

Silicon – Diode

FDH400

200V/200mA

DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

FDH400 • FDH444

HIGH VOLTAGE GENERAL PURPOSE DIODES

DIFFUSED SILICON PLANAR

- BV ... 200 V (MIN) FDH400
... 150 V (MIN) FDH444
- V_F ... 1.1 V (MAX) @ 300 mA FDH400
@ 200 mA FDH444

ABSOLUTE MAXIMUM RATINGS (Note 1)

Temperatures

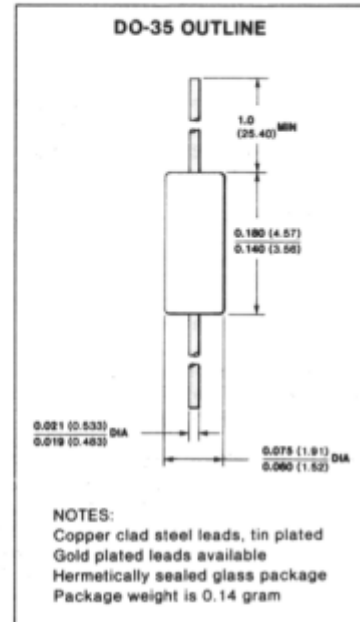
Storage Temperature Range	-65°C to +200°C
Max Junction Operating Temperature	+175°C
Lead Temperature	+260°C

Power Dissipation (Note 2)

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

Maximum Voltage and Currents

		FDH400	FDH444
WIV	Working Inverse Voltage	175 V	125 V
I_O	Average Rectified Current	200 mA	200 mA
I_F	Forward Current Steady State	500 mA	500 mA
i_f	Recurrent Peak Forward Current	600 mA	600 mA
$i_f(\text{surge})$	Peak Forward Surge Current		
	Pulse width = 1.0 s	1.0 A	1.0 A
	Pulse width = 1.0 μ s	4.0 A	4.0 A



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

SYMBOL	CHARACTERISTIC	FDH400		FDH444		UNITS	TEST CONDITIONS
		MIN	MAX	MIN	MAX		
VF	Forward Voltage		1.1		1.2	V	$I_F = 300$ mA $I_F = 200$ mA
			1.0		1.1	V	
BV	Breakdown Voltage	200		150		V	$I_R = 100$ μ A
I_R	Reverse Current		100		50	nA	$V_R = 150$ V $V_R = 100$ V $V_R = 150$ V, $T_A = 150^\circ$ C $V_R = 100$ V, $T_A = 150^\circ$ C
			100		100	μ A	
						μ A	
C	Capacitance		2.0		2.5	pF	$V_R = 0$, $f = 1.0$ MHz
t_{rr}	Reverse Recovery Time		50		60	ns	$I_F = 30$ mA, $I_R = 30$ mA $R_L = 100$ Ω , $I_{rr} = 3.0$ mA

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 product family characteristic curves, refer to Chapter 4, D1.

CURVE SET NUMBER D1
HIGH VOLTAGE SMALL SIGNAL DIODE

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

