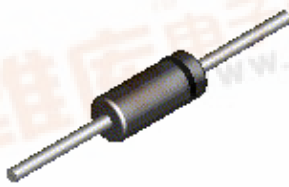




**Discrete POWER & Signal
Technologies**

FDH/FDLL 300/A / 333



DO-35



LL-34

THE PLACEMENT OF THE EXPANSION GAP
HAS NO RELATIONSHIP TO THE LOCATION
OF THE CATHODE TERMINAL

COLOR BAND MARKING

DEVICE	1ST BAND	2ND BAND
FDLL300	BROWN	GREEN
FDLL300A	BROWN	YELLOW
FDLL333	BROWN	BLUE

High Conductance Low Leakage Diode

Sourced from Process 1M. See MMBD1501/A-1505/A for characteristics.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
W_{IV}	Working Inverse Voltage	125	V
I_O	Average Rectified Current	200	mA
I_F	DC Forward Current	500	mA
i_f	Recurrent Peak Forward Current	600	mA
$I_{(surge)}$	Peak Forward Surge Current Pulse width = 1.0 second Pulse width = 1.0 microsecond	1.0 4.0	A A
T_{stg}	Storage Temperature Range	-65 to +200	°C
T_J	Operating Junction Temperature	175	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 200 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		FDH/FDLL 300/A / 333	
P_D	Total Device Dissipation Derate above 25°C	500 3.33	mW mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	300	°C/W

FDH300/A / FDLL300/A / FDH333 / FDLL333

High Conductance Low Leakage Diode

(continued)

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
B _V	Breakdown Voltage	I _R = 100 μA	150		V
I _R	Reverse Current	FDH/FDLL 300/A V _R = 125 V FDH/FDLL 300 V _R = 125 V, T _A = 150°C FDH/FDLL 333 V _R = 125 V FDH/FDLL 300/A V _R = 125 V, T _A = 100°C		1.0 3.0 3.0 500	nA μA nA nA
V _F	Forward Voltage	FDH/FDLL 300/A I _F = 1.0 mA FDH/FDLL 300 I _F = 5.0 mA FDH/FDLL 300A I _F = 5.0 mA FDH/FDLL 300/A I _F = 10 mA FDH/FDLL 300 I _F = 50 mA FDH/FDLL 300A I _F = 50 mA FDH/FDLL 300/A I _F = 100 mA FDH/FDLL 300/A I _F = 200 mA FDH/FDLL 333 I _F = 50 mA I _F = 100 mA I _F = 150 mA I _F = 200 mA I _F = 250 mA I _F = 300 mA		680 750 760 800 880 890 920 1.0 800 830 860 0.87 0.88 0.9	mV mV mV mV mV mV mV V mV mV mV V V V
C _O	Diode Capacitance	V _R = 0, f = 1.0 MHz		6.0	pF

FDH300/A / FDLL300/A / FDH333 / FDLL333

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FACT™	QS™
FACT Quiet Series™	Quiet Series™
FAST®	SuperSOT™-3
FASTr™	SuperSOT™-6
GTO™	SuperSOT™-8
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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.