

## MUR805, MUR810, MUR815, MUR820, MUR840, MUR860

### SWITCHMODE™ Power Rectifiers

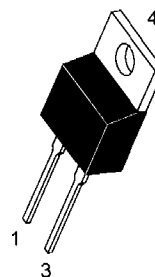
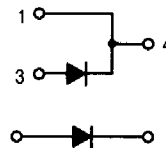
... designed for use in switching power supplies, inverters and as free wheeling diodes, these state-of-the-art devices have the following features:

- Ultrafast 25, 50 and 75 Nanosecond Recovery Time
- 175°C Operating Junction Temperature
- Popular TO-220 Package
- Epoxy Meets UL94, V<sub>0</sub> @ 1/8"
- Low Forward Voltage
- Low Leakage Current
- High Temperature Glass Passivated Junction
- Reverse Voltage to 600 Volts

#### Mechanical Characteristics:

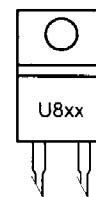
- Case: Epoxy, Molded
- Weight: 1.9 grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes:  
260°C Max. for 10 Seconds
- Shipped 50 units per plastic tube
- Marking: U805, U810, U815, U820, U840, U860

### ULTRAFAST RECTIFIERS 8.0 AMPERES 50-600 VOLTS

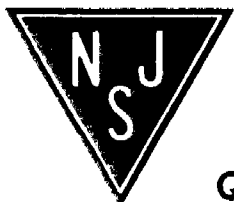


TO-220AC  
PLASTIC

#### MARKING DIAGRAM



U8xx = Device Code  
xx = 05, 10, 15,  
20, 40 or 60



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

## MUR805, MUR810, MUR815, MUR820, MUR840, MUR860

### MAXIMUM RATINGS

Rating	Symbol	MUR						Unit
		805	810	815	820	840	860	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	50	100	150	200	400	600	Volts
Average Rectified Forward Current Total Device, (Rated $V_R$ ), $T_C = 150^\circ\text{C}$	$I_{F(AV)}$	8.0						Amps
Peak Repetitive Forward Current (Rated $V_R$ , Square Wave, 20 kHz), $T_C = 150^\circ\text{C}$	$I_{FM}$	16						Amps
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	$I_{FSM}$	100						Amps
Operating Junction Temperature and Storage Temperature Range	$T_J, T_{stg}$	-65 to +175						$^\circ\text{C}$

### THERMAL CHARACTERISTICS

Maximum Thermal Resistance, Junction to Case	$R_{\theta JC}$	3.0	2.0	$^\circ\text{C/W}$
--	-----------------	-----	-----	--------------------

### ELECTRICAL CHARACTERISTICS

Maximum Instantaneous Forward Voltage (Note 1.) ( $i_F = 8.0$ Amps, $T_C = 150^\circ\text{C}$ ) ( $i_F = 8.0$ Amps, $T_C = 25^\circ\text{C}$ )	$V_F$	0.895 0.975	1.00 1.30	1.20 1.50	Volts
Maximum Instantaneous Reverse Current (Note 1.) (Rated dc Voltage, $T_J = 150^\circ\text{C}$ ) (Rated dc Voltage, $T_J = 25^\circ\text{C}$ )	$i_R$	250 5.0	500 10		$\mu\text{A}$
Maximum Reverse Recovery Time ( $I_F = 1.0$ Amp, $di/dt = 50$ Amps/ $\mu\text{s}$ ) ( $I_F = 0.5$ Amp, $i_R = 1.0$ Amp, $I_{REC} = 0.25$ Amp)	$t_{rr}$	35 25	60 50		ns

1. Pulse Test: Pulse Width = 300  $\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$ .