

FAIRCHILD SEMICONDUCTOR

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FAIRCHILD

A Schlumberger Company

FDH1000/FDLL1000High Conductance
Switching Diodes

T-03-09

- $V_F \dots 1 \text{ V (max) @ } 500 \text{ mA}$
- $Q_S \dots 100 \text{ pC (max)}$

PACKAGES

FDH1000	DO-35
FDLL1000	LL-34

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 Power Dissipation at 25°C Ambient	500 mW
Linear Power Derating Factor	3.33 mW/°C

Maximum Voltage and Currents

WIV	Working Inverse Voltage	50 V
I_O	Average Rectified Current	200 mA
I_F	Continuous Forward Current	500 mA
I_F	Peak Repetitive Forward Current	600 mA
$I_F(\text{surge})$	Peak Forward Surge Current	
	Pulse Width = 1 s	1.0 A
	Pulse Width = 1 μ s	4.0 A

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

SYMBOL	CHARACTERISTIC	MIN	MAX	UNITS	TEST CONDITIONS
V_F	Forward Voltage		1.0	V	$I_F = 500 \text{ mA}$
I_R	Reverse Current		5.0 50 50	μ A nA μ A	$V_R = 50 \text{ V}$ $V_R = 20 \text{ V}$ $V_R = 20 \text{ V}, T_A = 125^\circ\text{C}$
BV	Breakdown Voltage	75		V	$I_R = 100 \mu\text{A}$
C	Capacitance		5.0	pF	$V_R = 0, f = 1.0 \text{ MHz}$
Q_S	Stored Charge		100	pC	$I_F = 10 \text{ mA}, V_R = 10 \text{ V}$

NOTES:

- Maximum ratings are limiting values above which life or satisfactory performance may be impaired.
- These are steady state limits. The factory should be consulted on applications involving pulsed or low duty-cycle operation.
- For family characteristic curves, refer to Chapter 4, D4.