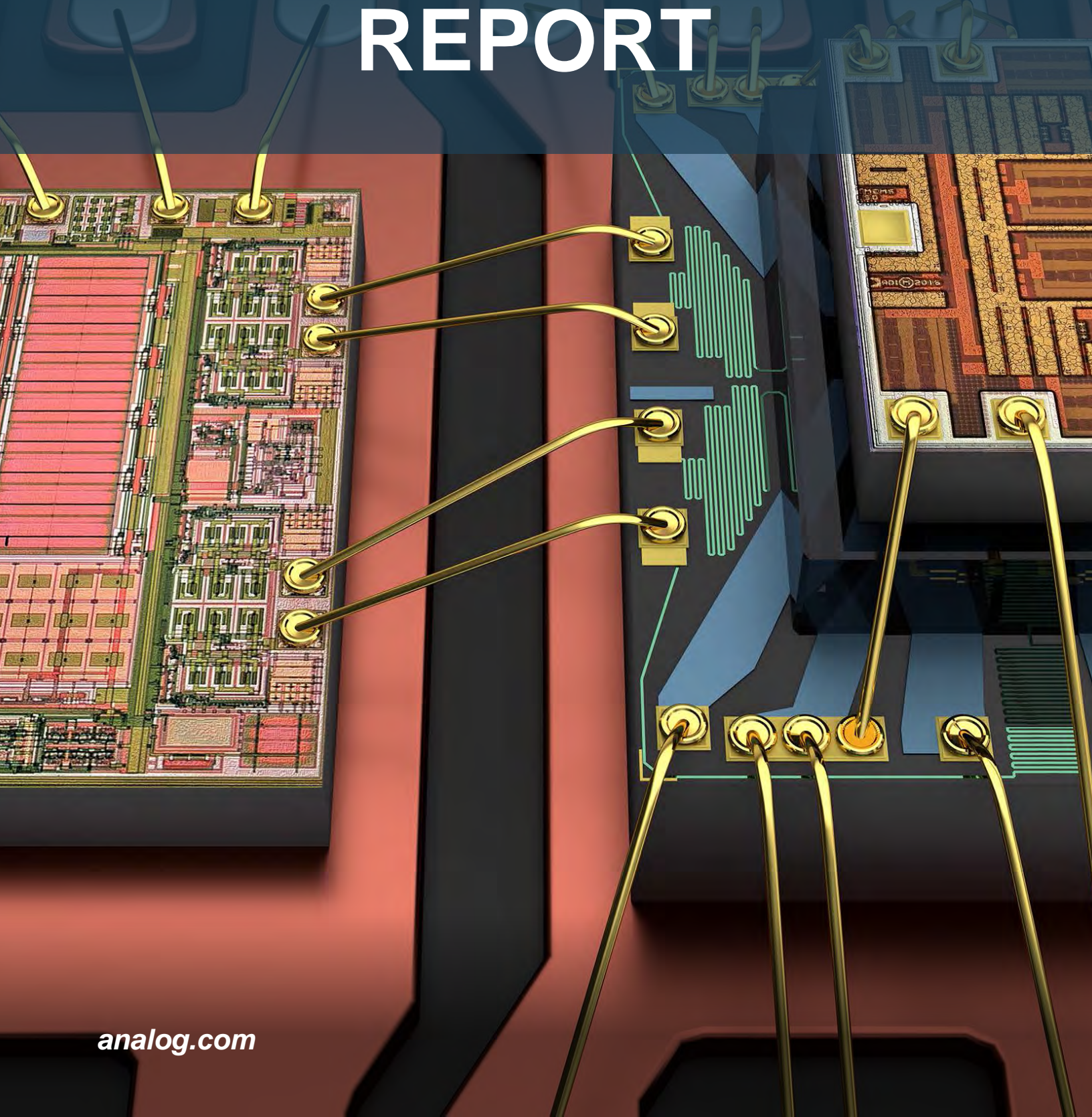


# RELIABILITY REPORT





# Reliability Data Report

## Product Family R402

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LTC1502/03   LTC1682   LTC1733/34/51  
LTC1754/59/60   LTC1772/79  
LTC1872/74   LTC1928/83/86  
LTC3550   LTC3700   LTC4060/61/62/63/68  
LTC4075/76/77

# Reliability Data Report

## Report Number: R402

Report generated on: Wed Sep 19 11:36:32 PDT 2012

OPERATING LIFE TEST					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HRS (125°C) <sup>1</sup>	No. of FAILURES <sup>2,3</sup>
SIDEBRAZE	147	9901	0337	147	0
QFN/DFN	385	0502	0522	385	0
SOIC/SOT/MSOP	3855	9901	1140	3773	0
Totals	4,387	-	-	4,305	0

HIGHLY ACCELERATED STRESS TEST AT +131 DEG C / 85% RH					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS (+85°C) <sup>4</sup>	No. of FAILURES
SOIC/SOT/MSOP	426	0201	1046	808	0
Totals	426	-	-	808	0

PRESSURE COOKER TEST AT 15 PSIG , +121 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	No. of FAILURES
QFN/DFN	4248	0427	1036	373	0
SSOP/TSSOP	1804	9917	0952	317	0
SOIC/SOT/MSOP	33406	9843	1114	3080	0
Totals	39,458	-	-	3,770	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
QFN/DFN	5763	0443	1036	1175	0
SSOP/TSSOP	2677	9917	1033	1369	0
SOIC/SOT/MSOP	47363	9484	1114	8842	0
Totals	55,803	-	-	11,386	0

THERMAL SHOCK FROM -65 TO 150 DEG C					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	No. of FAILURES
QFN/DFN	4005	0443	1036	953	0
SSOP/TSSOP	1771	9917	1033	992	0
SOIC/SOT/MSOP	24085	9484	1114	6131	0
Totals	29,861	-	-	8,076	0

(1) Assumes Activation Energy = 0.7 Electron Volts  
 (2) Failure Rate Equivalent to +55 °C, 60% Confidence Level =0.43 FITS  
 (3) Mean Time Between Failure in Years = 268077.09  
 (4) Assumes 20X Acceleration from 85 °C to +131 °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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<b>HIGH TEMPERATURE BAKE AT 150 DEG C</b>					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	No. of FAILURES
QFN/DFN	273	0639	0825	273	0
SSOP/TSSOP	281	0835	0850	281	0
Totals	554	-	-	554	0
<b>HIGH TEMPERATURE BAKE AT 175 DEG C</b>					
PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	No. of FAILURES
QFN/DFN	231	0639	0646	231	0
SSOP/TSSOP	193	0835	0850	193	0
Totals	424	-	-	424	0