

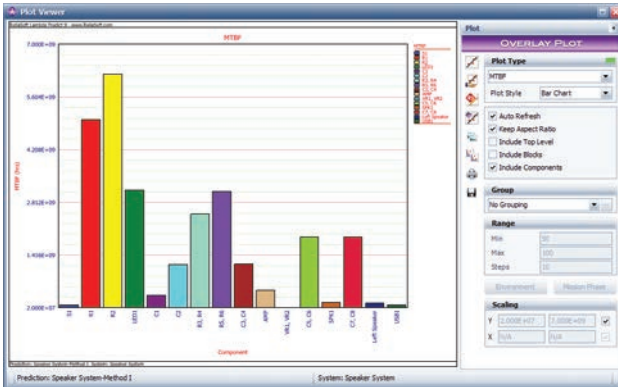
λ PREDICT®

MIL-217 * Bellcore/Telcordia * FIDES * NSWC Mechanical

When actual product reliability data is not available, standards based reliability prediction may be used to evaluate design feasibility, compare design alternatives, identify potential failure areas, trade-off system design factors and track reliability improvement.

ReliaSoft's Lambda Predict facilitates failure rate and MTBF predictions based on the major reliability prediction standards. The software also offers reliability allocation, derating analysis and a full set of supporting tools.

Lambda Predict is part of the Synthesis Platform®.



Where do you want to search?
 Current Folder Current Database Other Database Library

Search based on the criteria specified below

Name: Part Number: Part Number:

capacitor And CB

Select	Name	Category	Part Number	Description
<input checked="" type="checkbox"/>	Fiber Capacitor	Capacitor	CB-1-S	250uF, 10V

Power Amplifier Circuit - ReliaSoft Lambda Predict

System Hierarchy

Name	Category	Quantity	Failure Rate(=INF)
Power Amplifier Circuit	MIL-HDBK-217P	1	0.9320 PPM/HR
Driving Circuit	Block	1	0.7153
D1	Diode, Low Frequency	1	0.1656
C1	Capacitor	1	0.0725
C2	Capacitor	1	0.0093
C3	Capacitor	1	0.0166
C4	Capacitor	1	0.0097
R1	Resistor	1	0.0024
R2	Resistor	1	0.0753
R3, R4	Resistor	2	0.1836
MB1	Hybrid Block	1	0.0915
Hybrid Layer	Hybrid Layer	1	-
IC1	Micro, Digital	1	0.0006
C5	Capacitor	1	0.0019
R5	Resistor	1	0.0026
Amplifier Circuit	Block	1	0.2367
C6	Capacitor	1	0.0106
VR1	Resistor	1	0.1139
TL1, T2	Transistor, LP Bipolar	2	0.0090
TL3, T4	Transistor, LP Bipolar	2	0.0106
MB1	Linked Block	1	0.0415

Properties

Properties	Values
Name	C1
Part Number	
Supplier	
Description	
Quantity	1
Environment	Ground, mobile
Ambient Temperature (°C)	30
Applied Voltage (V)	0.6
Voltage Stress	0.20
Connection Type	Reflow Solder
Circuit Resistance (Ω)	30
Adjustment Factor	1
Capacitor Style	Ceramic, General, NFR
Capacitance (µF)	0.1
Number of Pins	2
Rated Voltage (V)	25
Quality, Capacitors	Non established Polab

Name	Category	Quantity	Failure Rate(=INF)	MTBF	Contribution	Failure Rate Upper Bound(=INF)
Speaker System	Telcordia SR-332 Issue 3	1	76.7614 FITS	1.3027E+07 hrs	1.0000	97.5084
Power Supply Circuit	Block	1	14.5527	6.8716E+07	0.1896	20.3809
S1	Switch	1	10.2322	9.7720E+07	0.7031	15.5993
R1	Resistor, Fixed	1	0.1998	5.0058E+09	0.0137	0.2513
R2	Resistor, Fixed	1	0.1609	6.2169E+09	0.0111	0.2024
LED1	Opto-Electronic	1	0.3186	3.1391E+09	0.0219	0.5405
C1	Capacitor	1	2.7894	3.5801E+08	0.1874	4.6438
C2	Capacitor	1	0.0555	1.1604E+09	0.0500	1.4270
Driving Circuit	Block	1	38.1087	2.6242E+07	0.4964	57.5078
R3, R4	Resistor, Fixed	2	0.3995	2.5029E+09	0.0105	0.4727
R5, R6	Resistor, Fixed	2	0.3217	3.1084E+09	0.0084	0.3806
C3, C4	Capacitor	2	0.8505	1.1788E+09	0.0223	0.9128
Hybrid Block	Hybrid Block	1	26.5350	2.7371E+07	0.9580	55.8720
AMP	IC, Analog/Linear	1	2.0570	4.8614E+08	0.0623	3.4684
VR1, VR2	Resistor, Variable	2	26.4520	3.2839E+07	0.9218	39.8577
C5, C6	Capacitor	2	0.5260	1.9011E+09	0.0159	0.7828
Left Speaker	Block	1	6.8960	1.4522E+08	0.0897	7.1488
SPK1	External	1	6.3600	1.5723E+08	0.9236	-
C7, C8	Capacitor	2	0.5260	1.9011E+09	0.0764	0.7828
Right Speaker	Block	1	17.2160	5.8086E+07	0.2243	-
Left Speaker	Linked Block	1	6.8960	1.4522E+08	0.4700	7.1488
USB1	External	1	18.3300	9.6805E+07	0.6000	-

