

FAIRCHILD

A Schlumberger Company

FDH1000/FDLL1000High Conductance
Switching Diodes

T-03-09

- V_F ... 1 V (max) @ 500 mA
- Q_S ... 100 pC (max)

PACKAGESFDH1000 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	$I_F = 500$ mA
I_R	Reverse Current		5.0 50 50	μ A nA μ A	$V_R = 50$ V $V_R = 20$ V $V_R = 20$ V, $T_A = 125^\circ\text{C}$
BV	Breakdown Voltage	75		V	$I_R = 100$ μ A
C	Capacitance		5.0	pF	$V_R = 0$, $f = 1.0$ MHz
Q_S	Stored Charge		100	pC	$I_f = 10$ mA, $V_R = 10$ 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.