

Discrete POWER & Signal Technologies

FDH/FDLL 300/A / 333





LL-34
THE PLACEMENT OF THE EXPANSION GAP
HAS NO RELATIONSHIP TO THE LOCATION
OF THE CATHODE TERMINAL

COLOR BAND MARKING ICE 1ST BAND 2ND BAND

 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	
Io	Average Rectified Current	200	mA	
I _F	DC Forward Current	500	mA	
i _f	Recurrent Peak Forward Current	600	mA	
İ _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	500	mW
	Derate above 25°C	3.33	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	Para	meter	Test Conditions	Min	Max	Units
B _V	Breakdown Voltage	Э	$I_R = 100 \mu A$	150		V
I _R	Reverse Current	FDH/FDLL 300/A	V _R = 125 V		1.0	nA
			$V_R = 125 \text{ V}, T_A = 150^{\circ}\text{C}$		3.0	μΑ
		FDH/FDLL 333	V _R = 125 V		3.0	nA
			$V_R = 125 \text{ V}, T_A = 100^{\circ}\text{C}$		500	nA
V _F	Forward Voltage	FDH/FDLL 300/A	$I_F = 1.0 \text{ mA}$		680	mV
		FDH/FDLL 300	$I_F = 5.0 \text{ mA}$		750	mV
		FDH/FDLL 300A	$I_F = 5.0 \text{ mA}$		760	mV
		FDH/FDLL 300/A	$I_F = 10 \text{ mA}$		800	mV
		FDH/FDLL 300	$I_F = 50 \text{ mA}$		880	mV
		FDH/FDLL 300A	$I_F = 50 \text{ mA}$		890	mV
		FDH/FDLL 300/A	$I_F = 100 \text{ mA}$		920	mV
		FDH/FDLL 300/A	$I_F = 200 \text{ mA}$		1.0	V
		FDH/FDLL 333	I _F = 50 mA	800	890	mV
			$I_F = 100 \text{ mA}$	830	940	mV
			$I_F = 150 \text{ mA}$	860	970	mV
			$I_F = 200 \text{ mA}$	0.87	1.05	V
			$I_F = 250 \text{ mA}$	0.88	1.08	V
			$I_F = 300 \text{ mA}$	0.9	1.15	V
Co	Diode Capacitance	•	$V_R = 0, f = 1.0 \text{ MHz}$		6.0	pF

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