SOFTWARE HIGHLIGHTS - RELIASOFT'S LAMBDA PREDICT

Reliability Prediction Standards

- MIL-HDBK-217F
 - Part Stress and Parts Count Methods
 - Option to define failure rates for custom connection types
 - Option to calculate non-operational failure rates based on RADC-TR-85-91
- Bellcore/Telcordia
 - Telcordia SR-332 Issues 1 - 3
 - Bellcore TR-332 Issue 6
- FIDES
- NSWC (Mechanical)
 - 2007
 - 2011
- For all standards, option to define failure rates for "external" components not addressed in the standard

Data Management

- Easy to build system configurations
- Multiple views for data entry
 - Tree View
 - Pi Factor View
- Easy to find and reuse data
- Import/export and copy/paste

Derating Standards

- NAVSEA-TE000-AB-GTP-010
- MIL-STD-975M
- MIL-STD-1547A
- Naval Air System Command AS-4613
- ECSS-Q-30-11-A

Reliability Allocation Methods

- Equal
- AGREE
- Feasibility of Objectives
- ARINC
- Repairable Systems

Real Power for Real Applications

Some of the benefits of using the Lambda Predict software to make reliability predictions based on the major published standards include the ability to:

- Obtain an initial indication of whether a design will be able to meet reliability objectives, and identify potential problem areas early in development.
- Compare design alternatives and/or trade-off system design factors.
- Consider environmental and other stress factors that have a significant impact on system performance yet may otherwise be overlooked.

Why Upgrade to Version 10? (for details, visit <http://Predict.ReliaSoft.com/version10.htm>)

- Major upgrades to the Synthesis Platform®, such as an integrated Project Planner with expanded actions tracking, automated watches and alerts, easier to find and filter analyses, batch properties editor for managing resources, better integration with Active Directory® for user account management, and the option to implement a Synthesis Enterprise Portal website.
- Support for NSWC-11 and a dedicated folio for MIL-217 parts count analysis.
- Phase sets to manage life profiles for FIDES analyses, and new FIDES analysis plots.

Supported Calculations

- For all predictions:
 - Failure Rate($t=\infty$)
 - MTBF
 - Contribution
- For Bellcore/Telcordia:
 - Early Life Factor
 - Standard Deviation($t=\infty$)
 - Failure Rate Upper Bound($t=\infty$)
- For MIL-217:
 - Connection Failure Rate
 - Non-Operational Failure Rate & MTBF
 - Non-Operational Contribution
- For blocks that use redundancy:
 - Mission Time
 - Failure Rate(t)
 - Unreliability(t)

Supported Plot Types

- Failure Rate
- MTBF
- Unreliability
- Mission Phase
- Temperature Plots
 - Failure Rate/MTBF vs. Temperature
 - Unreliability vs. Temperature
- Environment Plots
 - Failure Rate/MTBF vs. Environment
 - Unreliability vs. Environment
- Stress Plots (Current, Power, Voltage)
 - Failure Rate/MTBF vs. Stress
 - Unreliability vs. Stress

Extensive Parts Libraries

- MIL-HDBK-217F Parts Count
- MIL-M-38510
- EPRD-97
- NPRD-95

- PartLibraries.org (via subscription)
 - 300,000+ commercial components
 - 140+ manufacturers

Import Types

- Microsoft Excel® Files
- Text Files (*.txt, *.csv)
- Analyses from Lambda Predict 1, 2 & 3
- Components from Libraries

Centralized Data Storage

- Standard Repository (*.rsrp)
- Microsoft SQL Server®
- Oracle®
- Simultaneous Access by Multiple Users
- Shared Analysis Settings and Data
- Flexible User Access Levels

Integration

Integration with all other Synthesis Platform applications, including:

- Publish *models* based on the predicted failure rate
- Use system configuration and prediction data in BlockSim and Xfmea/RCM++/RBI

Multiple Languages Supported

For details, please visit:
<http://www.ReliaSoft.com/languages>

Available Services

- Detailed User Documentation
- Practical Example Files
- Step-by-Step Example Guide
- Training for Theory + Software
- Professional Consulting Services