

# RELIABILITY REPORT



**RELIABILITY DATA**  
**LT138/338 LM138/338 LT1038**

**8/21/2006**

**• OPERATING LIFE TEST**

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS <sup>(1)</sup> AT +125°C	NUMBER OF FAILURES <sup>(2)</sup>
TO-3	694	8344	0125	1,700.33	0
TO-220	91	8601	8601	468.20	0
	785			2,168.54	0

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

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS <sup>(4)</sup> AT +85°C	NUMBER OF FAILURES
TO-3P	45	9150	9150	57.60	0
	45			57.60	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	100	9927	9933	2.40	0
TO-3P	850	9215	9502	28.80	0
	950			31.20	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
TO-3	438	8344	9942	215.62	0
TO-220	77	8613	8613	7.70	0
TO-3P	145	9150	9250	14.82	0
	660			238.14	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
TO-3	362	8344	9942	159.40	0
TO-220	77	8613	8613	7.70	0
TO-3P	50	9229	9229	5.00	0
	489			172.10	0

(1) Assumes Activation Energy = 1.0 Electron Volts  
 (2) Failure Rate Equivalent to +55°C, 60% Confidence Level = 0.85 FITS  
 (3) Mean Time Between Failures in Years = 134,208  
 (4) Assumes 20X Acceleration from 85°C to +131°C  
 Note: 1 FIT = 1 Failure in One Billion Hours.