

INCH-POUND

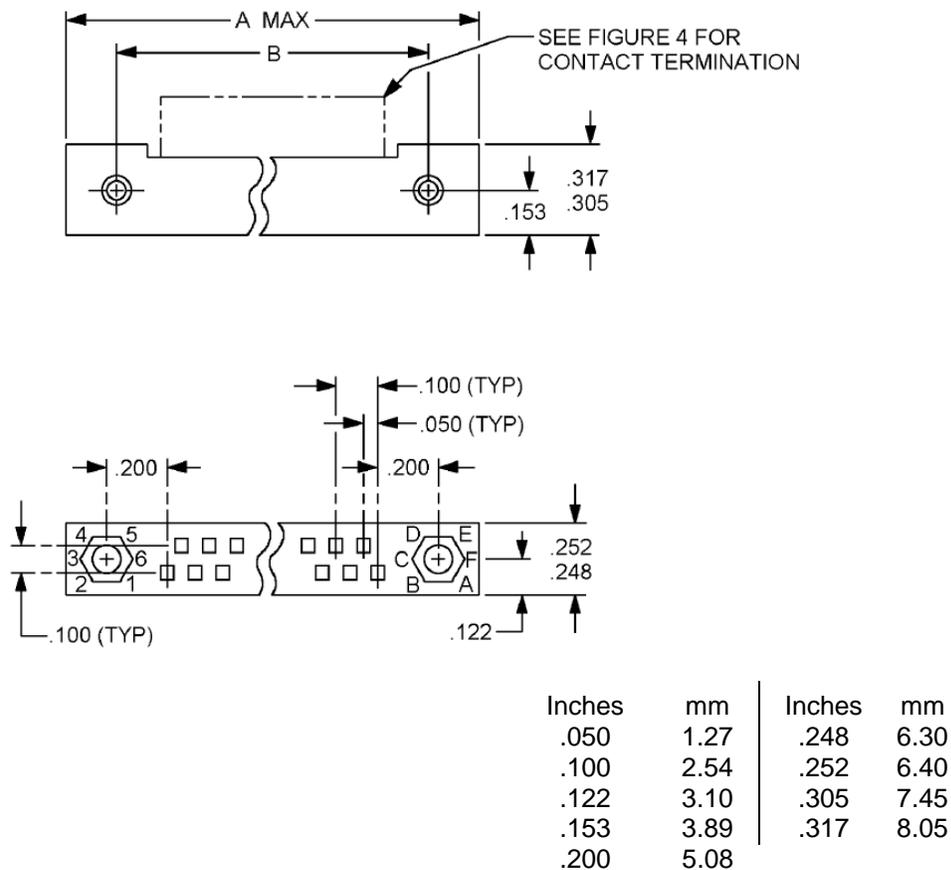
MIL-DTL-55302/142C
w/AMENDMENT 1
30 November 2012
SUPERSEDING
MIL-DTL-55302/142C
7 March 2005

DETAIL SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES, RECEPTACLE WITH SOCKET CONTACTS, FOR PRINTED WIRING BOARDS (.100 INCH SPACING)

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.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerance is $\pm .005$ (0.13 mm).

FIGURE 1. Connector, receptacle (.100 inch spacing).

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TABLE I. Arrangements and characteristics.

Contact arrangement	Number of contacts	Dimensions (inches)	
		A max	B ± .006 (0.15)
M55302/142A	17	1.516 (38.50)	1.200 (30.48)
M55302/142B	29	2.114 (53.70)	1.800 (45.72)
M55302/142C	33	2.314 (58.80)	2.000 (50.80)
M55302/142D	41	2.716 (69.00)	2.400 (60.96)
M55302/142E	53	3.315 (84.20)	3.000 (76.20)
M55302/142F	65	3.917 (99.50)	3.60 (91.44)

