FAIRCHILD SEMICONDUCTOR TM

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
$i_{f(surge)}$	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

High Conductance Low Leakage Diode
(continued)

Electrical Characteristics
TA = 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		1.0	nA
			V_R = 125 V, T_A = 150°C		3.0	µA
		FDH/FDLL 333	V_R = 125 V		3.0	nA
			V_R = 125 V, T_A = 100°C		500	nA
V_F	Forward Voltage	**FDH/FDLL 300/A**	I_F = 1.0 mA		680	mV
		FDH/FDLL 300	I_F = 5.0 mA		750	mV
		FDH/FDLL 300A	I_F = 5.0 mA		760	mV
		FDH/FDLL 300/A	I_F = 10 mA		800	mV
		FDH/FDLL 300	I_F = 50 mA		880	mV
		FDH/FDLL 300A	I_F = 50 mA		890	mV
		FDH/FDLL 300/A	I_F = 100 mA		920	mV
		FDH/FDLL 300/A	I_F = 200 mA		1.0	V
		FDH/FDLL 333	I_F = 50 mA	800	890	mV
			I_F = 100 mA	830	940	mV
			I_F = 150 mA	860	970	mV
			I_F = 200 mA	0.87	1.05	V
			I_F = 250 mA	0.88	1.08	V
			I_F = 300 mA	0.9	1.15	V
C_O	Diode Capacitance		V_R = 0, f = 1.0 MHz		6.0	pF

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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.

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Definition of Terms

Datasheet Identification	Product Status	Definition
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