

Reliability Data Report

Report Number: R531

Report generated on: Wed Nov 06 11:39:32 PST 2019

OPERATING LIFE TEST					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS (+125°C) ¹	No. of FAILURES _{2,3}
SSOP/TSSOP	460	0941	1428	1159	0
TO-3	462	1034	1034	1244	0
SOIC/MSOP	1456	0813	1518	5672	0
QFN/DFN	2272	0713	1630	3772	0
SOT	308	0908	1421	1724	0
Totals	4,958	-	-	13,571	0
HIGHLY ACCELERATED STRESS TEST AT +130 DEG C / 85% RH					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS (+85°C) ⁴	No. of FAILURES
SOT	1324	1332	1503	2557	0
Totals	1,324	-	-	2,557	0
PRESSURE COOKER TEST AT 15 PSIG , +121 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS	No. of FAILURES
DD PAK	9982	0811	1709	1546	0
QFN/DFN	21380	0552	1741	2628	0
SSOP/TSSOP	4700	0550	1704	539	0
SOIC/MSOP	12360	0739	1715	828	0
TO-220	5108	0813	1713	965	0
SOT	20748	0730	1712	1319	0
Totals	74,278	-	-	7,825	0
TEMP CYCLE FROM -65 TO 150 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	No. of FAILURES
DD PAK	9240	1045	1709	3352	0
QFN/DFN	19518	0552	1741	8398	0
SSOP/TSSOP	4160	0550	1704	1380	0
SOIC/MSOP	13324	0739	1715	3719	0
TO-220	4092	1045	1713	2050	0
SOT	13934	0740	1712	3203	0
Totals	64,268	-	-	22,102	0

(1) Assumes Activation Energy = 1.0 Electron Volts
(2) Failure Rate Equivalent to +55 °C, 60% Confidence Level =0.14 FITS
(3) Mean Time Between Failure in Years = 845081.19
(4) Assumes 20X Acceleration from 85 °C to +130 °C
Note 1: 1 FIT = 1 Failure in One Billion Hours.
Note 2: HAST, Temp Cycle & Thermal Shock are subjected to J-STD-020 MSL Preconditioning

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THERMAL SHOCK FROM -65 TO 150 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	No. of FAILURES
DD PAK	7564	0811	1709	2527	0
QFN/DFN	19950	0552	1741	8393	0
SSOP/TSSOP	4248	0550	1704	1467	0
SOIC/MSOP	13142	0739	1715	3555	0
TO-220	2880	0813	1713	1146	0
SOT	14174	0740	1712	2944	0
Totals	61,958	-	-	20,032	0
HIGH TEMPERATURE BAKE AT 150 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS	No. of FAILURES
QFN/DFN	3930	0739	1740	3651	0
SOIC/MSOP	1370	0739	1522	1370	0
SOT	308	0811	0811	154	0
Totals	5,608	-	-	5,175	0
HIGH TEMPERATURE BAKE AT 175 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS	No. of FAILURES
DD PAK	1876	1223	1615	1876	0
QFN/DFN	3006	0552	1741	4783	0
SSOP/TSSOP	708	1227	1649	710	0
SOIC/MSOP	1370	0739	1703	1220	0
TO-220	1106	1247	1615	1106	0
SOT	1680	0836	1648	1617	0
Totals	9,746	-	-	11,312	0