

ELVIA Chateaubourg
att. G Gourlaouen
20 Rue Joliot Curie
35220 Châteaubourg
France

Our ref. ESA-TECMSP-LE-2024-000483

Noordwijk, 11/10/2024

VISA: T Rohr (TEC-MSP)

Subject: Qualification renewal of sculptured flex PCBs from Elvia Chateaubourg

Dear Mr Gourlaouen,

Elvia Chateaubourg submitted samples of two sculptured flex PCB designs to ESA for qualification renewal in January and March 2023. The inspected PCB samples showed three deviations to ECSS-Q-ST-70-60, as reported in ESA-TECMSP-TR-2023-002015. ESA requested corrective actions in letter ESA-TECMSP-LE-2023-002699.

Elvia's responses to the actions are reported in "8D 20724 - Sculptured Flex Qual Renewal" and "8D 20724 - Annular Ring". In addition, new sculpture flex samples have been evaluated by ESA as reported in ESA-TECMSP-HO-2024-003090 according to the Elvia rework procedure (DT-I-12-5§27(2) - Simulation de retouche Aviflex Spatial). The test results are acceptable and provide confirmation that the observed infiltration of solder below coverlay is not a systematic problem. The results and the corrective actions implemented by Elvia have been reviewed and agreed acceptable by ESA, CNES and Elvia's main customers.

Elvia Chateaubourg is considered qualified in accordance with ECSS-Q-ST-70-60C for the manufacture of Printed Circuit Boards as follows:

- Sculptured flex PCB's as per the PID version 6 until Oct 2026

Best regards,

Jussi Hokka
Materials & Processes Section (TEC-MSP)