

RELIABILITY REPORT





Reliability Data Report Product Family R550

LTC5510 / LTC5540 / LTC5541 /
LTC5542 / LTC5543 / LTC5544 /
LTC5548 / LTC5549 / LTC5551 /
LTC5566 / LTC5567 / LTC5569 /
LTC5576 / LTC5577 / LTC5582 /
LTC5583 / LTC5584 / LTC5585 /
LTC5586 / LTC5588 / LTC5589 /
LTC5590 / LTC5591 / LTC5592 /
LTC5593 / LTC5596 / LTC5599

Reliability Data Report

Report Number: R550

Report generated on: Tue Apr 11 15:55:24 PDT 2017

OPERATING LIFE TEST					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS (+125°C) ¹	No. of FAILURES ^{2, 3}
QFN/DFN	2155	0839	1539	1752	0
Totals	2,155	-	-	1,752	0
HIGHLY ACCELERATED STRESS TEST AT +130 DEG C / 85% RH					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS (+85°C) ⁴	No. of FAILURES
QFN/DFN	76	1450	1450	291	0
Totals	76	-	-	291	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	2674	0930	1513	285	0
Totals	2,674	-	-	285	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	2739	0930	1513	1205	0
Totals	2,739	-	-	1,205	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	2594	0930	1513	1064	0
Totals	2,594	-	-	1,064	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	580	0930	1513	580	0
Totals	580	-	-	580	0

(1) Assumes Activation Energy = 0.7 Electron Volts

(2) Failure Rate Equivalent to +55 °C, 60% Confidence Level =6.76 FITS

(3) Mean Time Between Failure in Years = 16878.97

(4) Assumes 20X Acceleration from 85 °C to +130 °C

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	153	0930	1001	154	0
Totals	153	-	-	154	0