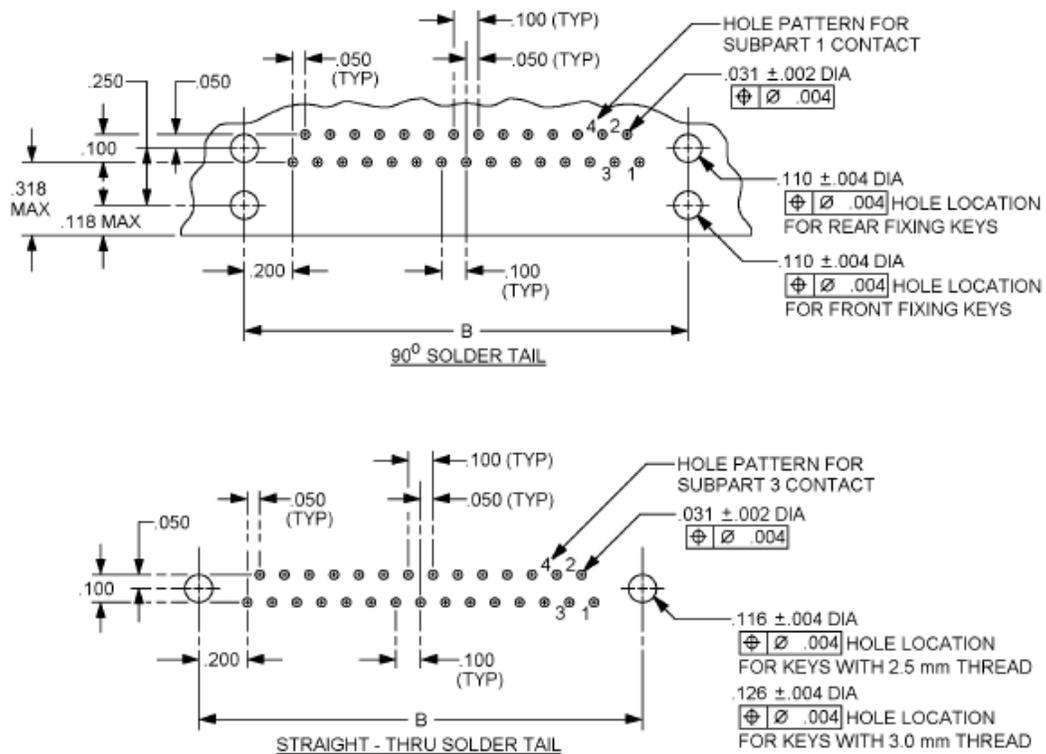
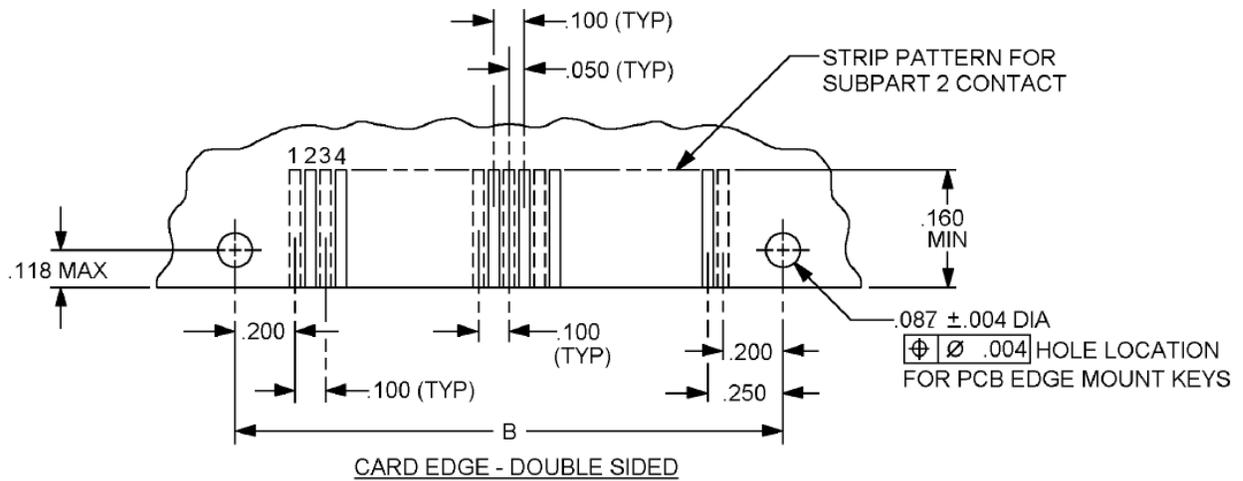


FIGURE 2. Recommended hole patterns.

