



## Reliability Data Report Product Family R365

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LT1317 / LT1766 / LT1940 / LT1941 /  
LT1942 / LT1943 / LT1944 / LT1945 /  
LT1946 / LT1947 / LT1948 / LT1949 /  
LT1952 / LT1956 / LT1961 / LT3010 /  
LT3020 / LT3023 / LT3024 / LT3479 /  
LT3483 / LT3740 / LT3750 / LT3844 /  
LT3845

# Reliability Data Report

## Report Number: R365

Report generated on: Fri May 02 14:08:19 PDT 2014

| 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> |
| QFN/DFN             | 512         | 0102             | 0710             | 564                                | 0                              |
| SSOP/TSSOP          | 1101        | 0233             | 1313             | 656                                | 0                              |
| SOIC/SOT/MSOP       | 1512        | 9740             | 1225             | 1643                               | 0                              |
| Totals              | 3,125       | -                | -                | 2,863                              | 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) <sup>4</sup> | No. of FAILURES |
| QFN/DFN   | 72          | 0112             | 0112             | 138                               | 0               |
| Totals  | 72          | -                | -                | 138                               | 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                                      | 6824        | 0102             | 1310             | 811          | 0               |
| SSOP/TSSOP                                   | 22479       | 0114             | 1323             | 1976         | 0               |
| SOIC/SOT/MSOP                                | 36157       | 9812             | 1322             | 2588         | 0               |
| PLASTIC DIP                                  | 921         | 0823             | 0926             | 270          | 0               |
| Totals                                       | 66,381      | -                | -                | 5,645        | 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                          | 5847        | 0112             | 1310             | 1032            | 0               |
| SSOP/TSSOP                       | 22209       | 9144             | 1323             | 7022            | 0               |
| SOIC/SOT/MSOP                    | 61213       | 9812             | 1322             | 9720            | 0               |
| PLASTIC DIP                      | 693         | 0823             | 0926             | 616             | 0               |
| Totals                           | 89,962      | -                | -                | 18,390          | 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                             | 5938        | 0112             | 1310             | 1151            | 0               |
| SSOP/TSSOP                          | 24719       | 9144             | 1323             | 7216            | 0               |
| SOIC/SOT/MSOP                       | 33462       | 9812             | 1322             | 6485            | 0               |
| PLASTIC DIP                         | 231         | 0926             | 0926             | 115             | 0               |
| Totals                              | 64,350      | -                | -                | 14,967          | 0               |

(1) Assumes Activation Energy = 1.0 Electron Volts  
 (2) Failure Rate Equivalent to +55 °C, 60% Confidence Level =0.64 FITS  
 (3) Mean Time Between Failure in Years = 178282.14  
 (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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| <b>HIGH TEMPERATURE BAKE AT 150 DEG C</b> |                    |                             |                             |                     |                        |
|---|--------------------|-----------------------------|-----------------------------|---------------------|------------------------|
| <b>PACKAGE TYPE</b>                       | <b>SAMPLE SIZE</b> | <b>OLDEST DATE<br/>CODE</b> | <b>NEWEST DATE<br/>CODE</b> | <b>K DEVICE HRS</b> | <b>No. of FAILURES</b> |
| QFN/DFN                                   | 50                 | 0837                        | 0837                        | 50                  | 0                      |
| SSOP/TSSOP                                | 512                | 0904                        | 0930                        | 512                 | 0                      |
| SOIC/SOT/MSOP                             | 50                 | 1238                        | 1238                        | 50                  | 0                      |
| PLASTIC DIP                               | 600                | 0823                        | 0926                        | 600                 | 0                      |
| Totals                                    | 1,212              | -                           | -                           | 1,212               | 0                      |
| <b>HIGH TEMPERATURE BAKE AT 175 DEG C</b> |                    |                             |                             |                     |                        |
| <b>PACKAGE TYPE</b>                       | <b>SAMPLE SIZE</b> | <b>OLDEST DATE<br/>CODE</b> | <b>NEWEST DATE<br/>CODE</b> | <b>K DEVICE HRS</b> | <b>No. of FAILURES</b> |
| SSOP/TSSOP                                | 681                | 0904                        | 1015                        | 639                 | 0                      |
| SOIC/SOT/MSOP                             | 2194               | 0650                        | 1314                        | 2740                | 0                      |
| PLASTIC DIP                               | 600                | 0823                        | 0926                        | 575                 | 0                      |
| Totals                                    | 3,475              | -                           | -                           | 3,954               | 0                      |