

Silicon – Diode

FDH333

150V/200mA

DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

FDH300•FDH333

HIGH CONDUCTANCE LOW LEAKAGE DIODES

DIFFUSED SILICON PLANAR

- BV... 150 V (MIN) @ 100 μ A
- I_R... 1.0 nA (MAX) @ 125 V (FDH300), 3.0 nA (MAX) @ 125 V (FDH333)

ABSOLUTE MAXIMUM RATINGS (Note 1)

Temperatures

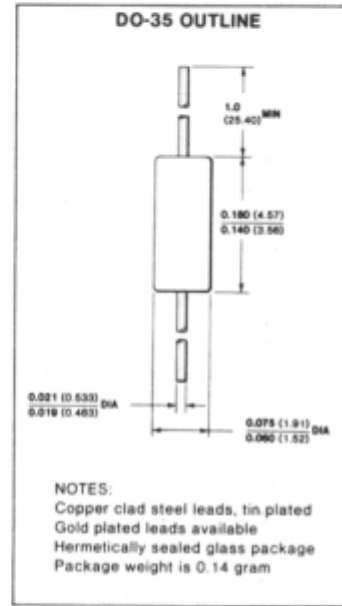
| | |
|--|-----------------|
| Storage Temperature Range | -65°C to +200°C |
| Maximum Junction Operating Temperature | +175°C |
| Lead Temperature | +260°C |

Power Dissipation (Note 2)

| | |
|---|------------|
| Maximum Total Dissipation at 25°C Ambient | 500 mW |
| Linear Derating Factor (from 25°C) | 3.33 mW/°C |

Maximum Voltages and Currents

| | | |
|------------------------|--------------------------------|--------|
| WIV | Working Inverse Voltage | 125 V |
| I _O | Average Rectified Current | 200 mA |
| I _F | Forward Current Steady State | 500 mA |
| i _f | Recurrent Peak Forward Current | 600 mA |
| i _f (surge) | Peak Forward Surge Current | 1.0 A |
| | Pulse Width = 1.0 s | 4.0 A |
| | Pulse Width = 1.0 μ s | |



ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

| SYMBOL | CHARACTERISTIC | FDH300 | | FDH333 | | UNITS | TEST CONDITIONS |
|----------------|-------------------|--------|-----|--------|------|---------|--|
| | | MIN | MAX | MIN | MAX | | |
| V _F | Forward Voltage | | | 0.9 | 1.15 | V | I _F = 300 mA |
| | | | | 0.88 | 1.08 | V | I _F = 250 mA |
| | | | 1.0 | 0.87 | 1.05 | V | I _F = 200 mA |
| | | | | 0.86 | 0.97 | V | I _F = 150 mA |
| | | | | 0.92 | 0.94 | V | I _F = 100 mA |
| | | | | 0.88 | 0.89 | V | I _F = 50 mA |
| | | | | 0.8 | | V | I _F = 10 mA |
| | | | | 0.75 | | V | I _F = 5.0 mA |
| | | | | 0.68 | | V | I _F = 1.0 mA |
| I _R | Reverse Current | | 1.0 | | 3.0 | nA | V _R = 125 V |
| | | | 3.0 | | 500 | μ A | V _R = 125 V, T _A = 150°C V _R = 125 V, T _A = 100°C |
| C | Capacitance | | 6.0 | | 6.0 | pF | V _R = 0, f = 1MHz |
| BV | Breakdown Voltage | 150 | | 150 | | V | I _R = 100 μ A |

NOTES:

1. The maximum ratings are limiting values above which life or satisfactory performance may be impaired.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
3. For family characteristic curves, refer to Chapter 4, D2.

CURVE SET NUMBER D2
LOW LEAKAGE SMALL SIGNAL DIODE

TYPICAL ELECTRICAL CHARACTERISTIC CURVES
 AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE NOTED

