

## 1N/FDLL 456/A - 1N/FDLL 459/A



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
FDLL456	BROWN	WHITE
FDLL456A	BROWN	WHITE
FDLL457	RED	BLACK
FDLL457A	RED	BLACK
FDLL458	RED	BROWN
FDLL458A	RED	BROWN
FDLL459	RED	RED
FDLL459A	RED	RED

### High Conductance Low Leakage Diode

Sourced from Process 1M.

#### Absolute Maximum Ratings\*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
W <sub>IV</sub>	Working Inverse Voltage	456/A	25
		457/A	60
		458/A	125
		459/A	175
I <sub>o</sub>	Average Rectified Current	200	mA
I <sub>F</sub>	DC Forward Current	500	mA
i <sub>r</sub>	Recurrent Peak Forward Current	600	mA
i <sub>r(surge)</sub>	Peak Forward Surge Current Pulse width = 1.0 second	1.0	A
		4.0	A
T <sub>stg</sub>	Storage Temperature Range	-65 to +200	°C
T <sub>J</sub>	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 456/A - 459/A	
P <sub>d</sub>	Total Device Dissipation Derate above 25°C	500	mW
		3.33	mW/°C
R <sub>θJA</sub>	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
BV	Breakdown Voltage	456/A	IR = 100 μA	30	V
		457/A	IR = 100 μA	70	V
		458/A	IR = 100 μA	150	V
		459/A	IR = 100 μA	200	V
IR	Reverse Current	456/A	VR = 25 V		25 nA
			VR = 25 V, TA = 150°C		5.0 μA
		457/A	VR = 60 V		25 nA
			VR = 60 V, TA = 150°C		5.0 μA
		458/A	VR = 125 V		25 nA
	VR = 125 V, TA = 150°C		5.0 μA		
	459/A	VR = 175 V		25 nA	
		VR = 175 V, TA = 150°C		5.0 μA	
VF	Forward Voltage	456	IF = 40 mA		1.0 V
		457	IF = 10 mA		1.0 V
		458	IF = 7.0 mA		1.0 V
		459	IF = 3.0 mA		1.0 V
		456/A-459/A	IF = 100 mA		1.0 V
CO	Diode Capacitance	VR = 0, f = 1.0 MHz		6.0	pF



1N/FD/L 456/A / 457/A / 458/A / 459/A