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Office of Engineering Technology
Federal Communications Commission
7435 Oakland Mills Road
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Date: 7/28/2021

Subject: Description of Hardware Changes
FCC ID: 2ASMP-BIT041B

To Whom It May Concern,

The test reports for 2ASMP-BIT041B (Model BIT041B) make reference to measurements conducted on a previous version of the hardware design (tested under FCC ID 2ASMP-BIT040B, model BIT040B). The performance of model BIT041B is believed to be fundamentally similar to model BIT040B, and this was verified using spot checks in expected worst case scenarios.

The electrical changes between the two models are expected to have a minimal effect on the radiated and conducted RF measurements on the modules. The changes between model BIT040B and BIT041B are summarized on the next page.

There are no design changes on the RF path for the LTE, BLE, and WiFi transceivers; the emissions results for these transceivers are expected to be similar to those from the BIT040B test report.

There are changes in the RF path for the NFC transceiver, but the resulting emissions are expected to be similar to those from the BIT040B test report.

List of Changes
1. NFC PCBA (VCU_NFC)
    a. Remove series 0-ohm resistors (R14 & R16) on the NFC antenna path and replace them with PCB traces. Add test points on NFC antenna traces (ANT1 & ANT2).
    b. Remove excess GND polygon in the J3 area.
    c. Remove series 0-ohm resistor R10 and replace with a PCB trace.
    d. Remove series 0-ohm resistor R23 and replace with a PCB trace.
    e. Remove I2C address resistors (R3, R6, R7, and R8) and replace them with PCB traces to GND.
    f. Rename components FB1 and FB2 to L2 and L4 (respectively). Rotate L2 90 degrees in layout.
    g. Update bypass components on display connector to match vendor recommendation.
2. Main PCBA (VCU_MLB)
    a. Add vias to LTE antenna (U0410, U0470) mechanical mounting pads.
    b. Change L1440 and L1441 to a different ferrite bead (Murata NFZ18SM701SN10D).
    c. Change board revision resistors (R1018, R1019) to different resistance values.
    d. Change R0942 to a different resistance value to prevent power supply brownout.
    e. Connect the STATUS and RESET pins on the LTE module (U0100) to the main MCU (U0200). Add R0342, Q0341, and R0343 to make this connection.

Sincerely,

DocuSigned by:

Nik Hatzis

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Name: Nik Hatzis

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