

# RELIABILITY REPORT





# Reliability Data Report

## Product Family R525

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LTC6801 / LTC6802 / LTC6803 /  
LTC6804 / LTC6820

# Reliability Data Report

## Report Number: R525

Report generated on: Fri May 20 09:47:43 PDT 2016

<b>OPERATING LIFE TEST</b>					
<b>PACKAGE TYPE</b>	<b>SAMPLE SIZE</b>	<b>OLDEST DATE CODE</b>	<b>NEWEST DATE CODE</b>	<b>K DEVICE HRS (+125°C)<sup>1</sup></b>	<b>No. of FAILURES <sub>2, 3</sub></b>
SSOP/TSSOP	2342	0831	1502	1360	0
SOIC/MSOP	3214	1219	1440	152	0
Totals	5,556	-	-	1,512	0
<b>HIGHLY ACCELERATED STRESS TEST AT +130 DEG C / 85% RH</b>					
<b>PACKAGE TYPE</b>	<b>SAMPLE SIZE</b>	<b>OLDEST DATE CODE</b>	<b>NEWEST DATE CODE</b>	<b>K DEVICE HRS (+85°C)<sup>4</sup></b>	<b>No. of FAILURES</b>
SSOP/TSSOP	2719	0831	1519	6460	0
SOIC/MSOP	77	1440	1440	295	0
Totals	2,796	-	-	6,755	0
<b>PRESSURE COOKER TEST AT 15 PSIG , +121 DEG C</b>					
<b>PACKAGE TYPE</b>	<b>SAMPLE SIZE</b>	<b>OLDEST DATE CODE</b>	<b>NEWEST DATE CODE</b>	<b>K DEVICE HRS</b>	<b>No. of FAILURES</b>
SSOP/TSSOP	53297	0816	1537	1876	0
SOIC/MSOP	403	1235	1518	86	0
QFN/DFN	77	1235	1235	25	0
Totals	53,777	-	-	1,987	0
<b>TEMP CYCLE FROM -65 TO 150 DEG C</b>					
<b>PACKAGE TYPE</b>	<b>SAMPLE SIZE</b>	<b>OLDEST DATE CODE</b>	<b>NEWEST DATE CODE</b>	<b>K DEVICE CYCLES</b>	<b>No. of FAILURES</b>
SSOP/TSSOP	48982	0904	1537	6919	0
SOIC/MSOP	204	1235	1440	274	0
QFN/DFN	76	1235	1235	152	0
Totals	49,262	-	-	7,345	0

- (1) Assumes Activation Energy = 0.7 Electron Volts  
 (2) Failure Rate Equivalent to +55 °C, 60% Confidence Level =7.84 FITS  
 Failure Rate Equivalent to +55 °C, 90% Confidence Level =19.57 FITS  
 (3) Mean Time Between Failure in Years = 14566.79  
 (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 I-STD-020 MSL Preconditioning

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<b>THERMAL SHOCK FROM -65 TO 150 DEG C</b>					
<b>PACKAGE TYPE</b>	<b>SAMPLE SIZE</b>	<b>OLDEST DATE CODE</b>	<b>NEWEST DATE CODE</b>	<b>K DEVICE CYCLES</b>	<b>No. of FAILURES</b>
SSOP/TSSOP	52803	0904	1525	6828	0
SOIC/MSOP	204	1235	1440	236	0
QFN/DFN	77	1235	1235	77	0
Totals	53,084	-	-	7,141	0
<b>HIGH TEMPERATURE BAKE AT 150 DEG C</b>					
<b>PACKAGE TYPE</b>	<b>SAMPLE SIZE</b>	<b>OLDEST DATE CODE</b>	<b>NEWEST DATE CODE</b>	<b>K DEVICE HRS</b>	<b>No. of FAILURES</b>
SSOP/TSSOP	677	0904	1537	492	0
SOIC/MSOP	48	1440	1440	48	0
Totals	725	-	-	540	0
<b>HIGH TEMPERATURE BAKE AT 175 DEG C</b>					
<b>PACKAGE TYPE</b>	<b>SAMPLE SIZE</b>	<b>OLDEST DATE CODE</b>	<b>NEWEST DATE CODE</b>	<b>K DEVICE HRS</b>	<b>No. of FAILURES</b>
SSOP/TSSOP	1277	0904	1525	1093	0
SOIC/MSOP	154	1235	1440	154	0
QFN/DFN	77	1235	1235	77	0
Totals	1,508	-	-	1,324	0