

SWITCHMODE™ Power Rectifier

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

- Ultrafast 35 Nanosecond Recovery Times
- 150°C Operating Junction Temperature
- Epoxy Meets UL 94, V-0 @ 0.125 in
- High Temperature Glass Passivated Junction
- Low Leakage Specified @ 150°C Case Temperature
- Current Derating @ Both Case and Ambient Temperatures
- Electrically Isolated. No Isolation Hardware Required.
- UL Recognized File #E69369 (Note 1)

Mechanical Characteristics

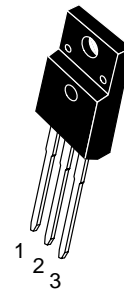
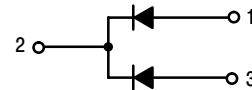
- Case: Epoxy, Molded
- Weight: 1.9 grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes:
260°C Max. for 10 Seconds

MAXIMUM RATINGS

Please See the Table on the Following Page

1. UL Recognized mounting method is per Figure 4

**ULTRAFAST
RECTIFIER
16 AMPERES
200 VOLTS**



**ISOLATED TO-220F
CASE 221D
STYLE 3**

MAXIMUM RATINGS (Per Leg)

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	200	Volts
Average Rectified Forward Current Total Device, (Rated V_R), $T_C = 150^\circ\text{C}$ Total Device	$I_{F(AV)}$	8 16	Amps
Peak Repetitive Forward Current (Rated V_R , Square Wave, 20 kHz), $T_C = 150^\circ\text{C}$	I_{FM}	16	Amps
Non-repetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I_{FSM}	100	Amps
Operating Junction and Storage Temperature	T_J, T_{stg}	- 65 to +150	$^\circ\text{C}$
RMS Isolation Voltage (t = 1 second, R.H. $\leq 30\%$, $T_A = 25^\circ\text{C}$) (Note 3) Per Figure 3 Per Figure 4 (Note 2) Per Figure 5	V_{iso1} V_{iso2} V_{iso3}	4500 3500 1500	Volts

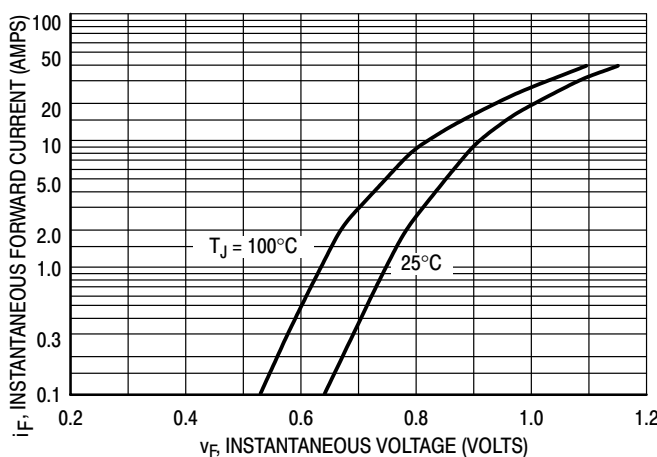
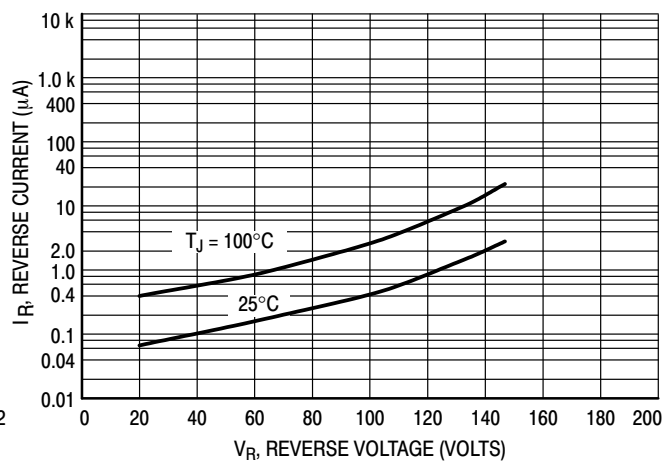
THERMAL CHARACTERISTICS (Per Leg)

Rating	Symbol	Value	Unit
Maximum Thermal Resistance, Junction to Case	$R_{\theta JC}$	4.2	$^\circ\text{C/W}$
Lead Temperature for Soldering Purposes: 1/8" from the Case for 5 seconds	T_L	260	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (Per Leg)

Characteristic	Symbol	Value	Unit
Maximum Instantaneous Forward Voltage (Note 4) ($i_F = 8.0$ Amp, $T_C = 150^\circ\text{C}$) ($i_F = 8.0$ Amp, $T_C = 25^\circ\text{C}$)	v_F	0.895 0.975	Volts
Maximum Instantaneous Reverse Current (Note 4) (Rated dc Voltage, $T_C = 150^\circ\text{C}$) (Rated dc Voltage, $T_C = 25^\circ\text{C}$)	i_R	250 5.0	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	ns

2. UL Recognized mounting method is per Figure 4
3. Proper strike and creepage distance must be provided.
4. Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$.

**Figure 1. Typical Forward Voltage, Per Leg****Figure 2. Typical Reverse Current, Per Leg***