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**Ciretec, Elvia-group
att. Mr R Lozada
Zone d'activités, 1 rue Jean Monnet
45130 Saint Ay, France**

Our ref. **ESA-TECMSP-LE-022352**

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Noordwijk, 05/03/2021

VISA: T Rohr (TEC-MSP)

Subject: Qualification renewal of rigid polyimide PCBs from Ciretec

Dear Mr Lozada,

Ciretec submitted a sequential rigid polyimide multilayer PCB with fused Tin-Lead finish for qualification renewal to ESA in January 2020. The PCB showed one non-conformance: the measured track width of external layers on this PCB is not in line with the specification, as reported in ESA-TECMSP-TR-018352. ESA requested corrective actions in letter ESA-TECMSP-LE-018976. Ciretec's response, including a third-party investigation, are reported in "Ciretec feedback report v2" (dated 15th Nov 2020).

In addition, ESA performed group 4 and group 6 tests on the remainder of the PCB to investigate the copper plating quality. The acceptable test results are reported in ESA-TECMSP-TR-021677.

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

- Rigid sequential polyimide PCBs as per PID 2015-02 ind 01 **until 1 March 2022**

Best regards,

Jussi Hokka
Materials & Processes Section