FAIRCHILD
SEMICONDUCTOR ™

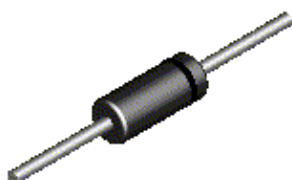*Discrete POWER & Signal*
Technologies

1N4150 / FDLL4150

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**
FDLL4150	BLACK	ORANGE

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 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
		1N / FDLL 4150	
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 Ultra Fast Diode
(continued)

Electrical Characteristics

$T_A = 25°C$ unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
B_V	Breakdown Voltage	$I_R = 5.0\ \mu A$	75		V
I_R	Reverse Current	$V_R = 50\ V$		100	nA
		$V_R = 50\ V,\ T_A = 150°C$		100	μA
V_F	Forward Voltage	$I_F = 1.0\ mA$	540	620	mV
		$I_F = 10\ mA$	660	740	mV
		$I_F = 50\ mA$	760	860	mV
		$I_F = 100\ mA$	820	920	mV
		$I_F = 200\ mA$	0.87	1.0	V
C_O	Diode Capacitance	$V_R = 0,\ f = 1.0\ MHz$		2.5	pF
T_{RR}	Reverse Recovery Time	$I_F = I_R = 10\ mA\text{-}200\ mA,\ R_L = 100\Omega$		4.0	nS
		$I_F = I_R = 200\ mA\text{-}400\ mA, R_L = 100\Omega$		6.0	nS
T_{FR}	Forward Recovery Time	$I_F = 200\ mA,\ V_{FR} = 1.0\ V$		10	nS