

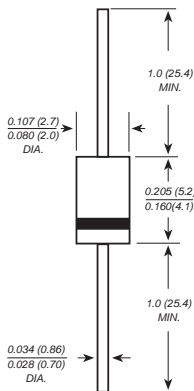


# R1200F THRU R2000F

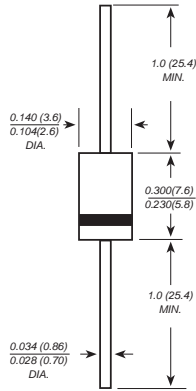
## HIGH VOLTAGE FAST RECOVERY RECTIFIER

Reverse Voltage - 1200 to 2000 Volts Forward Current -0.5/0.2 Ampere

**DO-41**



**DO-15**



Dimensions in inches and (millimeters)

### 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

### MECHANICAL DATA

**Case:** JEDEC DO-41/DO-15 molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.012 ounce, 0.33 grams (DO-41)  
 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%.

| MDD Catalog Number   | SYMBOLS         | R1200F      | R1500F | R1800F | R2000F | UNITS        |
|--|-----------------|-------------|--------|--------|--------|--------------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$       | 1200        | 1500   | 1800   | 2000   | VOLTS        |
| Maximum RMS voltage  | $V_{RMS}$       | 840         | 1050   | 1260   | 1400   | VOLTS        |
| Maximum DC blocking voltage  | $V_{DC}$        | 1200        | 1500   | 1800   | 2000   | VOLTS        |
| Maximum average forward rectified current<br>0.375" (9.5mm) lead length (see fig.1)                    | $I_{(AV)}$      | 0.5         |        |        | 0.2    | Amp          |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method) | $I_{FSM}$       | 30.0        |        |        |        | Amps         |
| Maximum instantaneous forward voltage at 0.5/0.2 A   | $V_F$           | 2.5         |        | 4.0    |        | Volts        |
| Maximum DC reverse current $T_A=25^\circ C$<br>at rated DC blocking voltage $T_A=100^\circ C$          | $I_R$           | 5.0         |        |        |        | $\mu A$      |
| Maximum reverse recovery time (NOTE 1)   | $t_{rr}$        | 500         |        |        |        | ns           |
| Typical junction capacitance (NOTE 2)  | $C_J$           | 15.0        |        |        |        | pF           |
| Typical thermal resistance (NOTE 3)  | $R_{\theta JA}$ | 50.0        |        |        |        | $^\circ C/W$ |
| Operating junction and storage temperature range   | $T_J, T_{STG}$  | -65 to +150 |        |        |        | $^\circ C$   |

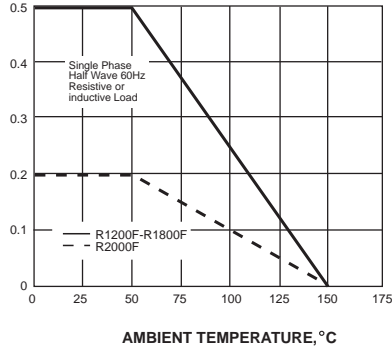
- Note:**
1. Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
  2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
  3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

MDD ELECTRONIC

# RATINGS AND CHARACTERISTIC CURVES R1200F THRU R2000F

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

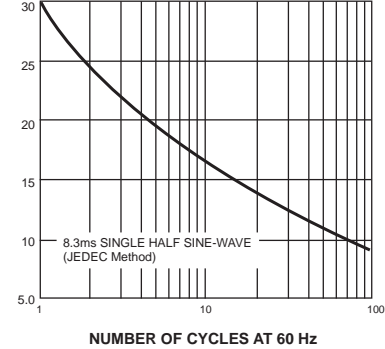


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

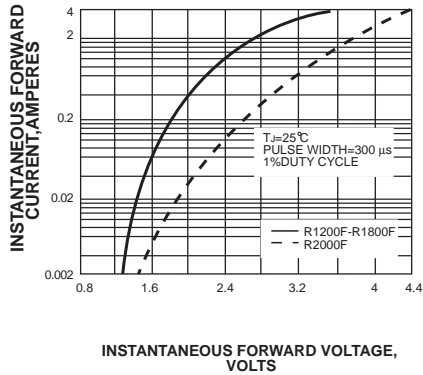
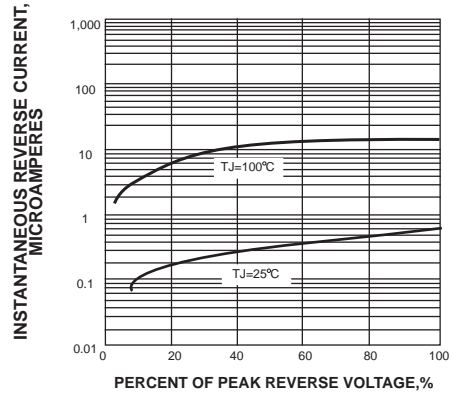
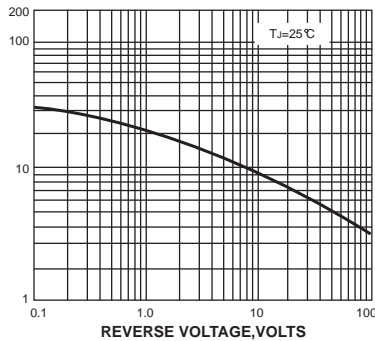


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  $^\circ\text{C}/\text{W}$

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

