

IEEE Mechanical Standard for Conduction-Cooled and Air-Cooled 10 SU Modules

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Abstract: The mechanical design requirements for conduction-cooled and air-cooled modules of the 10 SU by 6.375 in (161.9 mm) format are established. The specification of dimensions and tolerances is intended to ensure the mechanical intermateability of modules within associated sub-racks. The basic dimensions, frames, PWBs, materials, assembly, and chassis interface of single-sided and double-sided modules are covered.

Keywords: conduction, convection, direct air impingement, heatsink, printed wiring board (PWB)

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Introduction

(This introduction is not a part of IEEE Std 1101.3-1993, IEEE Mechanical Standard for Conduction-Cooled and Air-Cooled 10 SU Modules.)

The purpose of this standard is to provide instructions to organizations with respect to the requirements to be considered during the design of modules. This standard pertains to conduction-cooled and air-cooled modules. The conduction-cooled module assembly consists of components and a printed wiring board (PWB) or PWBs bonded to a heatsink or frame that has features that provide for insertion, extraction, chassis alignment, and thermal and structural management. The heatsink is a three-dimensional part requiring fine tolerances to provide for surface mount or through-hole component leads. This standard does not require this particular implementation. Other implementations that meet the mechanical interchangeability specifications are permitted. The air-cooled module assembly consists of components and a PWB with a front panel that has features that provide for insertion, extraction, chassis alignment, and structural management.

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