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IN REPLY

REFER TO DSCC -VAI (Mr. Antonelli/ (DSN 850) 614-692-0576/ra)

May 10, 2004

SUBJECT: Initial Drafts of MIL-DTL-55302/102E, /110H, /111B, /113F, Connectors, Printed Circuit Subassembly and Accessories, Plug and Receptacle, Various, for Printed Wiring Boards (.100 inch spacing), Project number 5935-4504-000, -4447-000, -4448-000 and -4449-000

Military/Industry Distribution

The initial drafts for the subject documents, which are being revised for conversion to detail status in accordance with acquisition reform and to replace obsolete references, have been placed on the DSCC-VAI website for you to review and comment. The website address is;
<http://www.dsccl.dla.mil/Programs/Milspec/DocSearch.asp>

If these documents are of interest to you, please provide your comments or suggested changes by e-mail to ralph.antonelli@dla.mil or by fax at (614) 692-6940. You may also send comments or suggested changes on Compilation of Comments form 155, shown at the end of the draft documents posted on the web.

Comments or suggested changes that are not editorial in nature should include justification. Industrial activities should indicate whether they are commenting from the standpoint of a "User" or "Manufacturer." Military review activities should forward their comments to their custodians in sufficient time to allow for consolidating the departmental reply. Military departments must identify their comments as either "Essential" or "Suggested." Essential comments, which must be accepted or withdrawn, should be supported by test data unless they obviously require no data.

Please return comments to this Center no later than 45 days from the date of this letter. Any further coordination concerning this document will be circulated only to firms and organizations that furnish comments or reply that they have an interest.

If you do not have access to the world wide web or you have problems downloading this document, please notify Mr. Ralph Antonelli at either the above e-mail address or fax number or by telephone at (614) 692-0576.

Sincerely,

/ signed /

RICHARD L. TAYLOR
Chief
Interconnection Devices Team

cc:
VQP (Tony Carnevlae)
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AF -11 (Jim Arnold - 88 OSS/OSE)

INCH-POUND
MIL-DTL-55302/110H
DRAFT
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 used 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-55302.

