

## Reliability Data Sheet

### Description

For applications requiring component reliability estimation, Agilent Technologies provides reliability data for all families of devices. Data is compiled from reliability tests run to demonstrate that a product meets the specified design criteria.

Periodically, additional tests are run. The data on this sheet represents the latest review of accumulated test results. All data recorded here is for P-type passivated microwave Schottky diodes mounted in non-hermetic sealed unsealed 44 packages.

### Applications

This information represents the capabilities of the generic device. Failure rate and MTTF values presented here are achievable with normal MIL-S-19500 test screening. Reliability can be guaranteed only under specified conditions and LTPD levels.

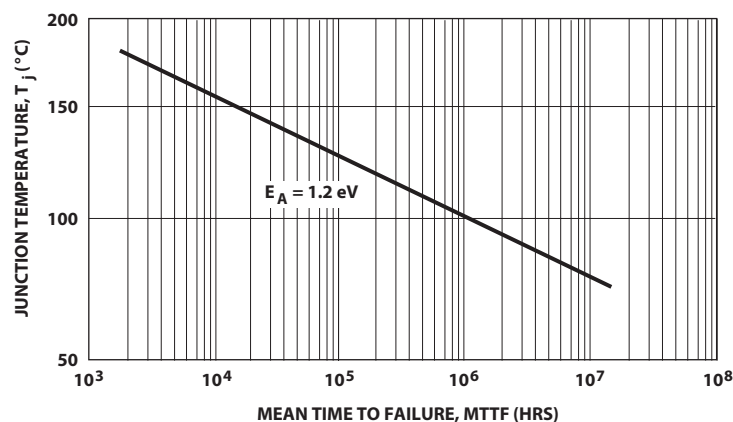


Figure 1. Mean Time to Failure vs. Junction Temperature.

**Table 1. Burn-In and Storage**

Test	Test Conditions <sup>[1]</sup>	LTPD per 1000 Hours
High Temperature Life	Storage at 125°C	4.0
Steady State Operating Life	P <sub>FM</sub> = 100 mW V <sub>RM</sub> = 80% of V <sub>BR</sub> T <sub>A</sub> = 25°C f = 60 Hz	3.0

Note:

1. 1000 hours minimum on all life tests.

**Table 2. Environmental**

Test	MIL-STD-750 Reference	Test Conditions	LTPD
Temperature Cycle	1051C	10 cycles from -65°C to 200°C, 5 hours at extremes, 5 min. transfer	10
Thermal Shock	1056	10 cycles from 0°C to 100°C, 3 sec. transfer	10
Mechanical Shock	2016	5 blows each at X1, X2, Y, 1500 G, 0.5 msec pulse	10
Vibration Fatigue	2046	20 G min., 60 Hz 10	
Vibration Variable Frequency	2056	four 4 min. cycles each X, Y, Z at 20 G min., 100 to 2000 Hz	10
Moisture Resistance	1021	240 hours, 90- 98% relative humidity	10
Salt Atmosphere	1041	35°C fog for 24 hours	12

**DOD-HDBK-1686 ESD Classification:**

HSMS-285A/5X Class I

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AV02-2295EN - December 22, 2009

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