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September 7, 2021

Director, Voting System Testing and Certification
U.S. Election Assistance Commission
633 3rd Street NW, Suite 200
Washington, DC 20001

Re: Hart ECO-01496 – Update Verity Duo Series Device Power Regulator Circuit

Dear Mr. Panek,

Hart has requested that SLI review ECO-01496 and supporting documentation to determine if the proposed update can be considered a minor change.

Summary Description:

ECO-01496 modifies a power regulator circuit design on the Verity Touch Writer Duo series baseboards to move away from the Linear Tech LT8711 power controller and instead use the more widely available Texas Instruments (TI) TPS552882 series part.

Reference Documents:

- EAC 2005 Voluntary Voting System Guidelines (VVSG) Volume II, Sec. 1 & 4
- EAC Voting System Testing and Certification Program Manual Version 3.0, Sec. 3.5.1

Documentation used in SLI's Assessment:

- ECO-01496 Summary - Update Verity Duo Series Power Regulator Circuit 4005704 A00
- 4005704A_Supporting_Documents
 - BOMs:
 - 2005710 Rev F BOM.pdf
 - 2005780 Rev B BOM.pdf
 - EMC Report:
 - EMC Report Verity Duo Power Reg Circuit Update.pdf
 - Linear Tech LT8711 Datasheet:
 - Linear Tech LT8711 Datasheet.pdf
 - New Part AMLs:

- 1005841 AML Rev A.pdf
- 1005842 AML Rev A.pdf
- 1005843 AML Rev A.pdf
- 1005844 AML Rev A.pdf
- QA Report:
 - ECO-01496 QA Test Report 4005705 A00.pdf
- Schematic:
 - Schematic Diagram 4005710 REV D.PDF
- TI TPS552882RPMR Datasheet:
 - TI tps552882 Datasheet.pdf

Conclusion:

The modification described on this ECO affects the Verity Touch Writer Duo series devices only. There are no changes to software and functionally is identical to existing baseboards the Linear Tech LT8711. The TI TPS552882RPMR is improved upon compared to the Linear Tech LT8711 in terms of operating temperature, being able to operate even farther outside Hart's specification on the hot end. The operating junction temperature changes as follows:

- Linear Tech (old part): -40C to 125C
- Texas Instruments (new part): -40C to 150C

Due to the addition of some passive components described in this ECO to match the reference design of the Linear Tech LT8711, EMC testing was performed on the Verity Touch Writer Duo series devices. Testing included all standards relevant to the circuit modification.

As required under section 3.5.1 of the EAC's Voting System Testing and Certification Program Manual Version 3.0, Hart InterCivic has provided the necessary information to verify the ECO-01496 is a minor change and therefore does not to affect the Verity Voting 2.3, 2.4, 2.5, and 2.6 Federal certification status. All tests passed successfully, and no additional testing is deemed required.

Please refer to the attached SLI Evaluation Hart ECO-01496 form for additional information.

If you have questions regarding this assessment, please contact Darrick Forester.

Sincerely,



Traci Mapps
Vice President, SLI Compliance