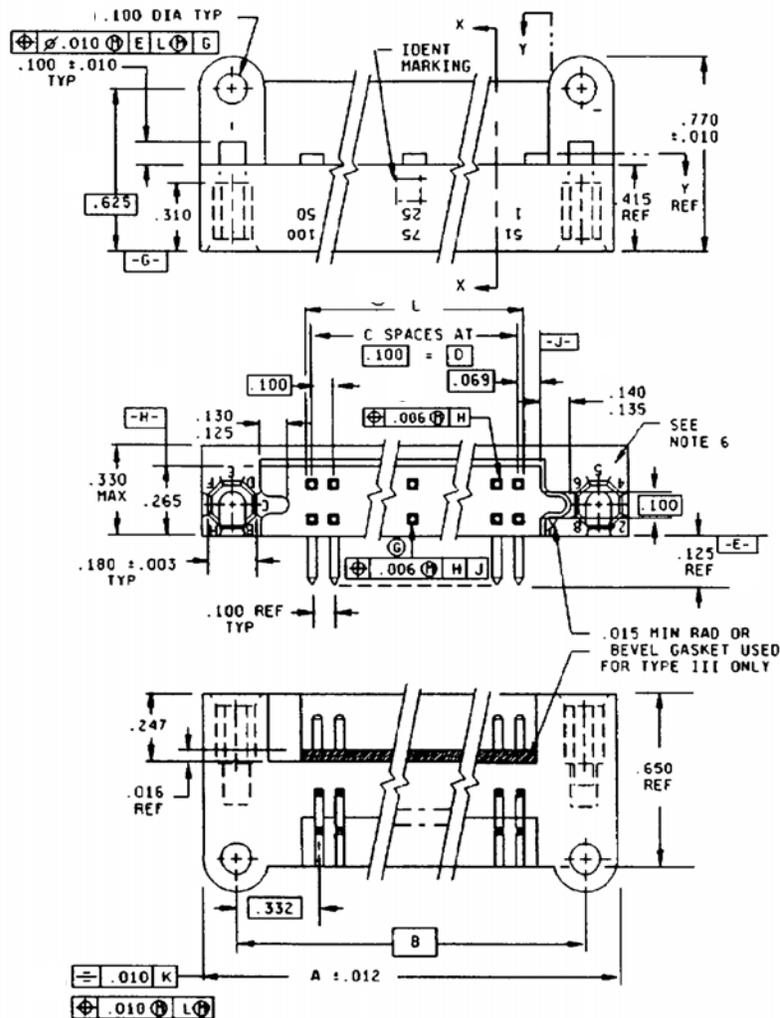
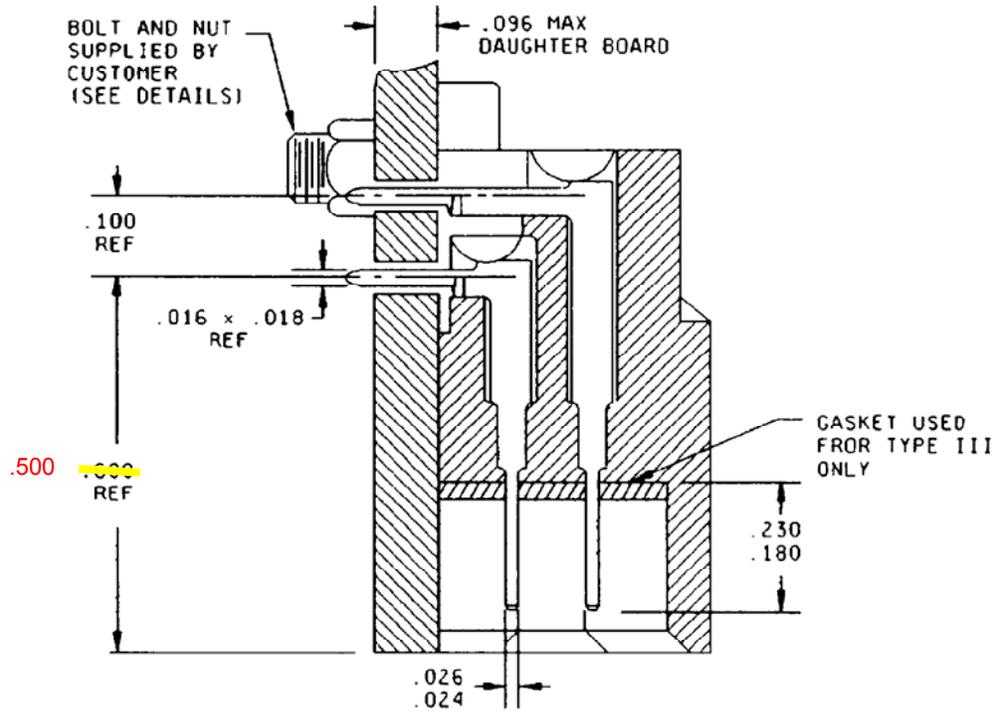
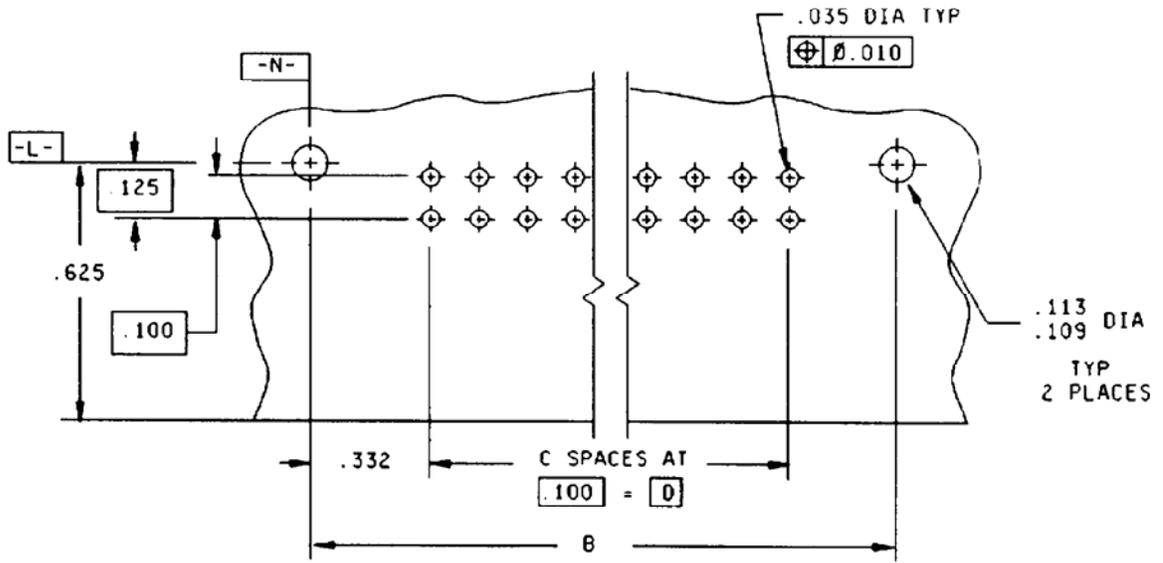


