

# PIN Diodes

## Reliability Data

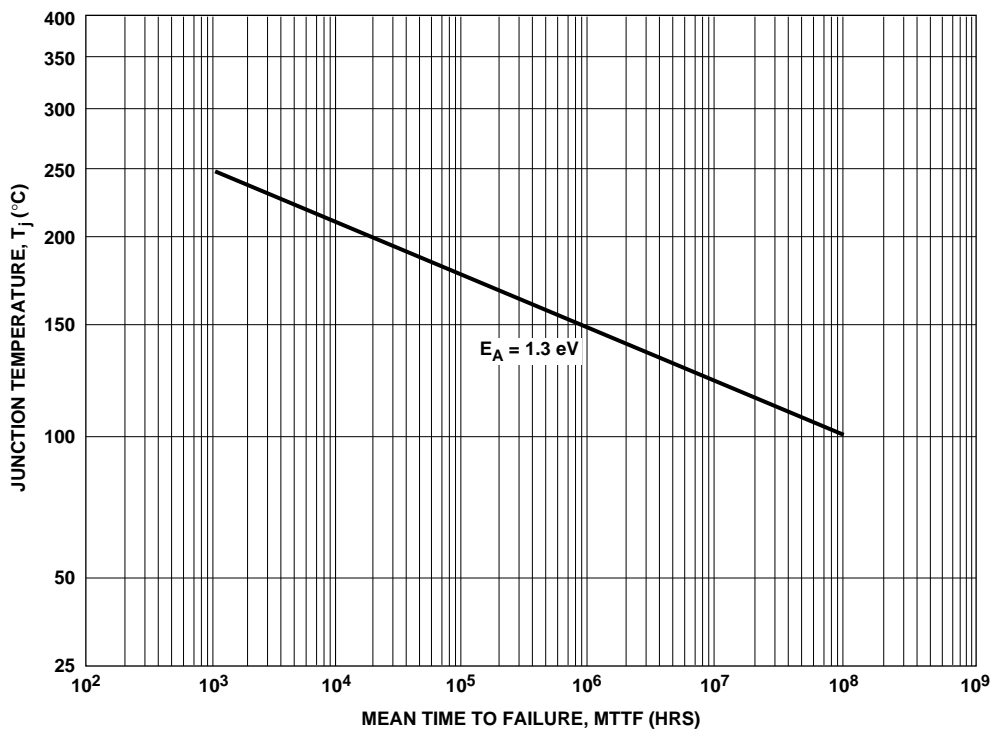
**1N5719**  
**5082-3001**  
**5082-3039**  
**5082-3077**

### Description

For applications requiring component reliability estimation, Hewlett-Packard provides reliability data for all families of devices. Data is initially compiled from reliability tests run prior to market introduction to demonstrate that a product meets design criteria. Additional tests are run periodically. The data on this sheet represents the latest review of accumulated test results.

### Applications

This information represents the capabilities of the generic device. Failure rates and MTTF values presented here are achievable with normal MIL-S-19500 TX level screening. This reliability screening is no longer available from Hewlett-Packard. The screening tests, references, conditions, lot sizes, and LTPD are provided as references only.



Mean Time to Failure vs. Junction Temperature

## Burn-In and Storage

Test	Test Conditions	LTPD/ 1000 Hours
High Temperature Life	1,000 hrs. min. storage time @ 150°C	3
Steady State Operating Life	1,000 hrs. min. operating time @ $P_{FM} = 250 \text{ mW}$ , $V_{RM} = 150 \text{ V}$ , $f = 60 \text{ Hz}$ , $T_A = 25^\circ\text{C}$	3

## Environmental

Test	MIL-STD-750 Reference	Test Conditions	LTPD
Solderability	2026	Sn 95, Pb 5, solder at 260°C	10
Temperature Cycling	1051	100 cycles from -65°C to +150°C, 0.5 hrs. at extremes, 5 min. transfer	7
Thermal Shock	1056	100 cycles from 0°C to +100°C, 3 sec. transfer	7
Moisture Resistance	1021	10 days, 90-98% RH, -10 to +65°C, non operating	7
Shock	2016	5 blows each $X_1$ , $Y_1$ , $Y_2$ , 1500 G. 0.5 msec pulse	7
Vibration Variable Frequency	2056	4, 4 minute cycles each X, Y, Z at 20 G min. 100 to 2000 Hz	7
Constant Acceleration	2006	1 minute each $X_1$ , $Y_1$ , $Y_2$ , at 20,000 G	7
Terminal Strength	2036	Miniature glass package, -3, 90° arcs, 2 leads, 8 oz., lead restriction	10
Hermeticity	1014	Fine and gross	2

## DOD-HDBK-1686 ESD

### Classification:

The PIN diodes covered in this Reliability Data Sheet are Class I.