



Reliability Data Report

Product Family R380

LTC1402/05/06/11/12/14/17/20

LTC1606/08/09 LTC1663/66/67/68/69

LTC1710/40/41/42

LTC1850/51/52/53/54/55/56/57/58/59

LTC1860/61/63/64/65/67/69

LTC2401/02/04/11/20/21/22/24/28/33/35

LTC2917/2918 LTC3801

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Report Number: R380

Report generated on: Wed Sep 19 10:17:28 PDT 2012

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	1670	9813	0713	1846	1
PLASTIC DIP	154	0040	0040	154	0
SOIC/SOT/MSOP	758	9813	1150	720	0
Totals	2,582	-	-	2,720	1

HIGHLY ACCELERATED STRESS TEST AT +131 DEG C / 85% RH

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS (+85°C) ⁴	No. of FAILURES
SSOP/TSSOP	36	0917	0917	69	0
Totals	36	-	-	69	0

PRESSURE COOKER TEST AT 15 PSIG , +121 DEG C

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	No. of FAILURES
QFN/DFN	600	0231	1101	105	0
SSOP/TSSOP	15072	9745	1121	1870	0
SOIC/SOT/MSOP	14242	9812	1116	841	0
Totals	29,914	-	-	2,816	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	373	0231	1101	36	0
SSOP/TSSOP	13040	9745	1118	3953	0
SOIC/SOT/MSOP	12325	9812	1116	1987	0
Totals	25,738	-	-	5,976	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	527	0231	1101	265	0
SSOP/TSSOP	12722	9745	1121	3207	0
SOIC/SOT/MSOP	12725	9923	1116	1721	0
Totals	25,974	-	-	5,193	0

(1) Assumes Activation Energy = 0.7 Electron Volts

(2) Failure Rate Equivalent to +55 °C, 60% Confidence Level = 1.48 FITS

(3) Mean Time Between Failure in Years = 77127.48

(4) Assumes 20X Acceleration from 85 °C to +131 °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 HOURS	No. of FAILURES
SSOP/TSSOP	190	0826	0918	139	0
Totals	190	-	-	139	0
HIGH TEMPERATURE BAKE AT 175 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	No. of FAILURES
SSOP/TSSOP	448	0827	1013	274	0
SOIC/SOT/MSOP	48	1011	1011	24	0
Totals	496	-	-	298	0