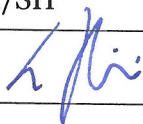


# MEMO

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| <b>Date</b> 03/12/2014                  | <b>Ref</b> QT/2014/361/SH   |
| <b>From</b> Stan Heltzel                | <b>Visa</b> T Ghidini  |
| <b>To</b> PCB/SMT WG, ESA projects, PAM | <b>Copy</b> M Nikulainen  |

## Subject: ECSS standards for PCB design

### 1 INTRODUCTION

ECSS-Q-ST-70-12C PCB Design Standard has been first issued in July 2014. Previously, PCB design aspects have been specified in ECSS-Q-ST-70-10C and ECSS-Q-ST-70-11C. These two standards are currently being revised and design aspects will be deleted from these standards because these are already covered in ECSS-Q-ST-70-12C.

### 2 QUALIFICATION OF PCB MANUFACTURERS

PCB manufacturers that are qualified by ESA in accordance with ECSS-Q-ST-70-10C have a qualified domain specified in their Process Identification Document (PID) that is compliant with ECSS-Q-ST-70-10C. From its date of issue, ECSS-Q-ST-70-12C supersedes ECSS-Q-ST-70-10C and -11C with respect to design aspects.

- Therefore, PCB manufacturers are requested to perform delta qualifications to qualify the higher technological complexity specified in ECSS-Q-ST-70-12C.
- Once the delta qualification is approved, the PID shall be updated with identification of deviations to ECSS-Q-ST-70-10C as “partial compliance”.
- The partial compliances to the ECSS-Q-ST-70-10C, as indicated in the PID, shall be declared during the Design Review, Manufacturing Readiness Review or in the Certificate of Conformance (CoC) in accordance with QT/2013/725/SH.

### 3 RFD FOR PROJECTS

Projects that have ECSS-Q-ST-70-10C and ECSS-Q-ST-70-11C applicable, but not ECSS-Q-ST-70-12C, are recommended to apply the latter standard for PCB design.

Projects that have ECSS-Q-ST-70-10C and ECSS-Q-ST-70-11C applicable, but not ECSS-Q-ST-70-12C, and that require PCB design that exceeds the technological complexity of ECSS-Q-ST-70-10C, but that is compliant with ECSS-Q-ST-70-12C, are recommended to perform the following:

- Issue an RFD for deviation to applicable ECSS standards for approval of the final customer.
- Identify in the RFD the non-compliance to ECSS-Q-ST-70-10C and ECSS-Q-ST-70-11C and identify the compliance to ECSS-Q-ST-70-12C.
- Provide as justification in the RFD the compliance to the qualified domain specified in the PID of the PCB manufacturer.
- Provide as justification in the RFD the procurement documentation of the PCB identifying the partial compliances, as specified in §2.c. of the present memo.