Silicon – Diode

FDH300

150V/200mA

DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

Datasheet Rev. 1.3 – 03/19 - data without warranty / liability

FDH300•FDH333

HIGH CONDUCTANCE LOW LEAKAGE DIODES

DIFFUSED SILICON PLANAR

- **BV . . . 150 V (MIN) @ 100 μA**
- **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

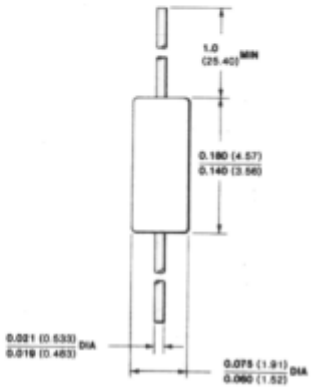
Power Dissipation (Note 2)

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	
	Pulse Width = 1.0 s	1.0 A
	Pulse Width = 1.0 μs	4.0 A

DO-35 OUTLINE



NOTES:
Copper clad steel leads, tin plated
Gold plated leads available
Hermetically sealed glass package
Package weight is 0.14 gram

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

SYMBOL	CHARACTERISTIC	FDH300 MIN	FDH300 MAX	FDH333 MIN	FDH333 MAX	UNITS	TEST CONDITIONS
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	0.83	0.94	V	I_F = 100 mA
			0.88	0.80	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			μA	V_R = 125 V, T_A = 150°C
					500	nA	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 μA

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.

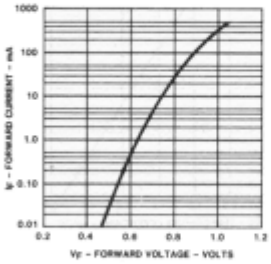
CURVE SET NUMBER D2

LOW LEAKAGE SMALL SIGNAL DIODE

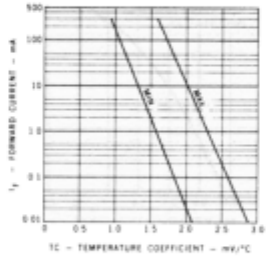
TYPICAL ELECTRICAL CHARACTERISTIC CURVES

AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE NOTED

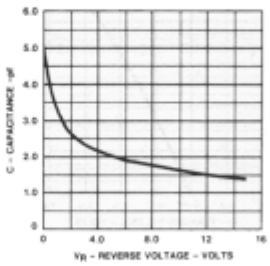
FORWARD VOLTAGE VERSUS FORWARD CURRENT



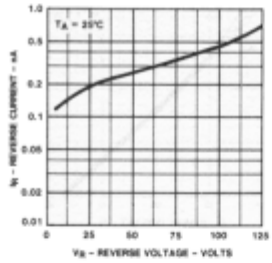
FORWARD CURRENT VERSUS TEMPERATURE COEFFICIENT



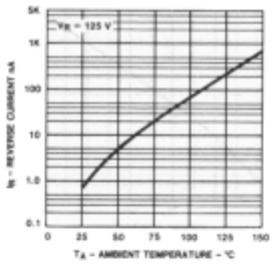
CAPACITANCE VERSUS REVERSE VOLTAGE



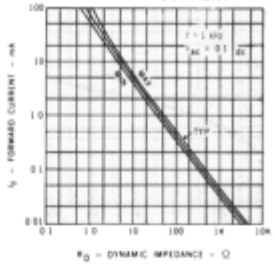
REVERSE VOLTAGE VERSUS REVERSE CURRENT



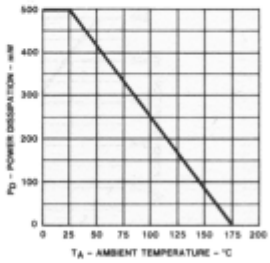
REVERSE CURRENT VERSUS AMBIENT TEMPERATURE



DYNAMIC IMPEDANCE VERSUS FORWARD CURRENT



POWER DERATING CURVE



AVERAGE RECTIFIED CURRENT AND FORWARD CURRENT VERSUS AMBIENT TEMPERATURE