



# Reliability Data Report

## Product Family R527

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LTC1955 / LTC4307 / LTC4308 / LTC4309 /  
LTC4310 / LTC4311 / LTC4316 / LTC4317 /  
LTC4318 / LTC4556 / LTC4357 / LTC4358

# Reliability Data Report

## Report Number: R527

Report generated on: Thu Aug 21 13:38:14 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	154	0723	0750	154	0
SOIC/MSOP	231	0722	0923	166	0
Totals	385	-	-	320	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	132	1136	1136	443	0
SSOP/TSSOP	56	1115	1115	241	0
Totals	188	-	-	684	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
SSOP/TSSOP	150	1017	1115	3	0
SOIC/MSOP	50	1024	1024	1	0
QFN/DFN	1248	0222	1007	48	0
SOT	98	0820	0916	2	0
Totals	1,546	-	-	54	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
SSOP/TSSOP	150	1017	1115	15	0
SOIC/MSOP	50	1024	1024	5	0
QFN/DFN	1222	0222	1117	198	0
Totals	1,422	-	-	218	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
SSOP/TSSOP	150	1017	1115	15	0
SOIC/MSOP	150	0949	1024	15	0
QFN/DFN	100	0816	1223	10	0
Totals	400	-	-	40	0

(1) Assumes Activation Energy = 0.7 Electron Volts

(2) Failure Rate Equivalent to +55 °C, 60% Confidence Level = 37.03 FITS

(3) Mean Time Between Failure in Years = 3082.92

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

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

Note 2: HAST, Temp Cycle & Thermal Shock are subjected to J-STD-020 MSL1 Preconditioning