



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

February 20, 2014

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Engineering Practices Study: Lead Requirements for MIL-PRF-49470.

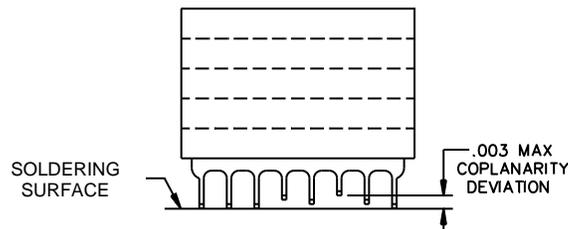
Project number: 5910-2014-013.

An engineering practices study is being conducted to gather information and comments regarding the addition of lead requirements to MIL-PRF-49470.

BACKGROUND

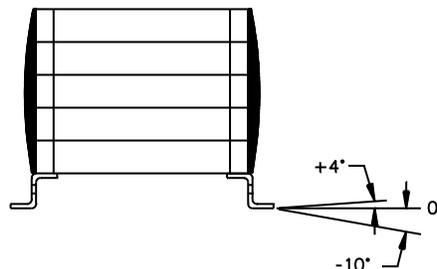
DLA Land and Maritime has learned that users of MIL-PRF-49470 parts are rejecting units based on lead alignment tolerances that are not clearly defined in the specification; tolerances such as: coplanarity, foot angle, and seating plane. In order to meet the needs of the user base as well as protect the manufacturers, these tolerances should be specified and measurable. The G11 Component Parts Committee has assigned task 12-206 to gather information regarding this issue. To that end, DLA Land and Maritime is considering adding the following requirements and clarifications to MIL-PRF-49470:

Coplanarity



This proposed coplanarity requirement is intended for lead styles “L” and “J” to ensure that the lead bends are in one plane. The maximum deviation limit of .003 inches originates from NASA STD 8739.2 (Workmanship Standard for Surface Mount Technology) (canceled).

Foot Angle

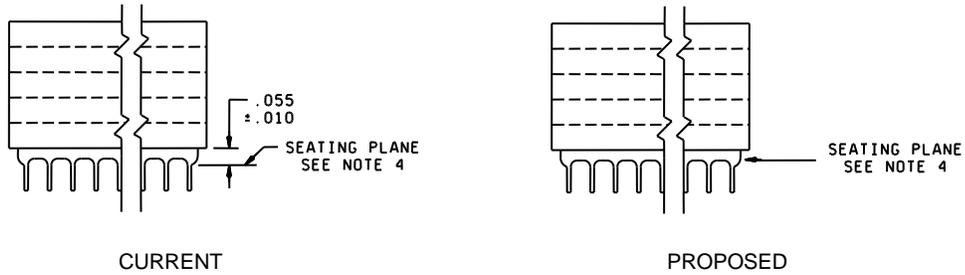


Note:

1. Foot angle shall be +4°, -10° from the plane formed by the bottom of the chip stack.

This proposed foot angle requirement is also intended for lead styles “L” and “J” to ensure that the lead bends are horizontal. A maximum deviation of +4°, -10° was suggested by a manufacturer.

Clarification to note 4 (MIL-PRF-49470/1 only)



MIL-PRF-49470/1E, figure 1, note 4 reads as follows:

Note 4: Lead frame configuration is shown as typical above the seating plane. A seating plane is only required for lead style N.

Because the configuration of the seating plane varies from manufacturer to manufacturer, consistent measurement is not always practical. The intent of the seating plane is to ensure that the part has a standoff height of .055 inches \pm .010 inches when mounted to a printed circuit board. Therefore, we are proposing the following wording:

Note 4: Lead frame configuration is shown as typical above the seating plane. The seating plane shall be configured to create a standoff height of .055 inches \pm .010 inches when the part is mounted to a printed circuit board. The standoff height shall be the distance between the PCB and the bottom of the chip stack. A seating plane is only required for lead style N.

REQUEST FOR COMMENTS

Please provide comments on the requirements and clarifications proposed herein. Do you feel they should be included in MIL-PRF-49470?

Comments are required at this Center no later than **11 April 2014**. The point of contact for this study is Mr. John Bonitatibus, DLA Land and Maritime - VAT, Post Office Box 3990, Columbus, OH 43218-3990. The preferred method of contact is via email. John can be reached at john.bonitatibus@dla.mil or 614-692-4709/DSN 850-4709.

//Signed//

Michael A. Radecki
Chief
Electronic Components Branch