



DEFENSE LOGISTICS AGENCY
LAND AND MARITIME
P.O. BOX 3990
COLUMBUS, OHIO 43218-3990

April 5, 2023

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Engineering Practice Study(EPS): MIL-DTL-32139/15 and /16
Project Number(s): 5935-2023-054

These initial draft(s) for these subject document(s), are now available for viewing and downloading from the DLA Land and Maritime-VA Web site:

<https://landandmaritimeapps.dla.mil/programs/milspec/default.aspx>

The purpose of this EP Study is to address the D dimensions, leads for the co-planar from the surface X, and the PCB layout for the pad lengths.

Concurrence or comments are required at this Center within 30 days from the date of this letter. Late comments will be held for the next coordination of the document. Comments from military departments must be identified as either "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians of this office, as applicable, in sufficient time to allow for consolidating the department reply. Lack of response to this draft will be construed as concurrence. **Since Navy-EC is the custodian for this document, all Navy review activities should forward their comments directly to this Center.**

If these document(s) are of interest to you, please provide your comments or suggested changes. The point of contact for this document is Mr. Wypasek, phone number 614-692-0530, facsimile transmission, 614-692-6939, e-mail edmund.wypasek@dlam.mil, or may be mailed via the US Postal Service to DLA LAND AND MARITIME, ATTN: VAI (Attention: Ed Wypasek), P.O. Box 3990, Columbus, OH 43218-3990.

Sincerely,

/SIGNED/

ABDONASSER M. ABDOUNI
Chief,
Interconnection Branch

ENGINEERING PRACTICE STUDY
(EPS)

MIL-DTL-32139/15 and /16

CONNECTORS, ELECTRICAL, RECTANGULAR,
NANOMINIATURE, DUAL ROW, PLUG, RECEPTACLE, POLARIZED SHELL,
PIN, SOCKETS CONTACTS, VERTICAL PCB SURFACE MOUNT SHELL TYPE

PROJECT NUMBER: 5935-2023-054

5 April 2023

Prepared by:
Ed Wypasek
Project officer (Rectangular connectors)
DLA Land and Maritime-VAI

ENGINEERING PRACTICE STUDY
MIL-DTL-32139/15 and /16

Objective: The purpose of this EP Study is to address the D dimensions, leads for the co-planar from the surface X, and the PCB layout for the pad lengths.

Background: The initial draft resulted a difference of the manufactures comments. The comments are applicable to both the MIL-DTL-32139/15 and /16. Please see the disposition of comments as reference that was emailed 2/13/23.

1. Figure 1, D dimensions:
Manufacture A - responded for shorter dimensions.
Manufacture B – keep the larger dimension from the initial draft.
Manufacture C – no comment.
2. Leads for the co-planer – there was difference in tolerance:
Manufacture A - Data indicates tolerances should be leads to be co-planer within .002 above to .004 below mounting surface.
Manufacture B – leads to be co-planar within .004 above to .001 below the mounting surface.
Manufacture C – prefer +/- .003 from co-planar.
3. The recommended PC board pad lengths do not match other manufactures:
Manufacture A – Recommend showing PCB layout for each size and eliminating dims E and F.
Manufacture B – Agreed with mfg. A.
Manufacture C – responded for longer pad dimensions.

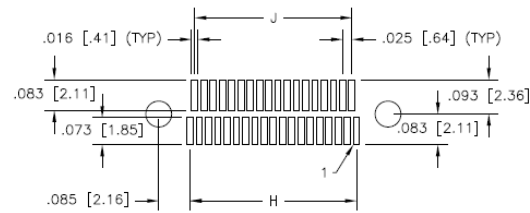
Proposal:

1. Figure 1, D dimensions – Manufacture B is proposing to label a MAX dimension which was the larger dimension from the initial draft. Thus, allowing the other manufactures to meet the specifications.
2. Since there were a difference among manufactures, DLA is for a looking for consensus from the manufacture industry on the co-planar tolerances.
3. Manufacture B submitted new tables and drawings. Larger PC pads are included for the size 85. The larger pads should allow for the size 85 contacts. Please see the included drawings below.

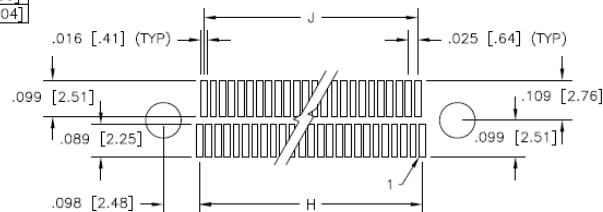
ENGINEERING PRACTICE STUDY MIL-DTL-32139/15 and /16

MIL-DTL-32139/15

SIZE	H	J
9	.100 [2.54]	.075 [1.90]
15	.175 [4.44]	.150 [3.81]
21	.250 [6.35]	.225 [5.71]
25	.300 [7.62]	.275 [6.98]
31	.375 [9.52]	.350 [8.89]
37	.450 [11.43]	.425 [10.79]
51	.625 [15.87]	.600 [15.24]
65	.800 [20.32]	.775 [19.68]
69	.850 [21.59]	.825 [20.96]
85	1.050 [26.67]	1.025 [26.04]



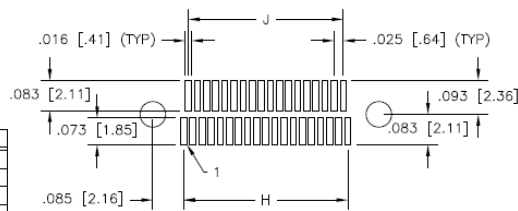
RECOMMENDED PC BOARD LAYOUT
FOR SIZE 9 THROUGH 69
(COMPONENT SIDE)



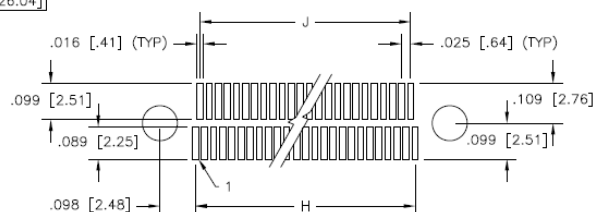
RECOMMENDED PC BOARD LAYOUT
FOR SIZE 85
(COMPONENT SIDE)

MIL-DTL-32139/16

SIZE	H	J
9	.100 [2.54]	.075 [1.90]
15	.175 [4.44]	.150 [3.81]
21	.250 [6.35]	.225 [5.71]
25	.300 [7.62]	.275 [6.98]
31	.375 [9.52]	.350 [8.89]
37	.450 [11.43]	.425 [10.79]
51	.625 [15.87]	.600 [15.24]
65	.800 [20.32]	.775 [19.68]
69	.850 [21.59]	.825 [20.96]
85	1.050 [26.67]	1.025 [26.04]



RECOMMENDED PC BOARD LAYOUT
FOR SIZE 9 THROUGH 69
(COMPONENT SIDE)



RECOMMENDED PC BOARD LAYOUT
FOR SIZE 85
(COMPONENT SIDE)

Methodology: Obtain input from the manufactures industry to standardize of the proposed recommendations.

If there are any questions, please contact Mr. Ed Wypasek, phone 614-692-0530, E-mail edmund.wypasek@dla.mil, DLA Land and Maritime-VAI, P.O. Box 3990, Columbus, OH 43218-3990.