

**MUR405 MUR430**  
**MUR410 MUR440**  
**MUR415 MUR450**  
**MUR420 MUR460**



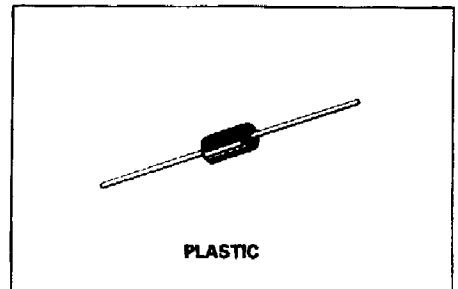
**SWITCHMODE POWER RECTIFIERS**

... 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 Times
- 175°C Operating Junction Temperature
- Low Forward Voltage
- Low Leakage Current
- High Temperature Glass Passivated Junction
- Reverse Voltage to 600 Volts

**ULTRAFAST  
RECTIFIERS**

**4.0 AMPERES  
50-600 VOLTS**



**MAXIMUM RATINGS**

Rating	Symbol	MUR								Unit
		405	410	415	420	430	440	450	460	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	50	100	150	200	300	400	500	600	Volts
Average Rectified Forward Current (Square Wave) (Mounting Method #3 Per Note 1)	$I_{F(AV)}$	4.0 @ $T_A = 80^\circ\text{C}$				4.0 @ $T_A = 40^\circ\text{C}$				Amps
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	$I_{FSM}$	125				70				Amps
Operating Junction Temperature and Storage Temperature	$T_J, T_{stg}$	-65 to +175								$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

Maximum Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	See Note 1	$^\circ\text{C/W}$
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**ELECTRICAL CHARACTERISTICS**

Maximum Instantaneous Forward Voltage (1) ( $I_F = 3.0$ Amp, $T_J = 150^\circ\text{C}$ ) ( $I_F = 3.0$ Amp, $T_J = 25^\circ\text{C}$ ) ( $I_F = 4.0$ Amp, $T_J = 25^\circ\text{C}$ )	$V_F$	0.710 0.875 0.890	1.05 1.25 1.28	Volts
Maximum Instantaneous Reverse Current (1) (Rated dc Voltage, $T_J = 150^\circ\text{C}$ ) (Rated dc Voltage, $T_J = 25^\circ\text{C}$ )	$I_R$	150 5.0	250 10	$\mu\text{A}$
Maximum Reverse Recovery Time ( $I_F = 1.0$ Amp, $di/dt = 50$ Amp/ $\mu\text{s}$ ) ( $I_F = 0.5$ Amp, $I_R = 1.0$ Amp, $I_{REC} = 0.25$ Amp)	$t_{rr}$	35 25	75 50	ns
Maximum Forward Recovery Time ( $I_F = 1.0$ A, $di/dt = 100$ A/ $\mu\text{s}$ , Recovery to 1.0 V)	$t_{fr}$	25	50	ns

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

