

RELIABILITY REPORT





NOW PART OF



Reliability Data Report Product Family R547

LTC4226 / LTC4231 / LTC4266 /
LTC4270 / LTC4274 / LTC4279 /
LTC4281 / LTC4282 / LTC4283 /
LTC4290 / LTC4291 / LTC4292 /
LTC4359 / LTC4364 / LTC4365 /
LTC4366 / LTC4367 / LTC4368 /
LTC4371 / LTC4376 / LT4380 /
LTC4417 / LTC4418 / LTC4419 /
LTC4420 / LTC4421 / LTC7000 /
LTC7001 / LTC7002 / LTC7003 /
LTC7004 / LTC7860 / LTC7862

Reliability Data Report

Report Number: R547

Report generated on: Fri Apr 10 16:05:12 PDT 2020

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	976	0848	1646	792	0
SOIC/MSOP	6364	1210	1707	4604	0
QFN/DFN	22018	1047	1701	7193	0
SOT	622	0921	1308	366	0
Totals	29,980	-	-	12,955	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	1956	1041	1703	4154	0
SOIC/MSOP	1948	1343	1707	5475	0
QFN/DFN	5994	1304	1701	13908	0
Totals	9,898	-	-	23,537	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) ⁵	No. of FAILURES
SSOP/TSSOP	1956	1041	1703	4154	0
SOIC/MSOP	1948	1343	1707	5475	0
QFN/DFN	5994	1304	1701	13908	0
Totals	9,898	-	-	23,537	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) ⁶	No. of FAILURES
SSOP/TSSOP	1956	1041	1703	4154	0
SOIC/MSOP	1948	1343	1707	5475	0
QFN/DFN	5994	1304	1701	13908	0
Totals	9,898	-	-	23,537	0

(1) Assumes Activation Energy = 0.7 Electron Volts
(2) Failure Rate Equivalent to +55 °C, 60% Confidence Level =0.91 FITS
(3) Mean Time Between Failure in Years = 124810.01
(4) Assumes 20X Acceleration from 85 °C to +130 °C
(5) Assumes 20X Acceleration from 85 °C to +130 °C
(6) 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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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	1154	0829	1702	148	0
SOIC/MSOP	4796	1351	1713	472	0
QFN/DFN	10590	1013	1714	618	0
SOT	1500	1118	1609	36	0
Totals	18,040	-	-	1,274	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	1138	0806	1702	444	0
SOIC/MSOP	4898	1152	1713	2528	0
QFN/DFN	11300	1013	1714	2779	0
SOT	1494	1118	1609	149	0
Totals	18,830	-	-	5,900	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	1006	0829	1702	376	0
SOIC/MSOP	3746	1152	1713	526	0
QFN/DFN	9970	1013	1714	2390	0
SOT	1490	1118	1609	149	0
Totals	16,212	-	-	3,441	0
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	200	0829	0838	200	0
SOIC/MSOP	200	1633	1646	200	0
QFN/DFN	1798	1425	1701	1798	0
Totals	2,198	-	-	2,198	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	190	0829	0838	190	0
SOIC/MSOP	290	1506	1549	190	0
QFN/DFN	1292	1250	1412	1064	0
SOT	200	1240	1602	150	0
Totals	1,972	-	-	1,594	0