

# RELIABILITY REPORT





# Reliability Data Report

## Product Family R550

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LTC5510 / LTC5540 / LTC5541 /  
LTC5542 / LTC5543 / LTC5544 /  
LTC5548 / LTC5549 / LTC5551 /  
LTC5552 / LTC5553 / LTC5562 /  
LTC5566 / LTC5567 / LTC5569 /  
LTC5576 / LTC5577 / LTC5582 /  
LTC5583 / LTC5584 / LTC5585 /  
LTC5586 / LTC5588 / LTC5589 /  
LTC5590 / LTC5591 / LTC5592 /  
LTC5593 / LTC5594/ LTC5596 /  
LTC5599



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## Report Number: R550

Report generated on: Tue Oct 27 15:55:24 PDT 2020

OPERATING LIFE TEST					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS (+125°C) <sup>1</sup>	No. of FAILURES <sup>2, 3</sup>
QFN/DFN	2849	0839	1701	2190	0
Totals	2,849	-	-	2,190	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) <sup>4</sup>	No. of FAILURES
QFN/DFN	196	1450	1701	26.1	0
Totals	196	-	-	26.1	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	3305	0930	1701	334.1	0
Totals	3,305	-	-	334.1	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	3411	0930	1701	1362.8	0
Totals	3,411	-	-	1,362.8	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	2974	0930	1615	1194.4	0
Totals	2,974	-	-	1,194.4	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	957	0930	1701	957.0	0
Totals	957	-	-	957.0	0

(1) Assumes Activation Energy = 0.7 Electron Volts  
 (2) Failure Rate Equivalent to +55 °C, 60% Confidence Level =5.38 FITS  
 (3) Mean Time Between Failure in Years = 21233.14  
 (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	303	0930	1534	304.8	0
Totals	303	-	-	304.8	0