Reliability Data: Reliability Estimator Results

The following failure rates are summarized by technology and mapped to the associated material part numbers. The failure rates are highly dependent on the number of units tested, therefore, it is not recommended to compare failure rates.

Part #	MTBF / FIT		MTBF / FIT Supporting Data						
	MTBF	**FIT**	Usage Temp. (°C)	Confidence Level (%)	Activation Energy (eV)	Test Temp. (°C)	Test Duration (hrs)	Sample Size	Number of Failures
BQ40Z50RSMR-R1	**$5.56x10^{8}$**	**1.8**							
Component 1			55	60.0	0.7	125	1000	6945	0
Component 2			55	60.0	0.7	125	1000	159230	0

Definition of Table Terminology

Part #: The TI Orderable part number
ELFR: Early Life Failure Rate
DPPM: Defects per parts per million
MTBF: Mean Time Between Failures
FIT: Failures-in-Time. The number of failures per 1E9 device-hours
Confidence Level %: Statistical confidence level
Test Temp. (°C): Temperature at which the stress test is performed
Sample Size: Sample size is how many units were tested and would be based on the normalized value for duration
Number of Failures: The number of failures per test
Usage Temp (°C): Estimated usage temperature
Activation Energy (eV): Energy in electron volts (eV) for a particular process to occur
Test Duration (hrs): Test Duration is a field that comes from the qualification testing of a product. Since more than one test is conducted and the duration varies, this field will be normalized based on calculations using Temp, quantity and fails. This value would be equivalent unit hours.
NA: Not Applicable
TBD: To be Determined

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