

RELIABILITY DATA

LTC981/986 LTC1625/27/28/29

LTC1702/03/04/05/07/08/09/29/31/32/35/36/55/56/73/78

LTC1871/73/76 LTC1909/1929/1960 LTC3704/07/09/11/13/14/16/17/18/19

LTC3720/27/28/29/30/31/32/33/34/35/38 LTC3770/73/78/80/83

LTC3802/3819/23/26/27/28/34/35 LTC4255/58/59 LTC4412/14/16

10/29/2008

• OPERATING LIFE TEST

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS ⁽¹⁾ AT +125°C	NUMBER OF FAILURES ⁽²⁾
PLASTIC DIP	51	9914	9914	51.00	0
SOIC/SOT/MSOP	2,756	9827	0721	2,444.91	0
SSOP/TSSOP	7,144	9901	0750	5,540.94	0
QFN/DFN	462	0111	0803	295.46	0
	10,413			8,332.31	0

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

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS ⁽⁴⁾ AT +85°C	NUMBER OF FAILURES
SOIC/SOT/MSOP	113	9827	0801	286.08	0
SSOP/TSSOP	156	0641	0648	299.52	0
QFN/DFN	233	0111	0748	447.36	0
	502			1,032.96	0

• PRESSURE COOKER TEST AT 15 PSIG, +121°C

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	NUMBER OF FAILURES
SOIC/SOT/MSOP	15,500	9813	0812	1,119.32	0
SSOP/TSSOP	111,911	9827	0811	6,837.24	0
QFN/DFN	28,308	0031	0809	3,520.71	0
	155,719			11,477.27	0

• TEMP CYCLE FROM -65°C to +150°C

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
SOIC/SOT/MSOP	27,634	9843	0810	4,006.89	0
SSOP/TSSOP	58,657	9827	0810	13,532.24	0
QFN/DFN	27,857	0031	0808	10,876.43	0
	114,148			28,415.56	0

• THERMAL SHOCK FROM -65°C to +150°C

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
SOIC/SOT/MSOP	10,835	9843	0810	2,004.30	0
SSOP/TSSOP	53,543	9827	0810	11,116.94	0
DD PACK	49	0437	0437	4.90	0
QFN/DFN	26,160	0031	0809	10,431.54	0
	90,587			23,557.67	0

(1) Assumes Activation Energy = 0.7 Electron Volts

(2) Failure Rate Equivalent to +55°C, 60% Confidence Level = 1.42 FITS

(3) Mean Time Between Failures in Years = 80,336

(4) Assumes 20X Acceleration from 85°C to +131°C

Note: 1 FIT = 1 Failure in One Billion Hours.