HEWLETT®
PACKARD

Passivated P-Type Microwave Schottky Diodes

Reliability Data

HSMS-285A/5X

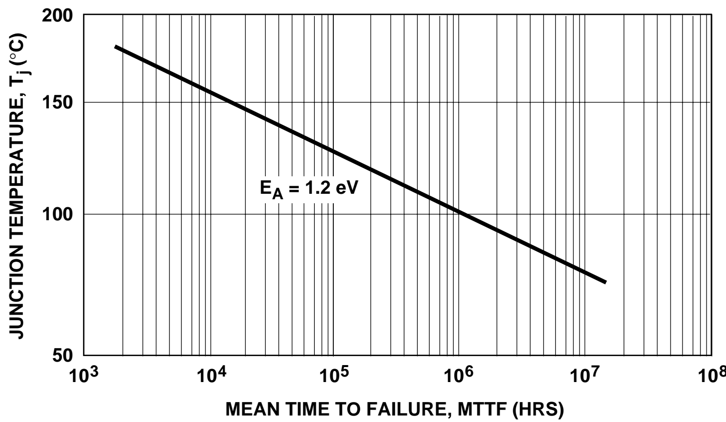
Description

For applications requiring component reliability estimation, Hewlett-Packard 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.



Mean Time to Failure vs. Junction Temperature.

5965-8868E

1. Burn-In and Storage

Test	Test Conditions[1]	LTPD per 1000 Hours
High Temperature Life	Storage at 125°C	4.0
Steady State Operating Life	P_{FM} = 100 mW V_{RM} = 80% of V_{BR} T_A = 25°C f = 60 Hz	3.0

Note:
1. 1000 hours minimum on all life tests.

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