FIGURE 1. Connectors, plug, .100 (2.54 mm) square grid.



SECTION X-X



RECOMMENDED PRINTED CIRCUIT BOARD LAYOUT

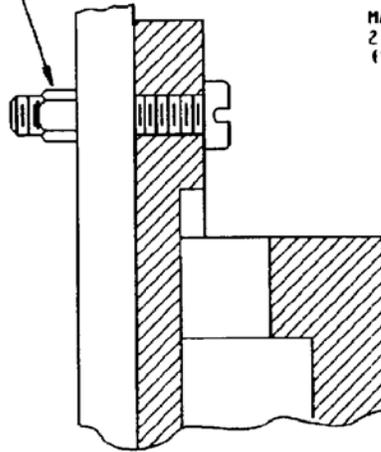
FIGURE 1. Connectors, plug, .100 (2.54 mm) square grid - Continued.

MIL-DTL-55302/110H

.086-56 COLD ROLLED STEEL PAN HEAD MACHINE SCREW, SLOTTED, CARBON STEEL, CADMIUM PLATED, NC-2A AND UNC-2A, SEE NOTE 2, OR EQUIVALENT AND NUTS

NASM35649 (NAS35649-222)

MAX TORQUE = 1.4 IN-LB (SEE NOTE 1)

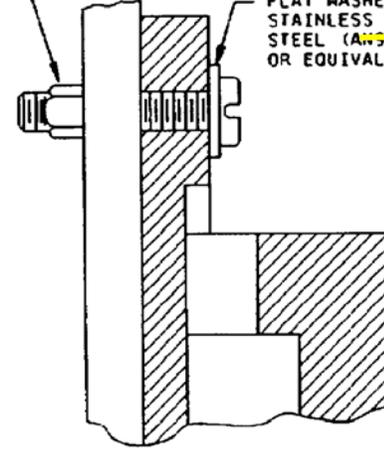


MS51957

.086-56 STAINLESS STEEL PAN HEAD MACHINE SCREW (MS51957 SEE NOTE 2 OR EQUIVALENT) AND NUTS (NAS35649-224)

NASM35649

MAX TORQUE = 2.4 IN-LB (SEE NOTE 1)



