

Discrete POWER & Signal Technologies

1N4150 / FDLL4150





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
Io	Average Rectified Current	200	mA
I _F	DC Forward Current	400	mA
İf	Recurrent Peak Forward Current	600	mA
İf(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.

- <u>NOTES</u>:

 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	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

TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
B _V	Breakdown Voltage	$I_R = 5.0 \mu\text{A}$	75		V
I _R	Reverse Current	V _R = 50 V V _R = 50 V, T _A = 150°C		100 100	nA μA
V _F	Forward Voltage	$I_{F} = 1.0 \text{ mA}$ $I_{F} = 10 \text{ mA}$ $I_{F} = 50 \text{ mA}$ $I_{F} = 100 \text{ mA}$ $I_{F} = 200 \text{ mA}$	540 660 760 820 0.87	620 740 860 920 1.0	mV mV mV mV
Co	Diode Capacitance	$V_R = 0, f = 1.0 \text{ MHz}$		2.5	pF
T _{RR}	Reverse Recovery Time	$I_F = I_R = 10 \text{ mA-}200 \text{ mA}, R_L = 100\Omega$ $I_F = I_R = 200 \text{ mA-}400 \text{ mA}, R_L = 100\Omega$		4.0 6.0	nS nS
T_FR	Forward Recovery Time	$I_F = 200 \text{ mA}, V_{FR} = 1.0 \text{ V}$		10	nS

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Definition of Terms

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