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**Ciretec, Elvia-group
att. G Dierckens, site director
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45130 Saint Ay, France**

Our ref.

ESA-TECMSP-LE-012785

..... Noordwijk, 12/02/2019

VISA: T Rohr (TEC-MSP)

Subject: Qualification renewal Ciretec

Dear Mr Dierckens,

Ciretec submitted two samples of rigid and rigid-flex polyimide PCBs to ESA for qualification renewal in Jul 2018.

The rigid-flex PCB is acceptable for qualification renewal as reported in ESA-TECMSP-RP-010801.

The rigid PCB showed two nonconformances for insufficient copper plating in blind vias and for an interface line between copper plating layers, as reported in ESA-TECMSP-RP-010749. ESA requested corrective actions in letter ESA-TECMSP-LE-010849. Ciretec's response and investigations are reported in CT-ESA-2018-01_final_19-12-18, which includes third-party evaluation.

The qualification renewal has been reviewed and approved by ESA, CNES and Ciretec's main customers. The same organisations performed a common audit at Ciretec in May 2018 and the successful audit closure is reported in ESA-TECMSP-MIN-009834.

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 1 **until 1 Mar 2020**
- Rigid-flex sequential polyimide PCBs as per PID 2015-03 ind 2 **until 1 Sep 2020**

Best regards,

Stan Heltzel
Materials & Processes Section