

Reliability Prediction Analysis

KEY HIGHLIGHTS

- MIL-HDBK-217, Telcordia, 217Plus
- SN 29500, IEC 61709, ANSI/VITA 51.1
- NSWC Mechanical, FIDES, 299C
- 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, SN 29500, IEC 61709, NSWC Mechanical, ANSI/VITA 51.1, FIDES and 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, SN 29500, IEC 61709, NSWC-11 Mechanical, ANSI/VITA 51.1, FIDES, and includes the NPRD/EPRD databases. All facets of the standards are supported, including full part stress calculations, parts count calculations, hybrid modeling, early life dropout calculations, and the incorporation of test and field data. Relyence Reliability Prediction allows you to extend features from one standard across all and 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!

Tag	Part Number	Category	Subcategory	Type	Reference Designator	Description	Quantity	Failure Rate	Failure Rate
1	MC6805A	Integrated Circuit	Microprocessor	UT		Dual core microprocessor	1	9.755558	
2	BRAM1281	Integrated Circuit	Memory	SR		60 Kbit BRAM	1	1.870802	
3	VP889211	Integrated Circuit	Logic, CGA	VP		Digital video processor	1	1.598875	
4	MT48LC4M16LP	Integrated Circuit	VMECLVLSI CMOS	MR		Dynamic random access memory	1	0.176116	
5	PP243L	Connection	Socket	ICI		Socket	1	0.087608	
6	CR2032	Capacitor	Mica	COND		Capacitor	1	0.239595	
7	MD020V	Miscellaneous	Custom	VIC		HD CMOS Video Camera 720p 1280x720 @ 30fps (87°wide angle lens)	1	0.100000	
8	PM85110DR1	Integrated Circuit	Logic, CGA	MM		3-axis magnetometer	1	0.501211	

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 Relyence Reliability Prediction software interface. On the left is a 'Collapsible Sidebar Menu' with sections for 'ANALYSES' (Select Dashboard, Drone Example), 'MODULES' (FMEA, CAPA, Fault Tree, Reliability Prediction), and 'FUNCTIONS' (Calculate, View Results, Report, Import/Export, My Parts Library, Analysis Properties, Settings, Advanced Tools). The main area shows a 'System Model & Parts List' for a 'Drone Example'. The system model is a hierarchical tree view showing a drone connected to a controller and a camera. The 'Parts Table' lists components with columns: Tag, Part Number, Part Type, Part Subtype, Reference Designator, Description, Quantity, and Specified Failure Rate. The table includes parts like MIC870A (Microprocessor), SRAM1031 (Memory), VP89011 (Logic, CGA), MT46H64M16LF (VHSIC/VLSI CMOS MR), PF243L (Socket), CB205TR2 (Capacitor), MID520V (Custom VC), and FXMS3110DR1 (Logic, CGA).

Collapsible Sidebar Menu

System Model & Parts List

Intelligent Part Mapping™

This screenshot shows the 'Parts Form & Pi Factors' window. It provides a detailed view of a specific part, MIC870A, including its reference designator, part type, and part subtype. It also displays 'Pi Factors' for various environmental and usage conditions, such as Temperature, Initial Temperature Rise, and Humidity. The 'Failure Rate' is calculated based on these factors.

Detailed Parts Form

Parts Form & Pi Factors

Popup Pi Factors

Account Management

Top Ten Highest Failure Rate Components



Example Prediction Dashboard

Failure Rate Percentage Pie Chart with Drilldown

Failure Rate vs. Temperature Graph