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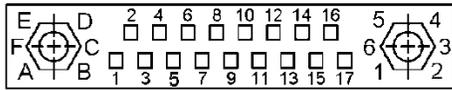
Inches	mm	Inches.	mm	Inches	mm
.002	0.05	.100	2.54	.200	5.08
.004	0.10	.110	2.79	.250	6.35
.025	0.64	.116	2.95	.318	8.08
.031	0.79	.118	3.00		
.050	1.27	.126	3.20		
.087	2.21	.160	4.06		

NOTES:

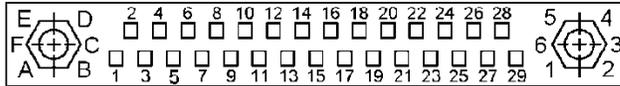
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerance is ± .005 (0.13 mm).
4. Metric equivalents are in parentheses.

FIGURE 2. Recommended hole patterns – Continued.

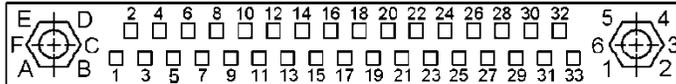
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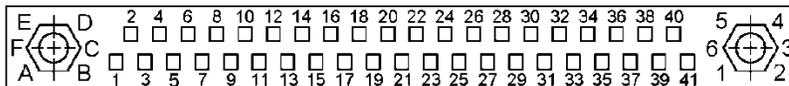
M55302/142A



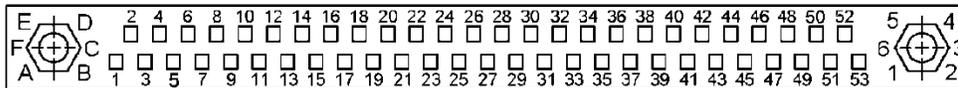
M55302/142B



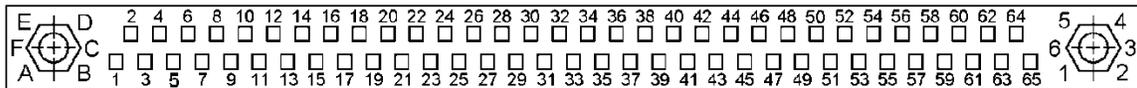
M55302/142C



M55302/142D



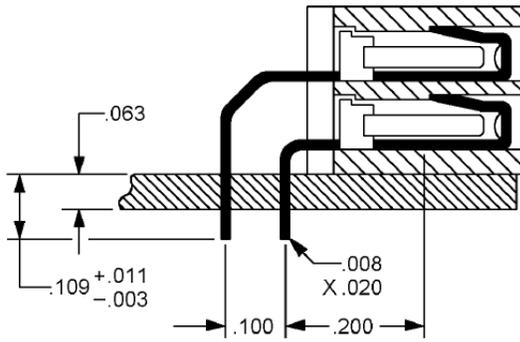
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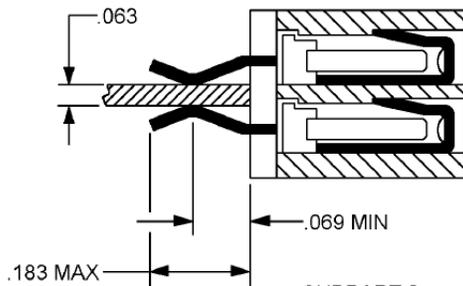
M55302/142F

FIGURE 3. Contact arrangements and keying arrangements.

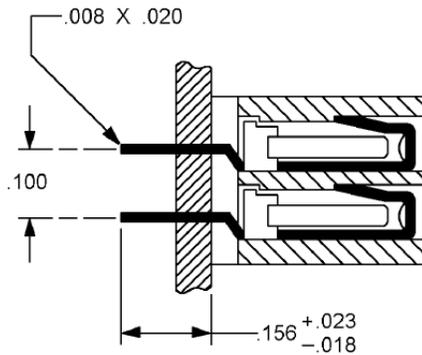
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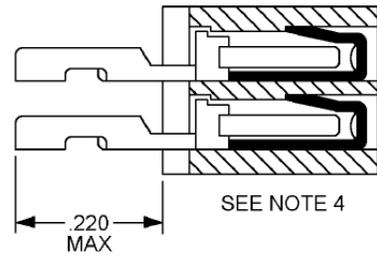
SUBPART 1
90° SOLDER TAILS



