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I.S. EN 16602-70-60:2019

Space product assurance - Qualification and Procurement of printed circuit boards

I.S. EN 16602-70-60:2019

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European Foreword

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This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2020, and conflicting national standards shall be withdrawn at the latest by January 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document will supersede EN 16602-70-10:2015 and EN 16602-70-11:2015.

This document is the result of the merge and update of both superseded standards, including the implementation of Change Requests.

This document has been developed to cover specifically space systems and will the-refore have precedence over any EN covering the same scope but with a wider do-main of applicability (e.g. : aerospace).

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association.

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Introduction

PCBs are used for the mounting of electronic components to produce PCB assemblies that perform electrical functions. The PCBs are subjected to thermo-mechanical stress during assembly such as soldering of components, rework and repair under normal terrestrial conditions. In addition, the assembled PCBs are exposed to the launch and space environment. The reliability of the circuit depends on the robustness of the manufacturing processes, for which this standard specifies requirements. PCB technology needs detailed inspections to verify its reliability, which is specified for the qualification and procurement phases of the PCB technology.

1
Scope

This standard specifies the requirements for the PCB manufacturer, the procurement authority and the qualification authority for qualification and procurement of PCB technology.

ECSS-Q-ST-70-60 is applicable for all types of PCBs, including sequential, rigid and flexible PCBs, sculptured flex, HDI and RF PCBs.

This standard can be made applicable for other products combining mechanical and electrical functionality using additive or reductive manufacturing processes, as used in PCB manufacturing. Examples of such products are slip-rings, bus bars and flexible flat cables.

This standard may be tailored for the specific characteristics and constraints of a space project in conformance with ECSS-S-ST-00.