

# RELIABILITY REPORT



## RELIABILITY DATA

### LTC4313 / LTC4314 / LTC4315 / LTC4316

2/13/2012

**• OPERATING LIFE TEST**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS <sup>(1)</sup> T +125°C	NUMBER OF <sup>(2)</sup> FAILURES
SSOP/TSSOP	154	0927	1035	154.00	0
SOIC/SOT/MSOP	77	1117	1117	77.00	0
	231			231.00	0

**• HIGHLY ACCELERATED STRESS TEST AT +131°C/85%RH<sup>(4,5)</sup>**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS <sup>(4)</sup> AT +85°C	NUMBER OF FAILURES
SSOP/TSSOP	904	0831	1145	2,115.24	0
DFN/QFN	132	1043	1053	233.28	0
SOIC/SOT/MSOP	476	1040	1119	1,229.44	0
	1,512			3,577.96	0

**• PRESSURE COOKER TEST AT 15 PSIG, +121°C<sup>(5)</sup>**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	NUMBER OF FAILURES
SSOP/TSSOP	10,142	0652	1025	568.37	0
DFN/QFN	4,234	0649	1034	259.08	0
SOIC/SOT/MSOP	2,183	0646	1046	460.79	0
	16,559			1,288.24	0

**• TEMP CYCLE FROM -65°C to +150°C<sup>(5)</sup>**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
SSOP/TSSOP	8,811	0705	1025	2,214.91	0
DFN/QFN	3,929	0729	1034	1,029.60	0
SOIC/SOT/MSOP	2,123	0648	1040	1,271.41	0
	14,863			4,515.92	0

**• THERMAL SHOCK FROM -65°C to +150°C<sup>(5)</sup>**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
SSOP/TSSOP	9,659	0652	1025	2,101.00	0
DFN/QFN	4,167	0652	1034	817.10	0
SOIC/SOT/MSOP	2,197	0646	1046	1,364.95	0
	16,023			4,283.05	0

(1) Assumes Activation Energy = 0.7 Electron Volts

(2) Failure Rate Equivalent to +55°C, 60% Confidence Level = 51.09 FITS

(3) Mean Time Between Failures in Years = 2,234

(4) Assumes 20x acceleration from 85°C to 131°C

(5) Environmental stress data given by Process Technology similarity

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