

FAIRCHILD SEMICONDUCTOR

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FAIRCHILD
A Schlumberger Company

FDH300/FDLL300 T-01-09
FDH333/FDLL333
High Conductance Low Leakage Diodes

- BV... 150 V (MIN) @ 100 μ A
- I_R... 1.0 nA (MAX) @ 125 V (FDH300), 3.0 nA (MAX) @ 125 V (FDH333)

PACKAGES

FDH300	DO-35
FDH333	DO-35
FDLL300	LL-34
FDLL333	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 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 μ s	4.0 A

If you need this device in the SOT package, an electrical equivalent is available. See FDSO1500 family.

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

SYMBOL	CHARACTERISTIC	FDH300		FDH333		UNITS	TEST CONDITIONS	
		MIN	MAX	MIN	MAX			
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 = 6.0 mA
				0.68			V	I _F = 1.0 mA
		I _R	Reverse Current		1.0		3.0	nA
	3.0					μ A	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 μ A	

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.

