

# RELIABILITY REPORT





## Reliability Data Report Product Family R540

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LTC3128 / LTC3225 / LTC3226 / LTC3554 /  
LTC3555 / LTC3557 / LTC3566 / LTC3567 /  
LTC3577 / LTC3586 / LTC3589 / LTC3625 /  
LTC4001 / LTC4055 / LTC4065 / LTC4066 /  
LTC4067 / LTC4069 / LTC4070 / LTC4071 /  
LTC4075 / LTC4078 / LTC4080 / LTC4081 /  
LTC4085 / LTC4088 / LTC4089 / LTC4090 /  
LTC4095 / LTC4096 / LTC4097 / LTC4098 /  
LTC4099 / LTC4155 / LTC4156 / LTC4160 /  
LTC4415 / LTC4425

# Reliability Data Report

## Report Number: R540

Report generated on: Mon Mar 17 11:29:58 PDT 2014

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	2291	0421	1112	2170	0
SSOP/TSSOP	77	0710	0710	77	0
SOIC/SOT/MSOP	385	0934	1022	320	0
Totals	2,753	-	-	2,567	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	77	0711	0711	462	0
Totals	77	-	-	462	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	42993	0350	1323	2042	0
SSOP/TSSOP	50	0949	0949	1	0
SOIC/SOT/MSOP	177	1009	1320	16	0
QFP	77	1311	1311	12	0
Totals	43,297	-	-	2,071	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	39782	0350	1322	7295	0
SSOP/TSSOP	50	0949	0949	5	0
SOIC/SOT/MSOP	281	1009	1317	236	0
Totals	40,113	-	-	7,536	0

TEMP CYCLE FROM -55 TO 125 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	No. of FAILURES
QFN/DFN	153	0819	0819	115	0
Totals	153	-	-	115	0

(1) Assumes Activation Energy = 0.7 Electron Volts  
 (2) Failure Rate Equivalent to +55 °C, 60% Confidence Level =0.71 FITS  
 (3) Mean Time Between Failure in Years = 159849.91  
 (4) Assumes 20X Acceleration from 85 °C to +131 °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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<b>THERMAL SHOCK FROM -65 TO 150 DEG C</b>					
<b>PACKAGE TYPE</b>	<b>SAMPLE SIZE</b>	<b>OLDEST DATE CODE</b>	<b>NEWEST DATE CODE</b>	<b>K DEVICE CYCLES</b>	<b>No. of FAILURES</b>
QFN/DFN	15904	0711	1322	1724	0
SSOP/TSSOP	50	0949	0949	5	0
SOIC/SOT/MSOP	281	1009	1317	159	0
Totals	16,235	-	-	1,888	0
<b>POWER CYCLE FROM 50 TO 100 DEG C</b>					
<b>PACKAGE TYPE</b>	<b>SAMPLE SIZE</b>	<b>OLDEST DATE CODE</b>	<b>NEWEST DATE CODE</b>	<b>K DEVICE CYCLES</b>	<b>No. of FAILURES</b>
QFN/DFN	77	0503	0503	3888	0
Totals	77	-	-	3,888	0
<b>HIGH TEMPERATURE BAKE AT 150 DEG C</b>					
<b>PACKAGE TYPE</b>	<b>SAMPLE SIZE</b>	<b>OLDEST DATE CODE</b>	<b>NEWEST DATE CODE</b>	<b>K DEVICE HRS</b>	<b>No. of FAILURES</b>
QFN/DFN	1970	0534	1313	1814	0
SOIC/SOT/MSOP	154	1317	1317	154	0
Totals	2,124	-	-	1,968	0
<b>HIGH TEMPERATURE BAKE AT 175 DEG C</b>					
<b>PACKAGE TYPE</b>	<b>SAMPLE SIZE</b>	<b>OLDEST DATE CODE</b>	<b>NEWEST DATE CODE</b>	<b>K DEVICE HRS</b>	<b>No. of FAILURES</b>
QFN/DFN	747	0537	0825	755	0
Totals	747	-	-	755	0