



## Reliability Data Report Product Family R544

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LTC2655 / LTC2934 / LTC2935 /  
LTC2941 / LTC2942 / LTC2970 /  
LTC2974 / LTC2975 / LTC2977 /  
LTC2978 / LTC2990 / LTC2991 /  
LTC2995 / LTC2996 / LTC2997

# Reliability Data Report

## Report Number: R544

Report generated on: Wed Apr 09 10:16:15 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 <sub>2,3</sub>
QFN/DFN	767	0619	1237	587	0
SOIC/SOT/MSOP	385	0929	1112	578	0
Totals	1,152	-	-	1,165	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
BGA 15X15	306	1302	1302	883	0
QFN/DFN	88	1106	1141	218	0
Totals	394	-	-	1,101	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	794	0839	1314	51	0
SOIC/SOT/MSOP	76	0843	0843	12	0
Totals	870	-	-	63	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
BGA 15X15	366	1211	1302	366	0
Totals	366	-	-	366	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	991	0839	1314	366	0
SOIC/SOT/MSOP	176	0843	1025	48	0
Totals	1,167	-	-	414	0

THERMAL SHOCK FROM -55 TO 125 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	No. of FAILURES
BGA 15X15	356	1211	1302	356	0
Totals	356	-	-	356	0

- (1) Assumes Activation Energy = 0.7 Electron Volts  
 (2) Failure Rate Equivalent to +55 °C, 60% Confidence Level = 10.17 FITS  
 (3) Mean Time Between Failure in Years = 11223.75  
 (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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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	1000	0839	1314	374	0
SOIC/SOT/MSOP	177	0843	1025	48	0
Totals	1,177	-	-	422	0
HIGH TEMPERATURE BAKE AT 150 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS	No. of FAILURES
BGA 15X15	357	1211	1302	357	0
SOIC/SOT/MSOP	50	0843	0843	50	0
QFN/DFN	227	0937	1314	113	0
Totals	634	-	-	520	0
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	204	0937	1236	179	0
Totals	204	-	-	179	0