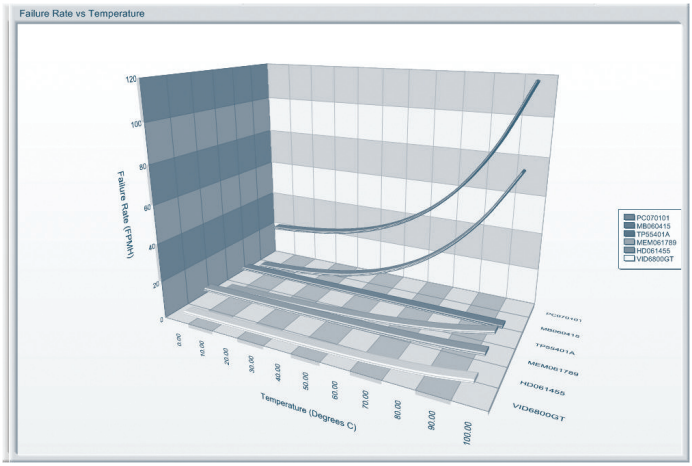
Relex Reliability Prediction

Perform Reliability Analyses Using Globally Accepted Standards

Based on industry-standard methodology, Relex Reliability Prediction provides a comprehensive, easy-to-use tool to estimate system reliability and MTBF (Mean Time Between Failures).

Relex Reliability Prediction provides the basis for the reliability evaluation and analysis of systems by allowing you to assess reliability metrics early in the design process. Using Relex Reliability Prediction, you can identify the leading contributors to system failure and measure the impact of environment and stress on the system. Intuitive interface tools, including extensive parts libraries and convenient import wizards, facilitate fast data entry and analysis, while helping you ensure full compliance with industry-standard models.



Vivid, flexible graphs constructed with easy-to-use, wizard-based design tools present key system metrics.

Key Benefits

Calculate Key Reliability Metrics

- Analyze components to predict and calculate the rate at which a product or system will fail
- Calculate failure rate and MTBF (Mean Time Between Failures)
- Prediction calculations are based on established, globally accepted models
- Combine models within a single analysis according to your needs
- Supports mission profile modeling, reliability allocation methods, and the ability to model both active and dormant states
- Supports derating analyses, user-defined parts, quality levels, and environments

Automates Complex Processes

- Quickly perform series reliability calculations and trade-off studies
- Accounts for operating conditions during calculation and analysis
- Account for stress parameters of components, such as device temperature, environment, operating voltage, rated voltage, and power stress ratios

Leverage Comprehensive Parts Libraries

- Parts Libraries provide instant access to a large database of component information
- Includes extensive NPRD/EPRD database of electromechanical component failure rate information
- Update libraries regularly via Web downloads
- Store your own component parts and assemblies in a searchable library with drag-and-drop functionality

Convenient, Intuitive Interface Tools

- Import bill of materials and other data files quickly and easily using the convenient Import Wizard
- Powerful filtering and search functions let you navigate large amounts of data quickly
- Customizable lists and auto-fill fields speed up the data entry process, letting you focus more time on your analysis
- Supports global data modifications

Features

Included Globally Accepted Prediction Standards

- FIDES Guide 2004
- MIL-HDBK-217 Part Stress and Parts Count
- Telcordia
- PRISM
- 217Plus
- RDF 2000
- IEC TR 62380
- NSWC Mechanical
- Siemens SN29500
- Chinese GJB/z 299C
- HRD5

Included Derating Standards

- AS-4613A
- AS-4613B
- AS-4613C
- MIL-HDBK-1547
- MIL-STD-975M
- TE000-AB-GTP-010

Reliability Allocation Methods

- Base, non-normalized
- Base, normalized
- Equal apportionment by components
- Equal apportionment by subsystems
- ARINC
- AGREE
- Feasibility of objectives
- Repairable system

Supported Calculations

- Failure Rate
- MTBF
- MTTR
- Reliability
- Availability
- Mission Profile Results
- User-Definable

Sample Analysis Outputs

- Failure rate vs. operating temperature
- Failure rate vs. environment
- Failure rate vs. operating stress
- Top (n) failure rate contributors
- Reliability vs. time
- Availability

Supported MTBF Adjustment Techniques

- Telcordia Method II: laboratory data
- Telcordia Method III: field data
- Device burn-in
- Process grades
- Bayesian
- Predecessor data
- User-defined

Extensive Parts Libraries

- Relex parts library with over 400,000 parts
- NPRD library with over 13,000 parts
- EPRD library with over 17,000 parts
- User-defined library

Input and Output Data in a Variety of Formats

- Easily import from or export to commonly used formats like Microsoft Excel, Microsoft Access, XML, and plain text files
- Create reports in Microsoft Word, Microsoft Excel, Adobe PDF, and Rich Text Format
- User-definable, wizard-driven custom graphs and reports
- Dynamically link to other Relex analyses, such as Fault Tree, FMEA, FRACAS, Life Cycle Cost, Maintainability, OpSim, and Weibull

Available Enterprise-Class Features

- Enterprise Edition supports a multi-user environment with login permissions, security features, administrator control, and audit trail functionality
- Database integration at enterprise level supports Microsoft SQL Server 2008, Oracle, Microsoft SQL Server Express, and Microsoft Jet Engine (Access compatible)
- User-specific login page displays system-wide announcements

For More Information

For more information about Relex Reliability Prediction, please visit: **www.relex.com/products/prediction.asp**

4789-Relex-DS-0709