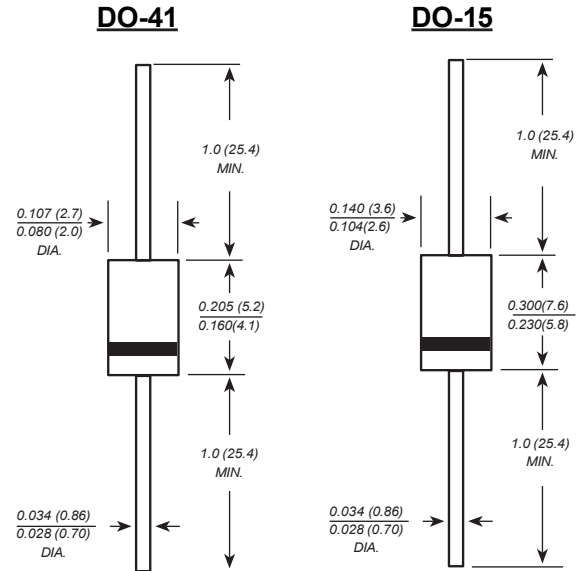


## HIGH VOLTAGE FAST RECOVERY RECTIFIER

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension



Dimensions in inches and (millimeters)

0.014 ounce, 0.40 grams(DO-15)

### 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%.

| Parameter                                                                                              | SYMBOLS         | R1200F      | R1500F | MD R1800F | R2000F | UNITS         |
|--------------------------------------------------------------------------------------------------------|-----------------|-------------|--------|-----------|--------|---------------|
| Marking Code                                                                                           |                 |             |        |           |        |               |
| Maximum repetitive peak reverse voltage                                                                | $V_{RRM}$       | 1200        | 1500   | 1800      | 2000   | V             |
| Maximum RMS voltage                                                                                    | $V_{RMS}$       | 840         | 1050   | 1260      | 1400   | V             |
| Maximum DC blocking voltage                                                                            | $V_{DC}$        | 1200        | 1500   | 1800      | 2000   | V             |
| Maximum average forward rectified current<br>0.375"(9.5mm) lead length(see fig.1)                      | $I_{(AV)}$      | 0.5         |        |           | 0.2    | A             |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed<br>on rated load (JEDEC Method) | $I_{FSM}$       | 30.0        |        |           |        | A             |
| Maximum instantaneous forward voltage at 0.5/0.2A                                                      | $V_F$           | 2.5         |        |           | 4.0    | V             |
| Maximum DC reverse current<br>at rated DC blocking voltage<br>$T_A=25^{\circ}C$<br>$T_A=100^{\circ}C$  | $I_R$           | 5.0<br>50.0 |        |           |        | $\mu A$       |
| Maximum reverse recovery time (NOTE 1)                                                                 | $t_{rr}$        | 500         |        |           |        | ns            |
| Typical junction capacitance (NOTE 1)                                                                  | $C_J$           | 15.0        |        |           |        | pF            |
| Typical thermal resistance (NOTE 2)                                                                    | $R_{\theta JA}$ | 50.0        |        |           |        | $^{\circ}C/W$ |
| Operating junction and storage temperature range                                                       | $T_J, T_{STG}$  | -65 to +150 |        |           |        | $^{\circ}C$   |

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

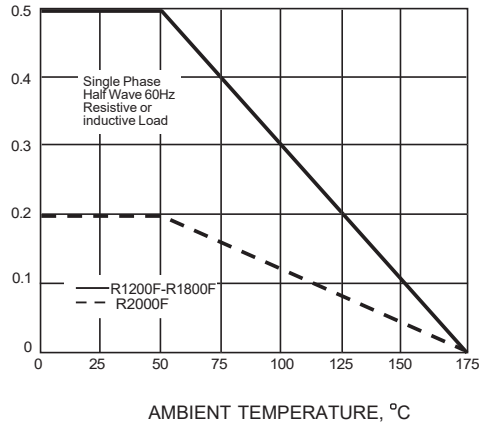
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