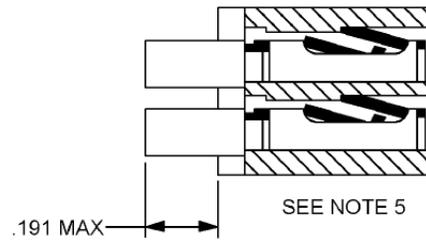
SUBPART 2
CARD EDGE



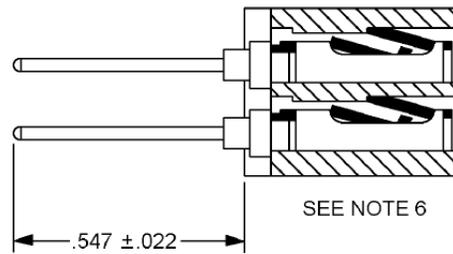
SUBPART 3
SOLDER TAILS



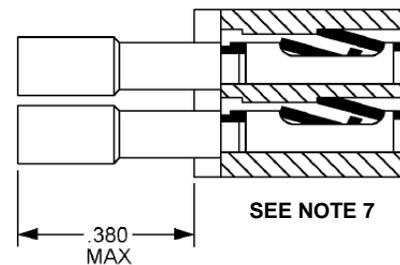
SEE NOTE 4
SUBPART 4
SOLDER TERMINALS



SEE NOTE 5
SUBPART 5
CRIMP 24-28 AWG



SEE NOTE 6
SUBPART 6
WIRE WRAPPOST



SEE NOTE 7
SUBPART 7
CRIMP 22 AWG

FIGURE 4. Connector terminations.

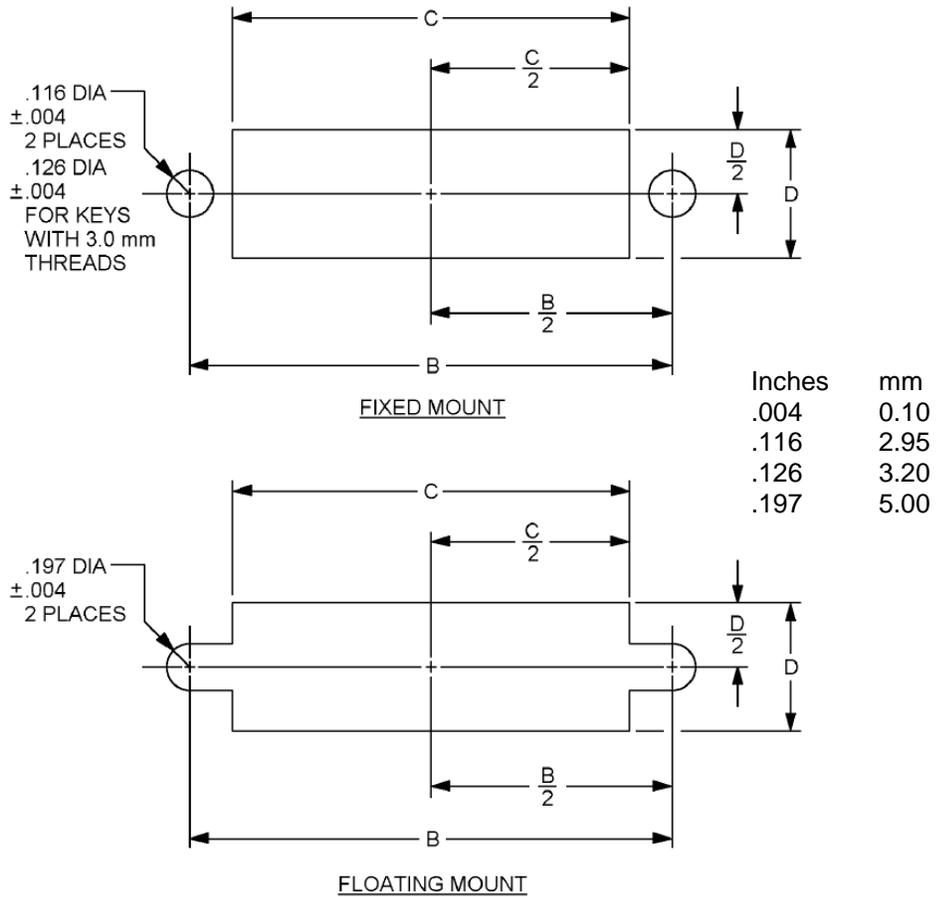
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Inches	mm	Inches	mm
.003	0.08	.100	2.54
.008	0.20	.109	2.77
.011	0.28	.156	3.96
.018	0.46	.183	4.65
.020	0.51	.191	4.85
.022	0.56	.200	5.08
.023	0.58	.220	5.59
.063	1.60	.380	9.65
.069	1.75	.547	13.89

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerance is $\pm .005$ (0.13 mm).
4. Contact accepts no. 22 AWG wire.
5. Contact, crimp type, accepts no 22-26 AWG wires.
6. Contact with $.025 \text{ inch}^2$ (0.64 mm^2) wrappost.
7. Contact, crimp type with insulation support barrel, accepts no. 22-26 AWG wire.

