



Reliability Data Report Product Family R547

LTC4226 / LTC4231 / LTC4266 / LTC4270 /
LTC4274 / LTC4279 / LTC4281 / LTC4282 /
LTC4290 / LTC4359 / LTC4364 / LTC4365 /
LTC4366 / LTC4367 / LTC4368 / LTC4380 /
LTC4417 / LTC4419 / LTC4420 / LTC7851 /
LTC7860

Reliability Data Report

Report Number: R547

Report generated on: Fri Apr 21 10:38:55 PDT 2017

OPERATING LIFE TEST					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS (+125°C) ¹	No. of FAILURES _{2, 3}
SSOP/TSSOP	385	0848	1222	344	0
QFN/DFN	5756	1047	1532	1726	0
SOIC/MSOP	1265	1210	1637	1749	0
SOT	311	0921	1308	183	0
Totals	7,717	-	-	4,002	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) ⁴	No. of FAILURES
SSOP/TSSOP	300	1041	1432	717	0
SOIC/MSOP	518	1343	1527	1401	0
QFN/DFN	1327	1304	1529	3504	0
Totals	2,145	-	-	5,622	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	227	0829	1336	65	0
SOIC/MSOP	575	1351	1541	37	0
QFN/DFN	2699	1013	1521	246	0
SOT	600	1118	1429	14	0
Totals	4,101	-	-	362	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	223	0806	0838	187	0
SOIC/MSOP	627	1152	1541	183	0
QFN/DFN	3054	1013	1538	1123	0
SOT	597	1118	1429	59	0
Totals	4,501	-	-	1,552	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	153	0829	0838	153	0
SOIC/MSOP	574	1152	1541	133	0
QFN/DFN	2643	1013	1517	953	0
SOT	595	1118	1429	59	0
Totals	3,965	-	-	1,298	0

(1) Assumes Activation Energy = 0.7 Electron Volts
 (2) Failure Rate Equivalent to +55 °C, 60% Confidence Level =2.96 FITS
 (3) Mean Time Between Failure in Years = 38555.75
 (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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HIGH TEMPERATURE BAKE AT 150 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS	No. of FAILURES
SSOP/TSSOP	100	0829	0838	100	0
QFN/DFN	50	1425	1425	50	0
Totals	150	-	-	150	0

HIGH TEMPERATURE BAKE AT 175 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS	No. of FAILURES
SSOP/TSSOP	95	0829	0838	95	0
SOIC/MSOP	45	1541	1541	45	0
QFN/DFN	646	1250	1412	532	0
SOT	50	1240	1240	25	0
Totals	836	-	-	697	0