/24-23	M55302/24-67
M55302/24-24	M55302/24-68
M55302/24-25	M55302/24-69
M55302/24-26	M55302/24-70
M55302/24-27	M55302/24-71
M55302/24-28	M55302/24-72
M55302/24-29	M55302/24-73
M55302/24-30	M55302/24-74
M55302/24-31	M55302/24-75
M55302/24-32	M55302/24-76
M55302/24-33	M55302/24-77
M55302/24-34	M55302/24-78
M55302/24-35	M55302/24-79
M55302/24-36	M55302/24-80
M55302/24-37	M55302/24-81
M55302/24-38	M55302/24- 82
M55302/24-39	M55302/24-83
M55302/24-40	M55302/24-84
M55302/24-41	M55302/24-85
M55302/24-42	M55302/24-86
M55302/24-43	M55302/24-87
M55302/24-44	M55302/24-88

<sup>1/</sup> Style 2 (external keying) receptacles can be mated to existing style 1 (internal keying) plugs.

Group qualification: See table II.

TABLE II. Group qualification.

Qualification of any of the following connectors 1/, 2/	Qualifies the following connectors	Retains qualification on the following
M55302/24-**	M55302/24-**	M55302/24-** M55302/25-** M55302/27-**
M55302/25-**	M55302/24-** M55302/25-** M55302/27-**	
M55302/27-**	M55302/24-** M55302/27-**	

- 1/ For initial qualification, connectors with the largest number of contact positions from the left hand column shall be used to obtain qualification for parts in corresponding center column.
- 2/ For qualification retention, data may be supplied on any two parts from the left hand column in order to retain qualification for the parts listed in the right hand column.
- \*\* Signifies number of contacts.

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 sheet references the following.

- MIL-DTL-55302/23                   ASTM B768
- MIL-DTL-55302/25                   ASTM D5138
- MIL-DTL-55302/27
- MIL-DTL-55302/29
- MIL-DTL-55302/30
- MIL-DTL-55302/31
- MIL-DTL-55302/32
- MIL-M-24519
- MIL-I-81969/9

CONCLUDING MATERIAL

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

Preparing activity:  
 DLA - CC  
 (Project 5935-4412-002)

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](http://www.dodssp.daps.mil).