test

Product qualification

report

**TITLE:**

LT3481 IMSE\_EMSE Test Platform Migration from

LTX TS88 to Eagle ETS88

**PCN NUMBER:**

PCN 21\_0067

**REVISION:**

A

**DATE:**

March 1, 2021

**SUMMARY**

The LT3481 is an adjustable frequency (300kHz to 2.8MHz) monolithic buck switching regulator that accepts input voltages up to 34V (36V maximum). A high efficiency 0.18Ω switch is included on the die along with a boost Schottky diode and the necessary oscillator, control, and logic circuitry. Current mode topology is used for fast transient response and good loop stability. Low ripple Burst Mode operation maintains high efficiency at low output currents while keeping output ripple below 15mV in a typical application. In addition, the LT3481 can further enhance low output current efficiency by drawing bias current from the output when VOUT is above 3V. Shutdown reduces input supply current to less than 1μA while a resistor and capacitor on the RUN/SS pin provide a controlled output voltage ramp (soft-start). A power good flag signals when VOUT reaches 90% of the programmed output voltage. The LT3481 is available in 10-Pin MSOP and 3mm x 3mm DFN packages with exposed pads for low thermal resistance.

**TEST AND PRODUCT INFORMATION**

|  |  |
| --- | --- |
| Device | LT3481 |
| Package | 10-Lead Plastic MSOP |
| Leads | 10 |
| Parts Affected | LT3481IMSE#TRPBF\ LT3481EMSE#PBF |
| Current Platform | TS88\_EXP with RASCO\_1000 Handler |
| New Platform | ETS88 with RASCO\_1000 Handler |

**DESCRIPTION AND TEST RESULTS** (Taken from the Test Platform Migration Criteria)

Table 1 provides a description of the qualification tests conducted and corresponding test results for LT3481. All the units have undergone electrical tests on both the Linear Technology TS88\_EXP and Eagle Test Systems ETS88 test platforms. Any device that did not meet the electrical qualification requirements, without further analysis and data to prove passing the qualification would be considered failed.

Table 1: Test Product Bulk Correlation Result

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Generic | Package | Testing Site | LTX TS88  Test Lot Size | Eagle ETS88  Test Lot Size | |  | | --- | | % Mean Shift Criteria  <StDv\_Dual | | |  | | --- | | Std. Dev. Ratio Criteria  =< 1.5 | |
| LT3481 | MSOP-10L | ADGT | 150 | 139 | Passed | Passed |

Table 2 shows result of the qualification lot run for the LT3481. The qualification lot has undergone electrical test on both Linear Technology TS88\_EXP and Eagle Test Systems ETS88 test platforms. Any deviation on the lot qualification run criteria without further analysis and data to prove a passing qualification would be considered a failed qualification lot run.

Table 2: Test Product Lot Qualification Result

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Generic | Package | Lot number | Lot Size (LTX) | Lot size (ETS) | |  | | --- | | Good units passed on both test platforms? | | Reject units failed on the same test parameter for both test platforms? |
| LT3481 | MSOP-10L | SE39178.3 | 150 | 147 | Yes | Yes |
| LT3481 | MSOP-10L | SE44081.1 | 150 | 148 | Yes | Yes |
| LT3481 | MSOP-10L | SE87738.3 | 150 | 111 | Yes | Yes |

**APPROVALS**

Technical Review Board (TRB)

**SUPPORTING DOCUMENTS**Technical Review Board: TRB-62994 – LT3481IMSE

**ADDITIONAL INFORMATION**

Homepage: http://www.analog.com/en/index.html

Datasheet: https://www.analog.com/media/en/technical-documentation/data-sheets/3481fc.pdf