LINEAR TECHNOLOGY

RELIABILITY DATA
LT1500/1501/1506/1507/1533/1534
LT1611/1613/1761/1762/1763/1764/1765 LT1959/62/63/64 LT3150

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
SIDEBRAZE	30	9601	9601	30.00	0
SOIC/SOT/MSOP	1,394	9601	0234	1,171.78	0
DD PACK	50	0037	0037	8.40	0
	1,474			1,210.18	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	343	9943	0046	1,252.16	0
	343			1,252.16	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	9607	9607	1.33	0
SOIC/SOT/MSOP	13,055	9610	0325	1,297.36	0
SSOP/TSSOP	185	9740	0234	44.29	0
DD PACK	2,599	9934	0332	178.45	0
TO-220	550	0121	0329	14.40	0
QFN/DFN	1,295	0209	0325	126.63	0
	17,734			1,662.45	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	50	9607	9607	5.00	0
SOIC/SOT/MSOP	22,315	9605	0325	4,892.91	0
SSOP/TSSOP	182	9740	0234	101.46	0
DD PACK	16,898	9838	0332	2,101.49	0
TO-220	2,950	0121	0329	331.00	0
QFN/DFN	1,246	0209	0325	384.43	0
	43,641			7,816.29	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	50	9607	9607	5.00	0
SOIC/SOT/MSOP	12,858	9605	0325	3,302.96	0
SSOP/TSSOP	41	0234	0234	20.50	0
DD PACK	2,572	9934	0332	717.72	0
TO-220	500	0121	0329	50.00	0
QFN/DFN	1,455	0210	0325	328.20	0
	17,476			4,424.38	0

(1) Assumes Activation Energy = 1.0 Electron Volts

(2) Failure Rate Equivalent to +55°C, 60% Confidence Level = 1.52 FITS

(3) Mean Time Between Failures in Years = 75,051

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

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