

RELIABILITY FAILURE RATE SUMMARY

| Search Results | | | | | | | | | | | | | | |
|-------------------|----------------------------|-------------------------|-----|--|-----------------------|----------------|--------------------------|----------------------------|----------------------------|------------------------------|-----------------------|---------------------------|----------------|-----------------------|
| | Early Life Failure Rate | Life Rate MTBF / FIT | | Early Life Failure Rate Supporting Data | | | | MTBF / FIT Supporting Data | | | | | | |
| PR_Tech: | ELFR-DPPM | MTBF | FIT | Confidence Level (%) | Test Temp. (°C) | Sample Size | Number of Failures | Usage Temp. (°C) | Confidence Level (%) | Activation Energy (eV) | Test Temp. (°C) | Test Duration (hrs) | Sample Size | Number of Failures |
| CSD95372A/BQ5M in | - | 3.45E+08 | 2.9 | - | - | - | - | 55 | 60 | 0.7 | 125 | 1000 | 8259 | 0 |
| FET NCH LV Gen2.1 | | | | | | | | | | | | | | |

¹ Assuming an ambient temperature of 55°C

² Chi-squared 60% estimations used to calculate the failure rate

³ Equivalent unit hours (EUH)

⁴ Thermal acceleration factor is calculated from the Arrhenius equation

where:

$$AF = exp [(Ea/k) x (1/Tu - 1/Ta)]$$

AF = acceleration factor

Ea = apparent activation energy in electron volts (eV)

 $K = Boltzmann's constant (8.617 \times 10^{-5} electron volts/°Kelvin)$

Tu = junction temperature at normal use conditions in degrees Kelvin

Ta = junction temperature at accelerated conditions in degrees Kelvin

Disclaimer: The information and/or drawings set forth in this document and all rights in and to inventions disclosed herein and patents which might be granted thereon disclosing or employing the materials, methods, techniques, or apparatus described herein are the exclusive property of Texas Instruments. No disclosure of information or drawing shall be made to any other person or organization without the prior consent of Texas Instruments.

Copyright 2015 Texas Instruments All Rights Reserved