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**Systronic**  
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**France**

Our ref.            ESA-TECMSP-LE-012484

Noordwijk, 21/01/2019

VISA: T Rohr (TEC-MSP)

**Subject: Qualification renewal of RF PCBs from Systronic**

Dear Mr Mougenot,

Systronic submitted RF PCBs with materials TMM10i and RT/Duroid 5880 to ESA for qualification renewal in Dec 2017. The results are reported in ESA-TECMSP-RP-008853. This report shows an acceptable evaluation of RT/Duroid 5880.

However, the report also shows insufficient copper plating thickness for TMM10i, which has been notified to Systronic in letter ESA-TECMSP-LE-009964. Systronic have performed root cause analysis, defined corrective actions and had a third-party evaluation performed, as shown in report 181221 SY 938-18 Rev 2.

In addition, Systronic performed delta qualification for a Process Change Notification of electroless copper, as reported in 190108 SY 962-18 ver F. As a result, the PIDs have been updated to issue 10.

The qualification renewal, the PCN and the PIDs have been reviewed and approved by ESA, CNES and Systronic's main customers.

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

- Double sided TMM10i as per PID 7 v10 until 1-02-2020
- Single sided RT Duroid 5880 as per PID 7 v10 until 1-02-2020

Best regards,

Stan Heltzel  
Materials & Processes Section