

## FDH / FDLL 600



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
FDLL600	RED	WHITE

### High Conductance Ultra Fast Diode

Sourced from Process 1R. See MMBD1201-1205 for characteristics.

#### Absolute Maximum Ratings\*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
$W_{IV}$	Working Inverse Voltage	50	V
$I_O$	Average Rectified Current	200	mA
$I_F$	DC Forward Current	400	mA
$i_f$	Recurrent Peak Forward Current	600	mA
$i_{f(surge)}$	Peak Forward Surge Current		
	Pulse width = 1.0 second	1.0	A
	Pulse width = 1.0 microsecond	4.0	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 600	
$P_D$	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 Ultra Fast Diode

(continued)

### Electrical Characteristics

T<sub>A</sub> = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
B <sub>V</sub>	Breakdown Voltage	I <sub>R</sub> = 5.0 μA	75		V
I <sub>R</sub>	Reverse Current	V <sub>R</sub> = 50 V V <sub>R</sub> = 50 V, T <sub>A</sub> = 150°C		100 100	nA μA
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> = 1.0 mA I <sub>F</sub> = 10 mA I <sub>F</sub> = 50 mA I <sub>F</sub> = 100 mA I <sub>F</sub> = 200 mA		650 790 860 920 1.0	mV mV mV mV V
C <sub>O</sub>	Diode Capacitance	V <sub>R</sub> = 0, f = 1.0 MHz		2.5	pF
T <sub>RR</sub>	Reverse Recovery Time	I <sub>F</sub> = I <sub>R</sub> = 10 mA, I <sub>rr</sub> = 1.0 mA, R <sub>L</sub> = 100 Ω I <sub>F</sub> = I <sub>R</sub> = 200 mA, I <sub>rr</sub> = 20 mA, R <sub>L</sub> = 100 Ω		4.0 6.0	nS nS

FDH600 / FDLL600

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Datasheet Identification	Product Status	Definition
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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.
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