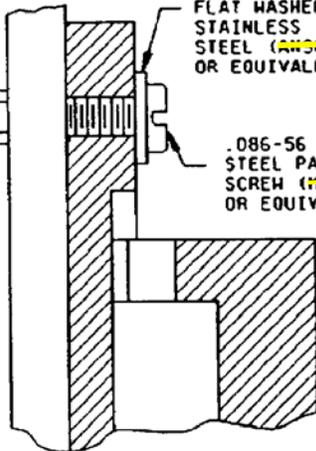
FLAT WASHER STAINLESS STEEL (NAS 1149 OR EQUIVALENT)

MOUNTING RECOMMENDATIONS

NASM21042

MAX TORQUE NUT (NAS21042-02)

MAX TORQUE = 3.0 IN-LB (SEE NOTE 1)

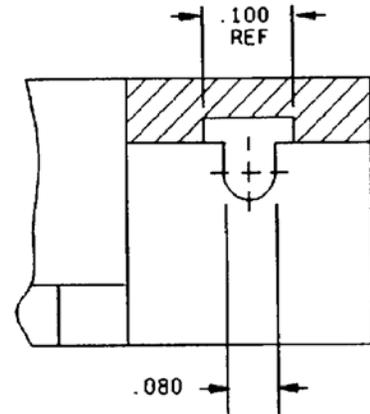


FLAT WASHER STAINLESS STEEL (NAS 1149 OR EQUIVALENT)

NAS 1149

.086-56 STAINLESS STEEL PAN HEAD MACHINE SCREW (MS51957 SEE NOTE 2 OR EQUIVALENT)

MS51957



KEYING RIVET HOLE CONFIGURATION

SECTION Y-Y

NOTES:

1. Torque wrench must be used when fastening connector to printed circuit board.
2. Length to be determined by user.

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

MIL-DTL-55302/110H

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 ± 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.

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>2/</u>	Type	Number of contacts	Dimensions <u>1/</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 <u>2</u> (192.15)	69	6.900 (175.26)	1, 71

1/ Metric equivalents are in parentheses.

2/ See table II for superseded part numbers.

MIL-DTL-55302/110H

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 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.

US patent number 3,404,367

MIL-DTL-55302/110H

Supersession data: See table I.

TABLE I. 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

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 specification sheet references the following documents](#)

[MIL-DTL-55302/27](#)

[MIL-DTL-55302/31](#)

[MIL-M-24519](#)

[MS51957](#)

[ASTM B5138](#)

[ASTM B768](#)

[NAS 1149](#)

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 www.dodssp.daps.mil.

PROJECT NUMBER		COMPILATION OF COMMENTS		COMMENT NUMBER
DOCUMENT		COMMENTOR IND NAME OR CODE	[] MFR [] USER [] IND ASSOC	
DOD USE ONLY	DEPT	[] A [] N [] AF [] DLA [] NSA [] CNDN [] NASA	[] ESSENTIAL [] SUGGESTED	
RECOMMENDED DISPOSITION OF COMMENT:		[] ACCEPTANCE [] NON-ACCEPTED-SEE REASON [] WITHDRAW [] MODIFY [] DISCUSS		
FINAL DISPOSITON OF COMMENT:		[] ACCEPTED [] NON-ACCEPTED [] WITHDRAW [] MODIFY		

DESC FORM 155

PROJECT NUMBER		COMPILATION OF COMMENTS		COMMENT NUMBER
DOCUMENT		COMMENTOR IND NAME OR CODE	[] MFR [] USER [] IND ASSOC	
DOD USE ONLY	DEPT	[] A [] N [] AF [] DLA [] NSA [] CNDN [] NASA	[] ESSENTIAL [] SUGGESTED	
RECOMMENDED DISPOSITION OF COMMENT:		[] ACCEPTANCE [] NON-ACCEPTED-SEE REASON [] WITHDRAW [] MODIFY [] DISCUSS		
FINAL DISPOSITON OF COMMENT:		[] ACCEPTED [] NON-ACCEPTED [] WITHDRAW [] MODIFY		

DESC FORM 155