LINEAR TECHNOLOGY

RELIABILITY DATA

LT1077 / 78 / 79 / 1178 / 79 / LT1101 / LT2078 / 79 / 2178 / 79

6/17/04

• OPERATING LIFE TEST

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS (1) AT +125°C	NUMBER OF (2) FAILURES
CERDIP	764	8826	0327	1,628.77	0
HERMETIC	601	8750	0325	1,726.29	2
PLASTIC DIP	3,542	8913	9942	6,530.22	2
SOIC/SOT/MSOP	2,119	8906	9944	5,396.50	1
	7,026			15,281.78	5

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

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +85°C (4)	NUMBER OF FAILURES
PLASTIC DIP	499	9113	9704	665.40	0
SOIC/SOT/MSOP	1,293	9239	0237	1,509.56	0
	1,792			2,174.96	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
PLASTIC DIP	50,194	9109	0310	2,294.05	0
SOIC/SOT/MSOP	35,069	9051	0345	2,595.05	0
TO-220	100	9317	9911	3.60	0
	85,363			4,892.71	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
CERDIP	126	9051	0327	90.30	0
HERMETIC	85	9122	0325	13.60	0
PLASTIC DIP	3,791	9113	0310	1,319.43	0
SOIC/SOT/MSOP	6,356	8850	0345	1,922.72	0
TO-220	50	9911	9911	5.00	0
	10,408			3,351.05	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
CERDIP	255	9051	0327	51.98	0
HERMETIC	34	9122	9122	8.16	0
PLASTIC DIP	2,330	8830	0244	1,201.64	0
SOIC/SOT/MSOP	5,113	9051	0345	2,308.16	0
TO-220	50	9911	9911	5.00	0
	7,782			3,574.94	0

(1) Assumes Activation Energy = 1.0 Electron Volts
(2) Failure Rate Equivalent to +55°C, 60% Confidence Level = 0.83 FITS
(3) Mean Time Between Failures in Years = 137,442
(4) Assumes 20X Acceleration from 85°C to +131°C
Note: 1 FIT = 1 Failure in One Billion Hours.