

Power System Reliability Modeling

Failures can occur in any electrical systems causing disruption of operations. Especially, power supply failures cause system down-time & costly interruptions. Business-critical applications rely on ITC (data centers and telecom network and other important systems) and their continuous availability.

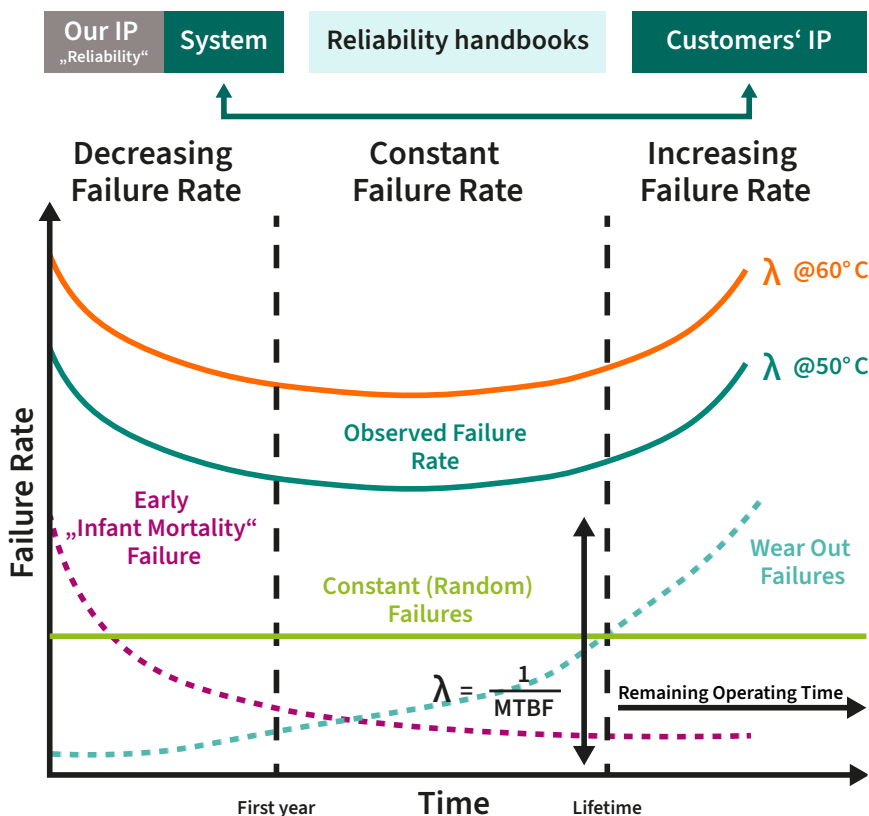
Monitoring the health of your power system can avoid failures and improve the total cost of ownership. Hence, dynamic insights into its condition are essential. Component reliability is the key to power supply monitoring.

Solution Benefits

- Real-time system diagnostics for your power supply
- Powerful system reliability-centric decision and quality assurance
- Easy to use and integrate in existing designs

Target applications

- Data center, AI server, GPUs, telecom networks, IBC modules, DCDC converters, ACDC rectifiers



Problem:

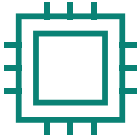
The reliability of any electrical system is very much dependent on its mission profile

Solution:

Statistical models and real-time mission profile logging enable a recalculation of the actual failure rate

Introducing Power System Reliability Modeling with real-time power health monitoring and advanced telemetry functionalities.

Here are your benefits at a glance:



Apply real-time system diagnostics to your power supply

- Continuous processing of operation conditions (e.g. temperature, current, voltage) of the power supply (dynamic mission profile)
- Modeling of complete power supply design (BOM model) inside the power controller
- Reliability and change of MTBF/MTTF predictions based on BOM model and dynamic mission profile



Get a powerful system reliability-centric decisions and quality assurance

- Optimize the lifetime of redundant systems and make better maintenance decisions
- Get insights into your power systems with advanced mission profile logging features
- Access field data for quality assurance and design iterations
- Create an overview of the statistical state of health of devices in the field



Easy to use and easy to integrate into your design

- Every power topology and design (BOM) can be modelled/used
- Existing digital power controller infrastructure and tooling can be used
- Pin-to-pin compatible with current power controller infrastructure generations
- Support of engineering team and modelling experts

Power System Reliability Modeling enables real-time power supply health monitoring for business-critical IT systems. Customers can optimize power supply utilization and reduce maintenance costs and downtime risk, improving profitability. Customers can increase the lifetime of their infrastructures and enable optimized after-sales services/support.

For more information visit [our solution page](#).

Published by
Infineon Technologies AG
Am Campeon 1-15, 85579 Neubiberg
Germany

© 2024 Infineon Technologies AG.
All rights reserved.

Public

Date: 04/2024

Please note!

This Document is for information purposes only and any information given herein shall in no event be regarded as a warranty, guarantee or description of any functionality, conditions and/or quality of our products or any suitability for a particular purpose. With regard to the technical specifications of our products, we kindly ask you to refer to the relevant product data sheets provided by us. Our customers and their technical departments are required to evaluate the suitability of our products for the intended application.

We reserve the right to change this document and/or the information given herein at any time.

Additional information

For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office (www.infineon.com).

Warnings

Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.



Scan QR code and explore offering
www.infineon.com/reliabilitymodeling