

# New Jersey Semi-Conductor Products, Inc.

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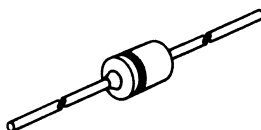
## RECTIFIERS

### High Efficiency, ESP, 2.5 Amp to 20 Amp

1N5802-1N5806  
 1N5807-1N5811  
 1N5812-1N5816

#### FEATURES

- Exceptional Efficiency
- Low Forward Voltage
- Extremely Fast Reverse Recovery Time
- Extremely Fast Forward Recovery Time
- High Surge
- Small Size
- Rugged, High Current Termination



#### DESCRIPTION

This series of High Efficiency Power Rectifiers allows circuit designers to design high current, high frequency supplies to 500 kHz with very low diode losses. The high forward surge capability makes these devices useful in protective circuits.

#### ABSOLUTE MAXIMUM RATINGS

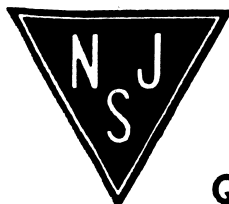
Peak Inverse Voltage	2.5 Amp Series	6 Amp Series	20 Amp Series
50V	1N5802	1N5807	1N5812
75V	1N5803	1N5808	1N5813
100V	1N5804	1N5809	1N5814
125V	1N5805	1N5810	1N5815
150V	1N5806	1N5811	1N5816

Maximum Average D.C. Output Current	2.5 AMP SERIES	6.0 AMP SERIES	20 AMP SERIES
@ $T_L = 75^\circ\text{C}$ , $L = \frac{1}{2}''$	2.5A	6.0A	—
@ $T_C = 100^\circ\text{C}$	—	—	20.0A
Non-Repetitive Sinusoidal Surge Current (8.3ms)	35A	125A	250A
Operating and Storage Temperature Range	-65°C to +175°C		
Thermal Resistance 2.5A and 6A Series	See Lead Temperature Derating Curve		
20A Series	3.0°C/W		

#### ELECTRICAL SPECIFICATIONS (at 25°C unless noted)

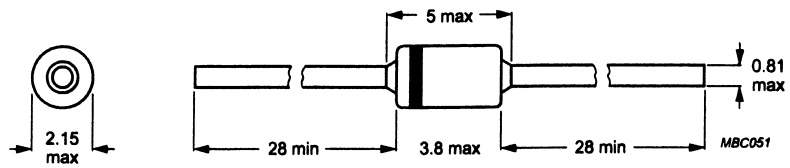
Type	PIV	Maximum Forward Voltage Drop*	Leakage Current @ PIV		Maximum Reverse Recovery Time $t_{rr}$ , $t_{rec}$	Typical Forward Recovery Time @ 1A Recover to 1V	Typical Forward Recovery Voltage @ 1A $t_r = 8ns$	Typical Junction Capacitance @ -10V
			25°C	100°C				
1N5802 1N5803 1N5804 1N5805 1N5806	50V 75V 100V 125V 150V	1.0 @ 1A	1 $\mu$ A	50 $\mu$ A	25ns, 0.5A-0.5A-0.05A	25ns	1.5V	15pf
1N5807 1N5808 1N5809 1N5810 1N5811	50V 75V 100V 125V 150V	1.0 @ 4A	5 $\mu$ A	150 $\mu$ A	30ns, 1.0-1.0-0.1A	25ns	1.5V	45pf
1N5812 1N5813 1N5814 1N5815 1N5816	50V 75V 100V 125V 150V	1.0 @ 10A	10 $\mu$ A	750 $\mu$ A	35ns, 1.0-1.0-0.1A	25ns	1.5V	200pf

\*Pulse width = 250ms



Quality Semi-Conductors

## PACKAGE OUTLINE



Dimensions in mm.  
The marking band indicates the cathode.