FIGURE 4. Connector terminations – Continued.

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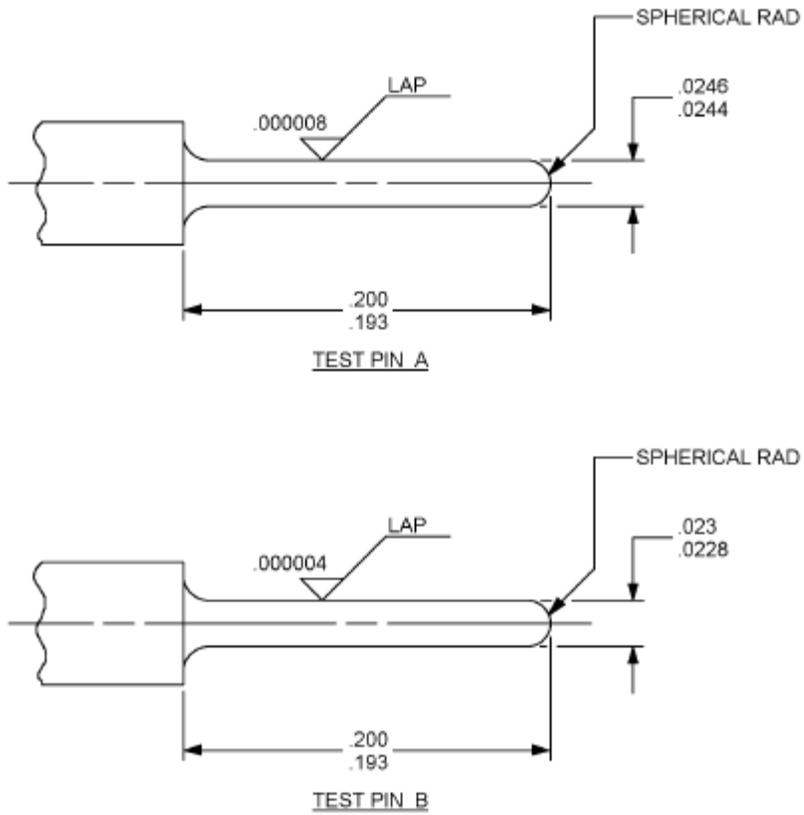
Dimension	Number of Contacts					
	17	29	33	41	53	65
B ± .008 (± 0.20)	1.200 (30.48)	1.800 (45.72)	2.000 (50.80)	2.400 (60.96)	3.000 (76.20)	3.600 (91.44)
C minimum	1.020 (25.91)	1.618 (41.10)	1.819 (46.20)	2.221 (56.41)	2.819 (71.60)	3.422 (86.92)
D minimum	.374 (9.45)	.374 (9.45)	.374 (9.45)	.374 (9.45)	.374 (9.45)	.374 (9.45)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerance is ± .005 (0.13 mm).
4. Floating mount panel thickness .085 (2.15 mm) maximum.

FIGURE 5. Recommended panel cutouts.

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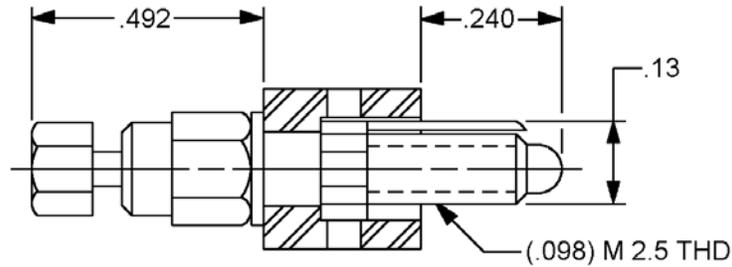


Material: Tool steel

Inches	mm
.000004	0.00001
.000008	0.00002
.0228	0.579
.023	0.58
.0244	0.619
.0266	0.676
.193	4.90
.200	5.08

FIGURE 6. Test pins.

