# Power Schottky Rectifier - 40Amp 60Volt

## Features

-Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
-High Junction Temperature Capability
-Low forward voltage, high current capability
-High surge capacity
-Low power loss, high efficiency
-High operation junction temp up to 175ºC Excellent EMI performance

## Application

-Switching-Mode Power Supply

## Absolute maximum ratings

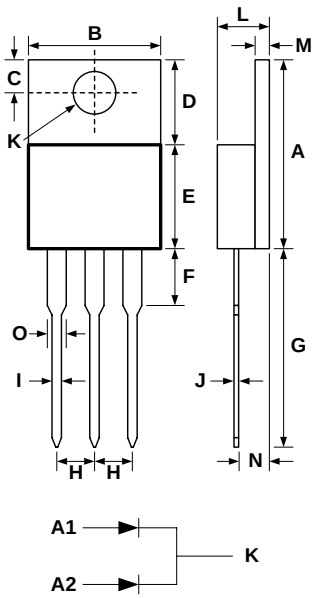
| Symbol | Ratings | Unit | Conditions |
|---|---|---|---|
| $I_{F(AV)}$ | 40 | A | Average Forward Current |
| $V_{RRM}$ | 60 | V | Repetitive Peak Reverse Voltage |
| $I_{FSM}$ | 400 | A | Peak Forward Surge Current |
| $I_{RRM}$ | 2.0 | A | Peak repetitive reverse surge current per leg at tp=2μs, 1KHz |
| $V_{F(max)}$ | 0.62 | V | Forward Voltage Drop |
| $T_j$ | -65 to +175 | ºC | Operating Temperature Range |
| $T_{stg}$ | -65 to +175 | ºC | Storage Temperature Range |

## Electrical characteristics

| Parameters | Symbol | Ratings | Conditions |
|---|---|---|---|
| Maximum Instantaneous Forward Voltage | $V_F$ | 0.78V<br>0.62V | Tc = 25ºC<br>Tc = 125ºC |
| Maximum Reverse Leakage Current | $I_R$ | 0.01mA<br>10mA | Tc = 25ºC<br>Tc = 125ºC |
| Maximum Voltage Rate of Change | dv/dt | 10,000 V/μs | Rated $V_R$ |
| Typical Thermal Resistance, Junction to Case | $R_{\theta (j-c)}$ | 2.2 ºC/W | Per diode |

Note: Pulse Test : 380μs pulse width, 2% duty cycle

**TO-220AB**




| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | .579 | .606 | 14.70 | 15.40 | |
| B | .392 | .411 | 9.95 | 10.45 | |
| C | .104 | .116 | 2.65 | 2.95 | |
| D | .248 | .272 | 6.30 | 6.90 | |
| E | .325 | .350 | 8.25 | 8.90 | |
| F | .126 | .157 | 3.20 | 4.00 | |
| G | .492 | .551 | 12.50 | 14.00 | |
| H | .096 | .108 | 2.45 | 2.75 | |
| I | .028 | .039 | 0.70 | 1.00 | |
| J | .010 | .022 | 0.25 | 0.55 | |
| K | .146 | .157 | 3.70 | 4.00 | |
| L | .167 | .187 | 4.25 | 4.75 | |
| M | .045 | .057 | 1.15 | 1.45 | |
| N | .089 | .114 | 2.25 | 2.90 | |
| O | .047 | .055 | 1.20 | 1.40 | |

