

RELIABILITY REPORT





Reliability Data Report

Product Family R384

LTC981 / LTC986 / LTC1625 / LTC1627 / LTC1628 / LTC1629 /
LTC1702 / LTC1703 / LTC1704 / LTC1705 / LTC1707 /
LTC1708 / LTC1709 / LTC1729 / LTC1731 / LTC1732 /
LTC1735 / LTC1736 / LTC1755 / LTC1756 / LTC1773 /
LTC1778 / LTC1871 / LTC1873 / LTC1876 / LTC1909 /
LTC1929 / LTC1960 / LTC3704 / LTC3707 / LTC3709 /
LTC3711 / LTC3713 / LTC3714 / LTC3716 / LTC3717 /
LTC3718 / LTC3719 / LTC3720 / LTC3727 / LTC3728 /
LTC3729 / LTC3730 / LTC3731 / LTC3732 / LTC3733 /
LTC3734 / LTC3735 / LTC3738 / LTC3770 / LTC3773 /
LTC3778 / LTC3780 / LTC3783 / LTC3802 / LTC3819 /
LTC3823 / LTC3826 / LTC3827 / LTC3828 / LTC3834 /
LTC3835 / LTC4255 / LTC4258 / LTC4259 / LTC4412 /
LTC4414 / LTC4416

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Report generated on: Thu Oct 22 10:51:48 PDT 2015

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	12462	9901	1449	8023	1
SOIC/MSOP	4006	9827	1433	3072	0
PLASTIC DIP	51	9914	9914	51	0
QFN/DFN	1742	0111	1446	800	0
SOT	77	1412	1412	0	0
Totals	18,338	-	-	11,946	1

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	1068	0525	1401	3033	0
SOIC/MSOP	611	9827	1412	1580	0
QFN/DFN	233	0111	0748	451	0
Totals	1,912	-	-	5,064	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	41389	0031	1422	4042	0
SSOP/TSSOP	196678	9827	1422	10081	0
SOIC/MSOP	27983	9813	1421	1281	0
Totals	266,050	-	-	15,404	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	45025	0031	1422	12808	0
SSOP/TSSOP	145326	9827	1422	27457	0
SOIC/MSOP	37947	9843	1420	4938	0
Totals	228,298	-	-	45,203	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
SSOP/TSSOP	50	0915	0915	5	0
Totals	50	-	-	5	0

(1) Assumes Activation Energy = 0.7 Electron Volts
(2) Failure Rate Equivalent to +55 °C, 60% Confidence Level =2.18 FITS
(3) Mean Time Between Failure in Years = 52406.87
(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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TEMP CYCLE FROM -40 TO 125 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	No. of FAILURES
QFN/DFN	50	0914	0914	5	0
Totals	50	-	-	5	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
QFN/DFN	38487	0031	1421	11569	0
SSOP/TSSOP	133559	9827	1422	23455	0
SOIC/MSOP	23097	9843	1420	3204	0
Totals	195,143	-	-	38,228	0
HIGH TEMPERATURE BAKE AT 150 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS	No. of FAILURES
QFN/DFN	2429	0634	1407	2014	0
SSOP/TSSOP	222	0826	1420	222	0
Totals	2,651	-	-	2,236	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	394	0719	0917	344	0
SSOP/TSSOP	4168	0813	1414	3723	0
SOIC/MSOP	198	0830	1349	149	0
Totals	4,760	-	-	4,216	0