

# RELIABILITY REPORT





## Reliability Data Report Product Family R536

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LTC2952 \ LTC2953 \ LTC4215 \  
LTC4217 \ LTC4218 \ LTC4219 \  
LTC4222 \ LTC4223 \ LTC4225 \  
LTC4227 \ LTC4228 \ LTC4229 \  
LTC4232 \ LTC4233 \ LTC4234 \  
LTC4235 \ LTC4236 \ LTC4242 \  
LTC4245 \ LTC4260 \ LTC4264 \  
LTC4280 \ LTC4352 \ LTC4353 \  
LTC4355 \ LTC4357 \ LTC4358 \  
LTC4370

# Reliability Data Report

## Report Number: R536

Report generated on: Wed Feb 10 17:19:34 PST 2016

<b>OPERATING LIFE TEST</b>					
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>
SSOP/TSSOP	1183	0702	1450	877	0
QFN/DFN	3722	0630	1448	3746	0
SOIC/MSOP	308	0502	1138	308	0
Totals	5,213	-	-	4,931	0

<b>HIGHLY ACCELERATED STRESS TEST AT +130 DEG C / 85% RH</b>					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS (+85°C) <sup>4</sup>	No. of FAILURES
QFN/DFN	231	1345	1345	591	0
SSOP/TSSOP	99	1332	1415	224	0
SOIC/MSOP	160	0743	0836	307	0
Totals	490	-	-	1,122	0

<b>PRESSURE COOKER TEST AT 15 PSIG , +121 DEG C</b>					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS	No. of FAILURES
SSOP/TSSOP	1718	0649	1419	143	0
SOIC/MSOP	1628	0511	1338	364	0
QFN/DFN	5250	0701	1417	390	0
Totals	8,596	-	-	897	0

<b>TEMP CYCLE FROM -65 TO 150 DEG C</b>					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	No. of FAILURES
SSOP/TSSOP	1693	0724	1422	428	0
SOIC/MSOP	1447	0511	1338	1087	0
QFN/DFN	5080	0701	1417	1490	0
Totals	8,220	-	-	3,005	0

<b>THERMAL SHOCK FROM -65 TO 150 DEG C</b>					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	No. of FAILURES
SSOP/TSSOP	1597	0724	1422	436	0
SOIC/MSOP	1366	0743	1338	1007	0
QFN/DFN	4841	0701	1417	1471	0
Totals	7,804	-	-	2,914	0

- (1) Assumes Activation Energy = 0.7 Electron Volts  
 (2) Failure Rate Equivalent to +55 °C, 60% Confidence Level =2.4 FITS  
 (3) Mean Time Between Failure in Years = 47505.84  
 (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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<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	976	0722	1349	951	0
SSOP/TSSOP	100	1311	1422	100	0
Totals	1,076	-	-	1,051	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	231	1345	1345	231	0
SSOP/TSSOP	200	0908	0946	175	0
SOIC/MSOP	726	0743	0928	726	0
Totals	1,157	-	-	1,132	0