

RELIABILITY REPORT





Reliability Data Report Product Family R549

LTC2310 / LTC2311 / LTC2312 / LTC2313 /
LTC2314 / LTC2315 / LTC2320 / LTC2321 /
LTC2323 / LTC2324 / LTC2325 / LTC2326 /
LTC2327 / LTC2328 / LTC2333 / LTC2335 /
LTC2336 / LTC2337 / LTC2338 / LTC2341 /
LTC2344 / LTC2345 / LTC2348 / LTC2353 /
LTC2357 / LTC2358 / LTC2364 / LTC2367 /
LTC2368 / LTC2370 / LTC2376 / LTC2377 /
LTC2378 / LTC2379 / LTC2380 / LTC2381 /
LTC2382 / LTC2383 / LTC2385 / LTC2386 /
LTC2387 / LTC2389 / LTC2391 / LTC2392 /
LTC2393 / LTC2500 / LTC2508 / LTC2512

RELIABILITY DATA

R549

8/6/2020

• OPERATING LIFE TEST

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +125°C ⁽¹⁾	NUMBER OF FAILURES ⁽²⁾
SOIC/MSOP	693	1035	1840	590.49	0
QFN/DFN	996	936	1911	1764.68	0
LQFP	231	1352	1435	771.54	0
TSOT	471	1210	1621	368.59	0
Total	2391			3495.30	0

• HIGHLY ACCELERATED STRESS TEST AT +130°C / 85%RH ⁽⁴⁾

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	Equivalent K DEVICE HOURS AT +85°C	NUMBER OF FAILURES
SOIC/MSOP	316	1511	1840	1213.44	0
QFN/DFN	82	1847	1847	157.44	0
LQFP	59	1411	1411	228.92	0
TSOT	238	1335	1621	456.96	0
Total	695			2056.76	0

• PRESSURE COOKER TEST AT 15PSIG, +121°C

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	NUMBER OF FAILURES
SOIC/MSOP	348	1001	2019	96.19	0
QFN/DFN	1072	0904	2012	186.98	0
LQFP	1381	1242	1849	128.45	0
TSOT	1031	1241	2020	107.90	0
Total	3832			519.52	0

• TEMPERATURE CYCLE TEST AT -65°C to +150°C

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
SOIC/MSOP	642	1001	2019	345.35	0
QFN/DFN	1441	1001	2012	451.70	0
LQFP	1740	0904	1849	441.70	0
TSOT	1568	1241	2020	408.20	0
Total	5391			1646.95	0

• THERMAL SHOCK TEST AT -65°C to +150°C

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
SOIC/MSOP	76	1001	1001	38.00	0
QFN/DFN	504	1001	1729	260.50	0
LQFP	959	0904	1801	386.30	0
TSOT	276	1241	1716	96.90	0
Total	1815			781.70	0

• HIGH TEMPERATURE STORAGE LIFE TEST AT +175°C ⁽⁵⁾

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	NUMBER OF FAILURES
DFN/QFN	127	1346	1728	127.00	0
Total	127			127.00	0

• HIGH TEMPERATURE STORAGE LIFE TEST AT +150°C

PACKAGE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS	NUMBER OF FAILURES
SSOP/TSSOP	50	1838	1838	50.00	0
DFN/QFN	250	1413	1927	225.00	0
LQFP	481	1242	1616	406.00	0
TSOT	45	1621	1621	45.00	0
Total	826			726.00	0

(1) Sample size too small for meaningful FIT calculations.

(2) Failure Rate Equivalent to +55C, Assuming 60% Confidence Level & Activation Energy of 0.7eV = 3.37 FIT

(3) Mean Time Between Failures (MTBF) = 33888yr

(4) Assumes 20X acceleration from +85°C to +130°C.

Note: 1 FIT = 1 Failure in One Billion Hours.