

RELIABILITY DATA
LTC1153 / 54 / 55 / 56 / 57 / 63 / 65 / 77
10/26/2003

• 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	63	9213	9213	64.18	0
PLASTIC DIP	550	9129	0033	557.74	0
SOIC/SOT/MSOP	640	9423	0033	213.75	0
	1,253			835.68	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	60	9619	9619	28.80	0
	60			28.80	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	1,350	9322	9909	42.00	0
SOIC/SOT/MSOP	7,433	9201	0314	600.67	0
	8,783			642.67	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
PLASTIC DIP	590	9201	0033	63.15	0
SOIC/SOT/MSOP	2,525	9216	0302	1,259.85	0
	3,115			1,323.00	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
PLASTIC DIP	297	9442	9909	29.70	0
SOIC/SOT/MSOP	2,989	9201	0314	1,132.20	0
	3,286			1,161.90	0

(1) Assumes Activation Energy = 0.7 Electron Volts
(2) Failure Rate Equivalent to +55°C, 60% Confidence Level = 14.16 FITS
(3) Mean Time Between Failures in Years = 8,056
(4) Assumes 20X Acceleration from 85°C to +131°C
Note: 1 FIT = 1 Failure in One Billion Hours.