

# New Jersey Semi-Conductor Products, Inc.

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## 1N459 • 1N459A

LOW LEAKAGE  
DIFFUSED SILICON PLANAR\* DIODES

- BV ... 200 V (MIN) @ 100  $\mu$ A
- $I_R$  ... 25 nA (MAX) @ 175 V

### ABSOLUTE MAXIMUM RATINGS (Note 1)

#### Maximum Temperatures

Storage Temperature

Operating Temperature

-65°C to +200°C  
175°C

#### Maximum Power Dissipation

Total Dissipation at 25°C Ambient Temperature

400 W

#### Maximum Voltages and Currents

$V_{WIV}$  Working Inverse Voltage

175 V

$I_O$  Average Rectified Current

40 mA

$I_F$  Forward Current Steady State DC

100 mA

$i_f$  Recurrent Peak Forward Current

125 mA

$i_{f(surge)}$  Peak Forward Surge Current

500 mA

Pulse Width = 1.0 s

2.0 A

Pulse Width = 1.0  $\mu$ s

See DO7-2 Package Outline



### ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC	1N459 MIN.	1N459 MAX.	1N459A MIN.	1N459A MAX.	UNITS	TEST CONDITIONS
$V_F$	Forward Voltage	1.0		1.0		V	$I_F$ = 3.0 mA
$I_R$	Reverse Current		25	25		nA	$I_F$ = 100 mA
$BV$	Breakdown Voltage		5.0	5.0		$\mu$ A	$V_R$ = 175 V
C	Capacitance (Note 2)	200		200		V	$V_R$ = 175 V, $T_A$ = 150°C
			6.0			pF	$I_R$ = 100 $\mu$ A
							$V_R$ = 0, f = 1.0 MHz