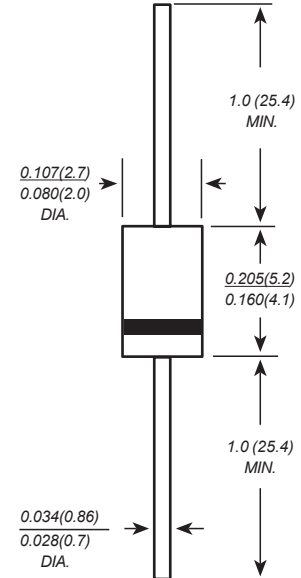


## SUPER FAST RECTIFIERS

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Idea for printed circuit board
- ◆ Ultra fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/ 10 seconds at terminals

### DO-41



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Catalog Number                                                                                      | SYMBOLS         | MUR120      | MUR140       | MUR160 | UNITS         |
|-----------------------------------------------------------------------------------------------------|-----------------|-------------|--------------|--------|---------------|
| Maximum repetitive peak reverse voltage                                                             | $V_{RRM}$       | 200         | 400          | 600    | VOLTS         |
| Maximum RMS voltage                                                                                 | $V_{RMS}$       | 140         | 280          | 420    | VOLTS         |
| Maximum DC blocking voltage                                                                         | $V_{DC}$        | 200         | 400          | 600    | VOLTS         |
| Maximum average forward rectified current<br>0.375"(9.5mm) lead length                              | $I_{(AV)}$      | 1.0         |              |        | Amps          |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 35          |              |        | Amps          |
| Maximum instantaneous forward voltage at 1.0A                                                       | $V_F$           | 0.875       | 1.25         |        | Volts         |
| Maximum DC reverse current $T_A=25^{\circ}C$<br>at rated DC blocking voltage $T_A=150^{\circ}C$     | $I_R$           | 2.0<br>50.0 | 5.0<br>150.0 |        | $\mu A$       |
| Maximum reverse recovery time (NOTE 1)                                                              | $t_{rr}$        | 25          | 50           |        | ns            |
| Typical thermal resistance (NOTE 2)                                                                 | $R_{\theta JA}$ | 27.0        | 50.0         |        | $^{\circ}C/W$ |
| Operating junction and storage temperature range                                                    | $T_J, T_{STG}$  | -65 to +175 |              |        | $^{\circ}C$   |

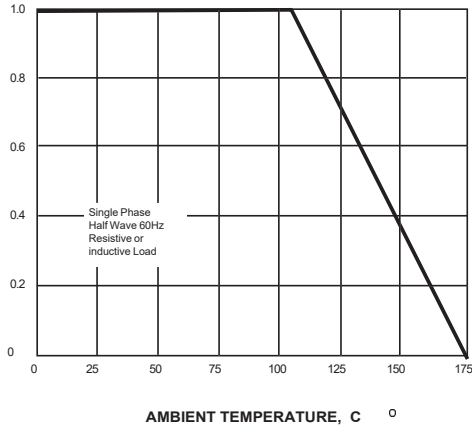
Note: 1. Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$

2. Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length, P.C.B. mounted

## Ratings And Characteristic Curves

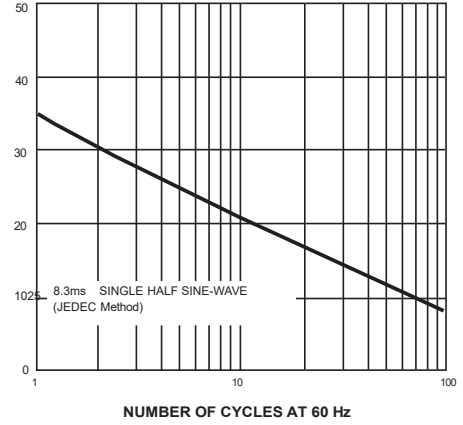
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



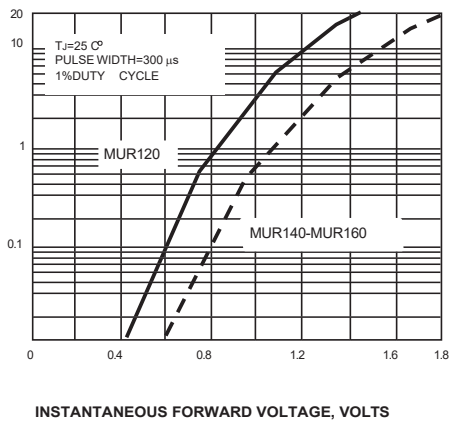
PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



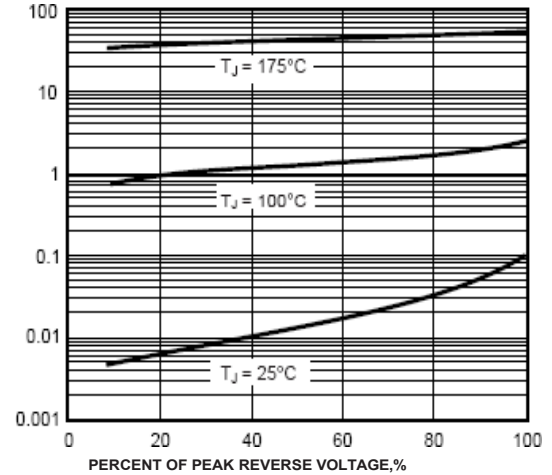
INSTANTANEOUS FORWARD  
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



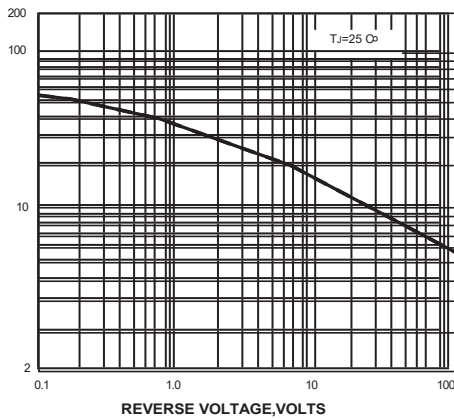
INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



The curve above is for reference only.