

PRODUCT CHANGE NOTIFICATION



Linear Technology Corporation
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September 09, 2016

PCN# 090916

Dear Sir/Madam:

Subject: Notification of Change to LTC2977 Die

Please be advised that Linear Technology Corporation has made improvements to the LTC2977 die to add error correction code (ECC) to the on-chip EEPROM and fix some minor errata.

ECC was added to the non-volatile memory to enhance its reliability. This change is transparent to the user and requires no modifications to programming files or system firmware.

Minor errata and enhancements were also addressed in the new silicon:

- Added read-only MFR_INFO PMBus register
- Improved the startup behavior of the bandgap reference. Under a narrow set of conditions, the bandgap reference might stall at $\sim 0.7V$ and remain there for an extended period of time, eventually recovering. A metal mask edit eliminates the problem.
- Improved wafer sort yield to the V_{VOUT_ENn} and V_{VIN_EN} Output High Voltage specifications. This change modified the N WELL layer and added an additional N WELL mask step. No changes to the EC table specifications were made.
- Fixed bug that generates a false fault log when powering up with an external fault pin low and the channel is held off

The new silicon can be identified with the MFR_SPECIAL_ID PMBus register value of 0x0131.

Product specifications are unaffected. The die change was qualified by performing characterization over the full operating junction temperature range and through rigorous engineering evaluation across a broad range of application conditions. In addition, the following qualification tests were successfully completed on this product prior to release:

- HTOL stress testing: 1000 hours
- HAST testing: 192 hours
- Unbiased HAST Testing: 168 hours
- Unbiased 150C data retention testing: 1000 hours

Samples of the revised die are available now upon request. Product built using the improved design is targeted for shipment around November 09, 2016. LTC2978/LTC2978A users are advised to migrate to the pin-compatible LTC2977 if EEPROM ECC is desired. A migration guide is available upon request.

Should you have any further questions, please feel free to contact your local Linear Technology sales person or you may contact me at 408-432-1900 ext. 2077, or by E-mail JASON.HU@LINEAR.COM. If I do not hear from you before November 09, 2016, we will consider this change to be approved by your company.

Sincerely,

Jason Hu

Quality Assurance Engineer