# Reliability Data Report
# Product Family R530

LT1912 / LT1913 / LT1938 / LT1939 / LT3480 / LT3481 / LT3482 / LT3487 / LT3489 / LT3493 / LT3494 / LT3495 / LT3500 / LT3502 / LT3503 / LT3504 / LT3505 / LT3507 / LT3508 / LT3508 / LT3509 / LT3511 / LT3512 / LT3513 / LT3571 / LT3572 / LT3573 / LT3574 / LT3575 / LT3579 / LT3580 / LT3581 / LT3585 / LT3587 / LT3645 / LT3653 / LT3663 / LT3680 / LT3681 / LT3682 / LT3684 / LT3685 / LT3686 / LT3688 / LT3689 / LT3690 / LT3692 / LT3693 / LT3694 / LT3695 / LT3742 / LT3745 / LT3748 / LT3751 / LT3757 / LT3758 / LT3759 / LT3798 / LT3799 / LT3957 / LT3958 / LT3959 / LT3970 / LT3971 / LT3972 / LT3973 / LT3975 / LT3980 / LT3988 / LT3990 / LT3991 / LT3992 / LT8410 / LT8415 / LT8582

# Reliability Data Report
# Report Number: R530

Report generated on: Tue Oct 09 10:37:51 PDT 2012

## OPERATING LIFE TEST

| PACKAGE TYPE | SAMPLE SIZE | OLDEST DATE CODE | NEWEST DATE CODE | K DEVICE HRS (+125°C)[1] | No. of FAILURES [2,3] |
|---|---|---|---|---|---|
| QFN/DFN | 4131 | 0612 | 1113 | 7085 | 0 |
| SSOP/TSSOP | 1076 | 0710 | 1132 | 2837 | 0 |
| SOIC/SOT/MSOP | 3730 | 0526 | 1206 | 12013 | 0 |
| Totals | 8,937 | - | - | 21,935 | 0 |

## HIGHLY ACCELERATED STRESS TEST AT +131 DEG C / 85% RH

| PACKAGE TYPE | SAMPLE SIZE | OLDEST DATE CODE | NEWEST DATE CODE | K DEVICE HRS (+85°C)[4] | No. of FAILURES |
|---|---|---|---|---|---|
| QFN/DFN | 305 | 0617 | 1108 | 604 | 0 |
| SOIC/SOT/MSOP | 197 | 0927 | 1039 | 424 | 0 |
| Totals | 502 | - | - | 1,028 | 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 |
|---|---|---|---|---|---|
| QFN/DFN | 26473 | 9017 | 1125 | 1318 | 0 |
| SSOP/TSSOP | 3413 | 0842 | 1122 | 94 | 0 |
| SOIC/SOT/MSOP | 17502 | 0646 | 1123 | 934 | 0 |
| Totals | 47,388 | - | - | 2,346 | 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 | 29450 | 9017 | 1210 | 6304 | 0 |
| SSOP/TSSOP | 3948 | 0738 | 1122 | 752 | 0 |
| SOIC/SOT/MSOP | 17242 | 0646 | 1122 | 3121 | 0 |
| Totals | 50,640 | - | - | 10,177 | 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 | 27567 | 9017 | 1208 | 5541 | 0 |
| SSOP/TSSOP | 3988 | 0842 | 1127 | 835 | 0 |
| SOIC/SOT/MSOP | 17816 | 0722 | 1122 | 3389 | 0 |
| Totals | 49,371 | - | - | 9,765 | 0 |

(1) Assumes Activation Energy = 1.0 Electron Volts
(2) Failure Rate Equivalent to +55 °C, 60% Confidence Level =0.08 FITS
(3) Mean Time Between Failure in Years = 1365916.5
(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 3/4 Preconditioning

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## 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 | 2663 | 0731 | 1021 | 2392 | 0 |
| SSOP/TSSOP | 154 | 1048 | 1048 | 154 | 0 |
| SOIC/SOT/MSOP | 431 | 0646 | 1122 | 481 | 0 |
| UTDFN | 126 | 0707 | 0707 | 126 | 0 |
| Totals | 3,374 | - | - | 3,153 | 0 |

## HIGH TEMPERATURE BAKE AT 175 DEG C

| PACKAGE TYPE | SAMPLE SIZE | OLDEST DATE CODE | NEWEST DATE CODE | K DEVICE HRS | No. of FAILURES |
|---|---|---|---|---|---|
| QFN/DFN | 1775 | 0227 | 1208 | 1673 | 0 |
| SOIC/SOT/MSOP | 1063 | 0646 | 1017 | 1002 | 0 |
| UTDFN | 188 | 0707 | 0707 | 190 | 0 |
| UTQFN | 50 | 0842 | 0842 | 50 | 0 |
| Totals | 3,076 | - | - | 2,915 | 0 |

## MECHANICAL SHOCK (JESD22-B104 CONDITION B - PEAK = 1500G)

| PACKAGE TYPE | SAMPLE SIZE | OLDEST DATE CODE | NEWEST DATE CODE | | No. of FAILURES |
|---|---|---|---|---|---|
| QFN/DFN | 24 | 0842 | 0842 | | 0 |
| Totals | 24 | - | - | | 0 |