

**RELIABILITY DATA**  
**LTC1403/07/08 LTC2202/03/04/05/06/07/08/09**  
**LTC2215/16/17/20/21/22/23/24/25/26/27/28/29**  
**LTC2230/31/32/33/34/36/37/38/39/45/46/47/48/49**  
**LTC2250/51/52/53/54/55 LTC2273/74**  
**LTC2280/82/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99**  
**7/31/2009**

• **OPERATING LIFE TEST**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS <sup>(1)</sup> AT +125°C	NUMBER OF FAILURES <sup>(2)</sup>
SOIC/SOT/MSOP	767	0309	0801	767.02	0
QFN/DFN	1,775	0438	0833	1,609.64	0
	2,542			2,376.66	0

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

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS <sup>(4)</sup> AT +85°C	NUMBER OF FAILURES
QFN/DFN	152	0420	0429	553.28	0
	152			553.28	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	506	0308	0804	101.01	0
QFN/DFN	6,899	0401	0652	1,797.38	0
	7,405			1,898.39	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	305	0308	0320	237.53	0
QFN/DFN	8,022	0401	0803	5,155.56	0
	8,327			5,393.08	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	228	0308	0320	228.00	0
QFN/DFN	4,772	0401	0640	3,637.40	0
	5,000			3,865.40	0

(1) Assumes Activation Energy = 0.7 Electron Volts  
(2) Failure Rate Equivalent to +55°C, 60% Confidence Level = 4.98 FITS  
(3) Mean Time Between Failures in Years = 22,907  
(4) Assumes 20X Acceleration from 85°C to +131°C  
Note: 1 FIT = 1 Failure in One Billion Hours.