

ESA ESTEC Keplerlaan 1 2201 AZ Noordwijk The Netherlands

ACB, att M van de Slyeke Vosmeer 3, 9200 Dendermonde Belgium

Our Ref:

ESA-TECMSP-LE-2023-002530

Noordwijk, 05/09/2023

VISA: T Rohr (HoS TEC-MSP)

Subject: Qualification of ACB for HDI PCBs

Dear Mr Van de Slyeke,

ACB participated as consortium member to the ESA GSTP activity G61A-017QT titled "High Density PCB assemblies" from 2018 to 2023. As a deliverable of that contract, ACB submitted to ESA their qualification dossier for HDI PCBs with reference 94199-IM-HDIPCB-TN-017 TN3-3-2 "Qualification test report for revised 0.8-1.0 mm pitch HDI technology".

In addition, ACB submitted their PID describing the qualified domain for this HDI technology, as well as the outgoing inspection approach. The PID specifies a qualified domain that includes up to 2 staggered microvias of 175 um diameter, core vias of 350 um drill diameter, fine pitch track & gap, polyimide material Ventec VT901 and 2x106 style prepreg in microvia layers, among other technology parameters.

The qualification dossier and PID have been reviewed and accepted by ESA, consortium members and key industrial customers in Aug 2023 as minuted in 94199-IM-HDIPCB-MN-087.

ACB Dendermonde is considered qualified in accordance with ECSS-Q-ST-70-60C for the manufacture of High Density Interconnect Printed Circuit Boards as follows:

Rigid polyimide HDI PCBs as per PID_HDI_v230505 ed1 until 1 Oct 2024

Best regards,

Stan Heltzel

Materials & Processes Section