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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

PLASTIC

MAXIMUM RATINGS

Rating	Symbol	MUR 405	410	415	420	430	440	450	460	Unit
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°C				4.0 @ T_A = 40°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								°C

THERMAL CHARACTERISTICS

Maximum Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	See Note 1	°C/W

ELECTRICAL CHARACTERISTICS

Maximum Instantaneous Forward Voltage (1) (I_F = 3.0 Amp, T_J = 150°C) (I_F = 3.0 Amp, T_J = 25°C) (I_F = 4.0 Amp, T_J = 25°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°C) (Rated dc Voltage, T_J = 25°C)	i_R	 150 5.0	 250 10	µA
Maximum Reverse Recovery Time (I_F = 1.0 Amp, di/dt = 50 Amp/µs) (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/µs, Recovery to 1.0 V)	t_{fr}	25	50	ns

(1) Pulse Test: Pulse Width = 300 µs, Duty Cycle ≤ 2.0%

Quality Semi-Conductors