

**RELIABILITY DATA**  
**LM119 / LM319 / LT1123**

**6/17/04**

**• OPERATING LIFE TEST**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS <sup>(1)</sup> AT +125°C	NUMBER OF <sup>(2)</sup> FAILURES
CERDIP	1,138	8433	0228	1,553.75	0
FLATPAK/LCC	926	9109	0307	972.19	0
HERMETIC	2,014	8318	0143	4,140.43	2
PLASTIC DIP	535	8411	9807	1,556.84	1
TO-92	630	8952	9528	2,859.89	0
	5,243			11,083.09	3

**• 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 <sup>(4)</sup>	NUMBER OF FAILURES
PLASTIC DIP	142	9033	9649	311.54	0
TO-92	178	9121	9542	264.48	0
	320			576.02	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	1,316	8724	0221	115.99	0
SOIC/SOT/MSOP	650	9326	0026	18.00	0
TO-92	645	9240	0210	24.74	0
	2,611			158.73	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	687	8433	0242	285.90	0
FLATPAK/LCC	382	8841	0307	38.20	0
HERMETIC	834	8318	0213	123.90	0
PLASTIC DIP	297	8425	0221	115.10	0
SOIC/SOT/MSOP	300	9607	0026	30.00	0
TO-92	335	9121	0210	33.50	0
	2,835			626.60	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	553	8433	0242	206.19	0
FLATPAK/LCC	186	8841	0307	7.81	0
HERMETIC	439	8318	0213	68.91	0
PLASTIC DIP	437	8425	0206	271.32	0
SOIC/SOT/MSOP	200	9636	0026	20.00	0
TO-92	245	9121	0210	24.50	0
	2,060			598.72	0

(1) Assumes Activation Energy = 1.0 Electron Volts  
 (2) Failure Rate Equivalent to +55°C, 60% Confidence Level = 0.76 FITS  
 (3) Mean Time Between Failures in Years = 150,101  
 (4) Assumes 20X Acceleration from 85°C to +131°C  
 Note: 1 FIT = 1 Failure in One Billion Hours.