FAIRCHILD
A Schlumberger Company

FDH400/FDLL400
FDH444/FDLL444

High Voltage General Purpose Diodes

T-01-09

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

PACKAGES

FDH400	DO-35
FDH444	DO-35
FDLL400	LL-34
FDLL444	LL-34

If you need this device in the SOT package, an electical equivalent is available. See FDSO1400 family.

3

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
$i_{f(surge)}$	Peak Forward Surge Current		
	Pulse width = 1.0 s	1.0 A	1.0 A
	Pulse width = 1.0 μs	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		
V_F	Forward Voltage		1.1		1.2	V	I_F = 300 mA
			1.0		1.1	V	I_F = 200 mA
BV	Breakdown Voltage	200		150		V	I_R = 100 μA
I_R	Reverse Current		100			nA	V_R = 150 V
					50	nA	V_R = 100 V
			100			μA	V_R = 150 V, T_A = 150°C
					100	μA	V_R = 100 V, T_A = 150°C
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.