## Ratings And Characteristic Curves

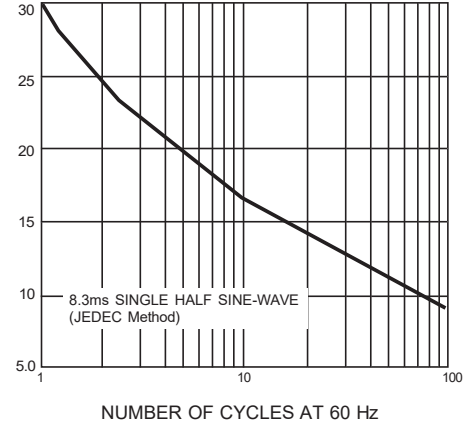
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



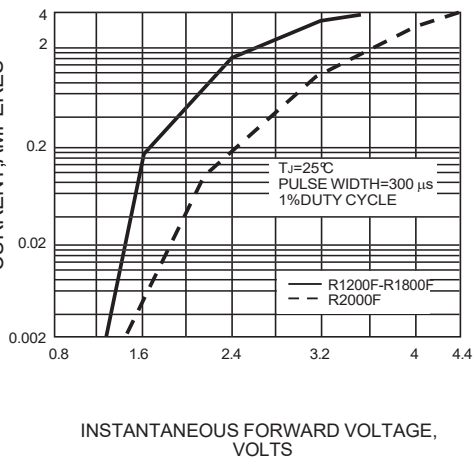
PEAK FORWARD SURGE CURRENT,  
AMPERES

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



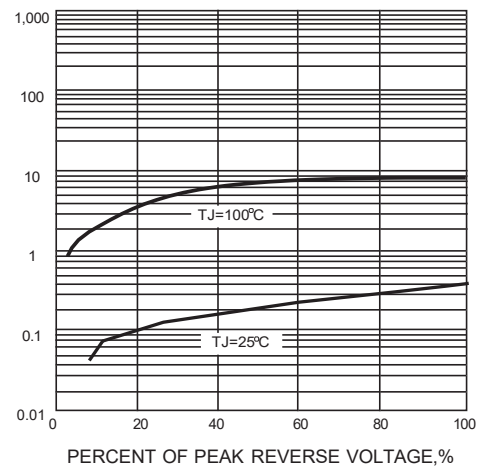
INSTANTANEOUS FORWARD  
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



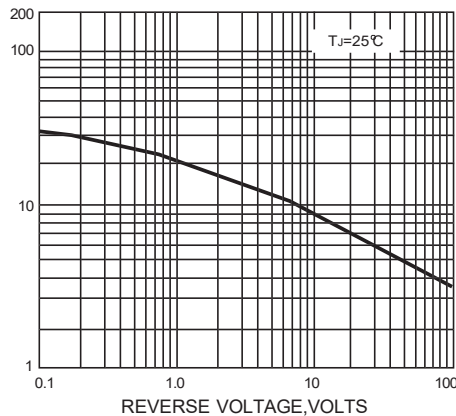
INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



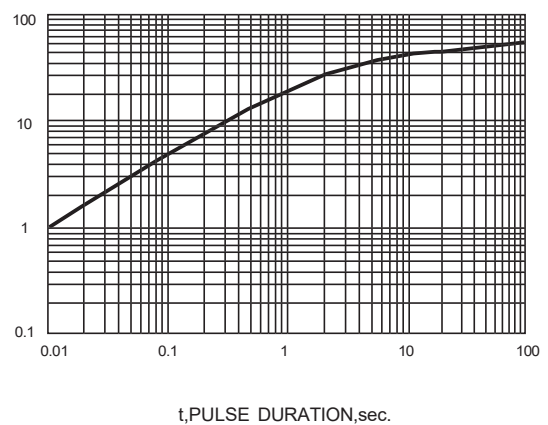
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.