

Reliability Prediction Analysis

KEY HIGHLIGHTS

- MIL-HDBK-217, Telcordia, 217Plus
- IEC 61709, ANSI/VITA 51.1
- NSWC Mechanical, China GJB/z 299
- NPRD and EPRD Databases
- Built-in device libraries
- Intelligent Part Mapping™
- Data import & export
- What-if? trade studies
- Mission profiles
- Custom Dashboards
- API support
- Cross-analysis integration
- Browser-based interface

Relyence® Reliability Prediction is a powerful tool for performing your MIL-HDBK-217, Telcordia, 217Plus, IEC 61709, NSWC Mechanical, ANSI/VITA 51.1, and China's GJB/z 299 reliability predictions, and includes the NPRD/EPRD databases. The impressive reliability prediction platform offers a streamlined front end coupled with an accurate calculation engine. A robust feature set rounds out our best-in-class solution: device libraries, Intelligent Part Mapping, BOM importing, what-if? studies, mission profiles, formula builder, custom reports, graphical dashboards, API support, and much more.

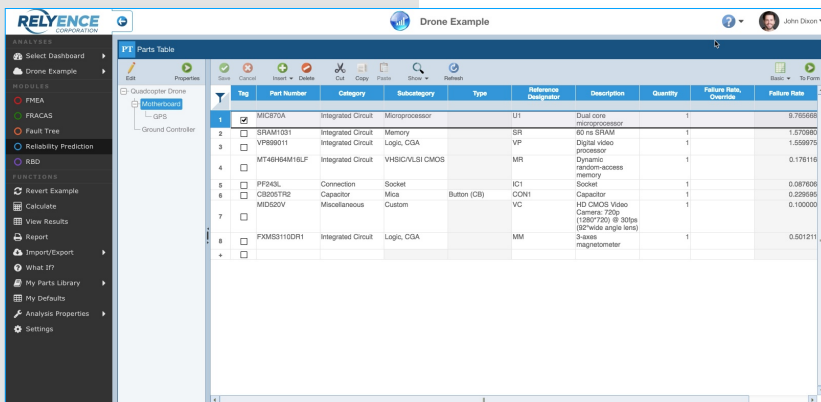
Complete MTBF Analysis. Relyence Reliability Prediction supports the worldwide accepted standards for MTBF predictions: MIL-HDBK-217F Notice 2, Telcordia SR-332 Issue 4, 217Plus 2015 Notice 1, IEC 61709, NSWC-11 Mechanical, ANSI/VITA 51.1, China's GJB/z 299C, and includes the NPRD/EPRD databases. All facets of the standards are supported, including the full part stress calculations, parts count calculations, hybrid modeling, early life dropout calculations, and the incorporation of laboratory, test, and field data. Relyence Reliability Prediction allows you to extend features from one standard across all, as well as combine standards in one analysis, enabling you to most accurately model your product.

Streamlining Reliability Predictions. Known for our streamlined, rapid data entry and quick, accurate calculations, Relyence Reliability Prediction also enhances efficiency with our built-in component libraries, the ability to directly import BOM data, and *Intelligent Part Mapping™* for part recognition. Our built-in library can be augmented with your own component database, and our auto-searching mechanism offers quick access to part data.

Robust Feature Set. Along with full reliability prediction standards support, Relyence Reliability Prediction includes a complete feature set offering a best-in-class solution: powerful library search, default data values, importing and exporting, flexible and customizable reports, mission profile analysis, what-if? studies, formulas for creating your own custom calculations, visual system modeling, and much more. Integration with other tools such as RBD, FMECA, Fault Tree, and FRACAS provides a comprehensive platform.

Dashboard for Reliability Prediction. The Relyence Reliability Prediction Dashboard provides an at-a-glance overview of your reliability prediction related metrics. Combining all the data you need for quick assessment, the Dashboard offers the ability to monitor and manage your reliability predictions with efficiency and effectiveness with a choice of customizable widgets. This visual overview enables you to quickly gauge system health, proactively maintain your reliability objectives, and turn insight into action.

Deployment Choice. Relyence Reliability Prediction is built on the Relyence Platform - a highly adaptable, browser-based, mobile-friendly framework designed with today's workplace in mind. Relyence Reliability Prediction can be installed on-premise at your location, hosted in the Microsoft Cloud, or hosted in your own private secure cloud. All platforms offer the same features and functions. The choice is yours!



Reliability Prediction Analysis

Streamlining MTBF analysis with rapid data entry and accurate calculations.

Graphical and Tree Views of System Model

Component Libraries with Auto-Search

Extensive Help including Videos

The screenshot displays the main interface of the Relyence Reliability Prediction software. On the left is a sidebar menu with sections for ANALYSES, MODULES, and FUNCTIONS. The main area is titled 'PT Parts Table' and shows a hierarchical system model on the left and a detailed parts list on the right. The parts list includes columns for Tag, Part Number, Part Type, Part Subtype, Reference Designator, Description, Quantity, and Specified Failure Rate.

Tag	Part Number	Part Type	Part Subtype	Reference Designator	Description	Quantity	Specified Failure Rate
1	MIC870A	Integrated Circuit	Microprocessor	U1	Dual core microprocessor	1	
2	SRAM1031	Integrated Circuit	Memory	SR	60 ns SRAM	1	
3	VP899011	Integrated Circuit	Logic, CGA	VP	Digital video processor	1	
4	MT46H64M16LF	Integrated Circuit	VHSIC/VLSI CMOS	MR	Dynamic random-access memory	1	
5	PF243L	Connection	Socket	IC1	Socket	1	
6	CB205TR2	Capacitor	Mica, Button (CB)	CON1	Capacitor	1	
7	MID520V	Miscellaneous	Custom	VC	HD CMOS Video Camera: 720p (1280x720) @ 30fps (92° wide angle lens)	1	0.0
8	FXMS3110DR1	Integrated Circuit	Logic, CGA	MM	3-axis magnetometer	1	

Collapsible Sidebar Menu

System Model & Parts List

Intelligent Part Mapping

This section shows a detailed view of a part's form and its associated Pi factors. The 'Part Form' includes fields for Part Number, Reference Designator, Technology, # of Bits, Package Type, # of Pins, Years in Production, and Quality Level. A 'Pi Factors' popup is also visible, showing a table of factors for the MIC870A part.

Factor	Value
C1	77.000000
C2	0.240000
C3	1.804500
C4	0.007994
C5	8.000000
C6	10.000000
C7	1.000000
C8	9.760000

Detailed Parts Form

Parts Form & Pi Factors

Popup Pi Factors

Account Management

Top Ten Highest Failure Rate Components

The dashboard provides a comprehensive overview of the reliability prediction results. It includes a 'Top 10 Highest Failure Rate Parts' bar chart, a 'Failure Rate Percentage' pie chart, and a 'Failure Rate vs Temperature' line graph. A table of 'Overstressed Parts' is also displayed.

Part Number	Category	Subcategory	Reference Designator	Failure Rate
T491C107K016AT	Capacitor	G-C2	G-C2	425.459014
P10.0K0CCT	Resistor	G-R2	G-R2	2.041000
CB205TR2	Capacitor	CON1	CON1	1162.928415

Failure Rate Percentage Pie Chart with Drilldown

Example Prediction Dashboard

Failure Rate vs. Temperature Graph