

RELIABILITY REPORT





Reliability Data Report

Product Family R533

LTC3785 / LTC3810 / LTC3812 /
LTC3813 / LTC3814 / LTC3824 /
LTC4110 / LTC4445 / LTC4447

Reliability Data Report

Report Number: R533

Report generated on: Fri Jun 20 08:18:24 PDT 2014

OPERATING LIFE TEST					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS (+125°C) ¹	No. of FAILURES ^{2,3}
SSOP/TSSOP	77	0713	0713	77	0
SOIC/SOT/MSOP	465	0630	1225	1373	0
QFN/DFN	77	0736	0736	77	0
Totals	619	-	-	1,527	0

PRESSURE COOKER TEST AT 15 PSIG , +121 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS	No. of FAILURES
QFN/DFN	987	0711	1227	201	0
SSOP/TSSOP	189	0929	0929	40	0
SOIC/SOT/MSOP	2258	0651	1118	232	0
Totals	3,434	-	-	473	0

TEMP CYCLE FROM -65 TO 150 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	No. of FAILURES
QFN/DFN	982	0747	1227	635	0
SSOP/TSSOP	274	0929	1101	229	0
SOIC/SOT/MSOP	727	0651	1118	72	0
Totals	1,983	-	-	936	0

THERMAL SHOCK FROM -65 TO 150 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	No. of FAILURES
QFN/DFN	1009	0710	1227	594	0
SSOP/TSSOP	273	0929	1101	190	0
SOIC/SOT/MSOP	922	0651	1118	92	0
Totals	2,204	-	-	876	0

HIGH TEMPERATURE BAKE AT 150 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS	No. of FAILURES
QFN/DFN	795	0710	1225	629	0
Totals	795	-	-	629	0

(1) Assumes Activation Energy = 0.7 Electron Volts

(2) Failure Rate Equivalent to +55 °C, 60% Confidence Level =7.76 FITS

(3) Mean Time Between Failure in Years = 14711.3

Note 1: 1 FIT = 1 Failure in One Billion Hours.

Note 2: HAST, Temp Cycle & Thermal Shock are subjected to J-STD-020 MSL Preconditioning

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HIGH TEMPERATURE BAKE AT 175 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS	No. of FAILURES
QFN/DFN	639	0710	0933	524	0
SSOP/TSSOP	140	0929	0929	140	0
SOIC/SOT/MSOP	348	0935	1033	358	0
Totals	1,127	-	-	1,022	0