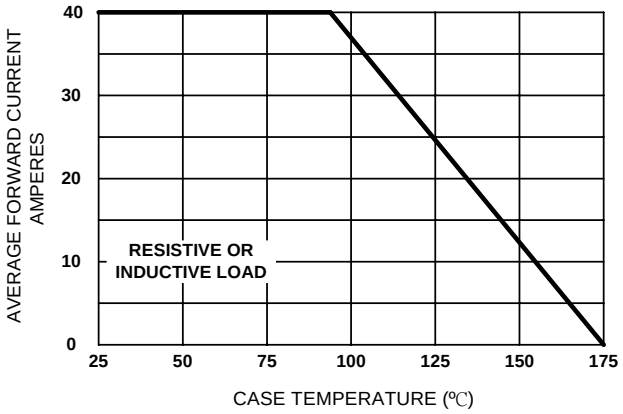



**Figure 1. Forward Current Derating Curve**

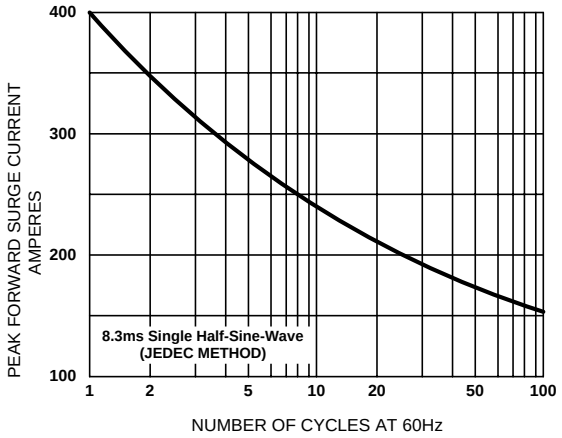



**Figure 2. Maximum Non-repetitive Surge Current**

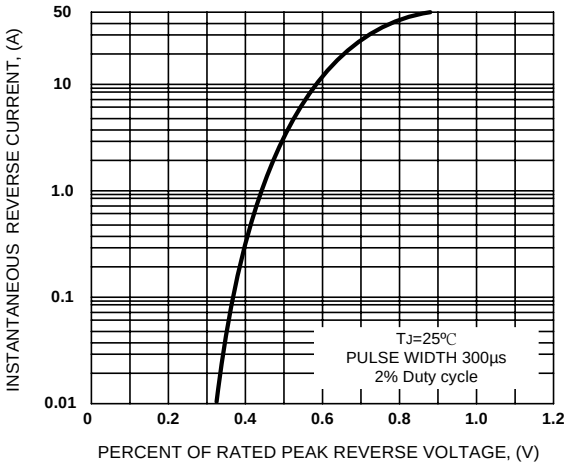



**Figure 3. Typical Instantaneous Forward Characteristics**

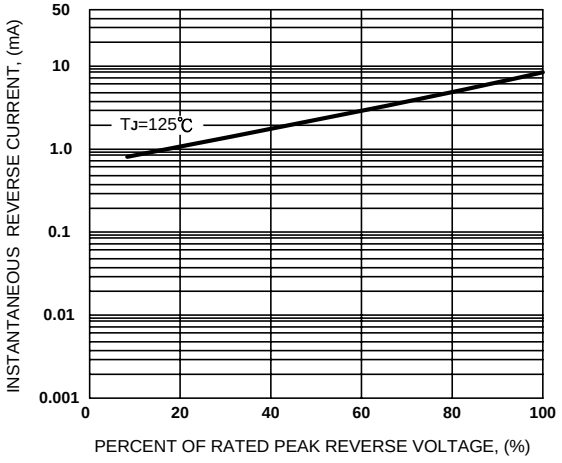



**Figure 4. Typical Reverse Characteristics**

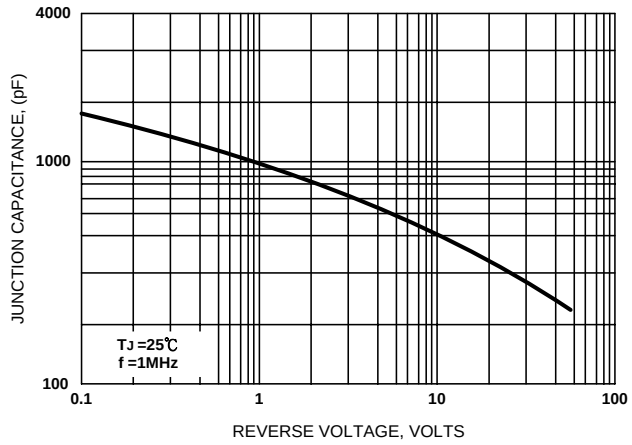



**Figure 5. Typical Junction Capacitance**

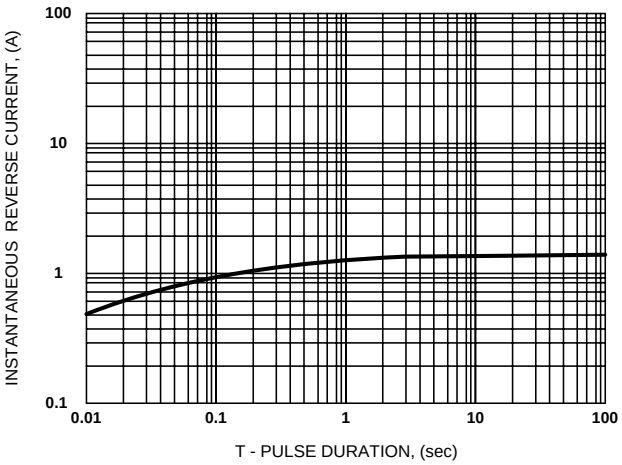



**Figure 6. Typical Transient Thermal Impedance**