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(1U & 2U) PLUG - ROTATING
JACKSCREW - POLARIZED

Inches	mm
.098	2.49
.13	3.30
.240	6.10
.492	12.50

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerance is $\pm .015$ (0.38 mm) for lengths in hundredths, and $\pm .010$ (± 0.38 mm) for lengths in thousandths..
4. 1U has hexagonal base with 6 polarizing positions; 2U has a square base with 4 polarizing positions.

FIGURE 7. Mounting hardware

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REQUIREMENTS:

Dimensions and configurations: See figures 1 through 5.

Contact identification: See figure 3.

Contact retention: 4 pounds minimum for each contact.

Contact engagement: 0.7 ounce minimum, 3.6 ounces maximum.

Contact separation: 0.5 ounce minimum. Use the following test procedure:

- a. Insert and withdraw test pin "A" (see figure 6)
- b. Insert test pin "B" (see figure 6) fully, then withdraw the pin and measure the separation force.

Contact resistance: Shall not exceed 12 milliohms.

Dielectric withstanding voltage:

Sea level: 1,000 Vrms, 60 Hz.

High altitude: 300 Vrms, 60 Hz.

Current rating, maximum: 3.0 amperes.

Keying socket: Two hexagonal keyed guides provide 36 polarizing positions. Connectors are supplied with hex pins in the "1" and "A" positions, except for 1/4-turn locking styles, which are keyed in "F" and "6" positions. When required, connectors can be easily keyed to the desired position by using a standard wrench or screwdriver.

Crimping tools (for subparts 4 and 6):

Basic tool: M22520/2-01.

Positioner: M22520/2-36.

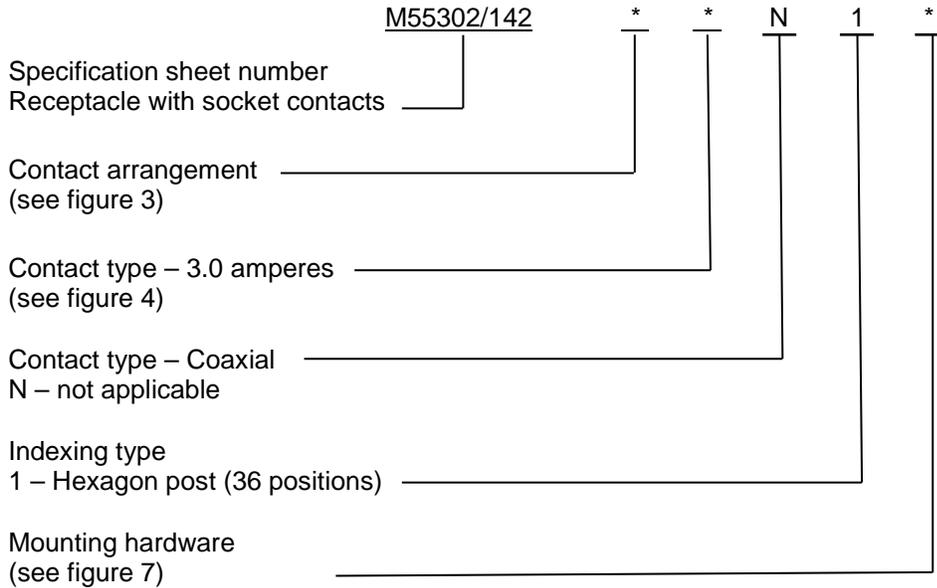
Retention clip: Optional.

Oversize pin exclusion test: Not applicable.

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Part or Identifying Number (PIN): Consists of the letter M, the basic number of the specification sheet, and a dash number compiled as follows:

Example:



Qualification: Qualification is not required for this specification sheet.

First article testing (FAT): FAT shall be in accordance with MIL-DTL-55302, qualification inspection.

Sample size: 6 connectors shall be subjected to the FAT. All sample units shall be subjected to the inspections in subgroup I. The sample units shall be divided equally into 3 groups of 2 and subjected to the inspection for their particular subgroups. Contacts shall be tested as specified in subgroup 4A or 4B as applicable.

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Referenced documents. This document references MIL-DTL-55302.

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CONCLUDING MATERIAL

Custodians:

Army – CR
Navy – EC
Air Force – 85
DLA – CC

Preparing activity:
DLA - CC

(Project 5935-2012-079)

Review activities:

Army – AR, AT, AV, CR4
Navy – AS, MC, OS, SH
Air Force – 19, 99

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