



R1200F THRU R2000F

HIGH VOLTAGE FAST RECOVERY RECTIFIER

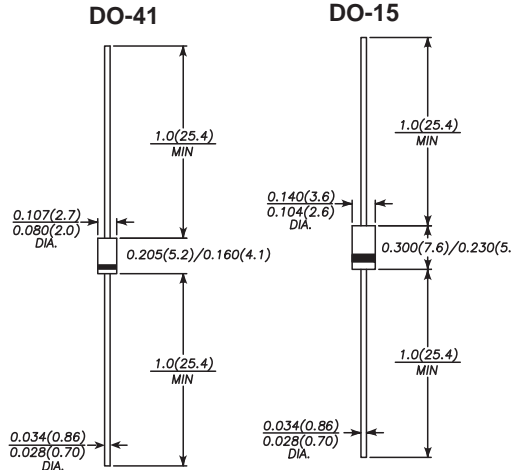
Reverse Voltage - 1200 to 2000 Volts Forward Current - 0.5/0.2 Ampere

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:
 260°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)



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%.

| | 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 0.375" (9.5mm) lead length (see fig.1) | $I_{(AV)}$ | 0.5 | | | 0.2 | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on 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 $T_A=25^\circ C$ at rated DC blocking voltage $T_A=100^\circ C$ | I_R | 5.0 200.0 | | | | μA |
| 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} | -55 to +150 | | | | $^\circ C$ |

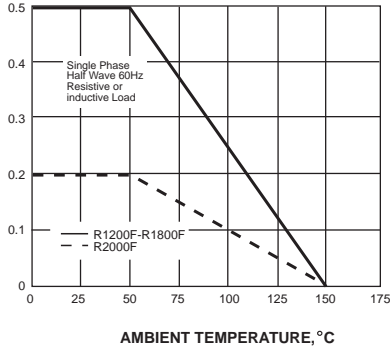
Note: 1.Reverse recovery condition $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3.Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



RATINGS AND CHARACTERISTIC CURVES R1200F THRU R2000F

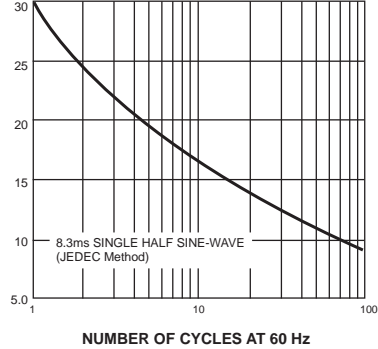
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



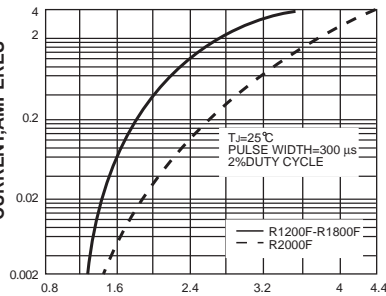
PEAK FORWARD SURGE CURRENT, AMPERES

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



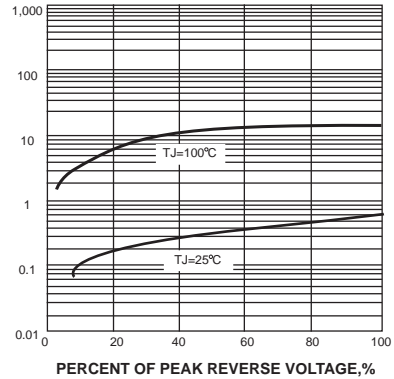
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



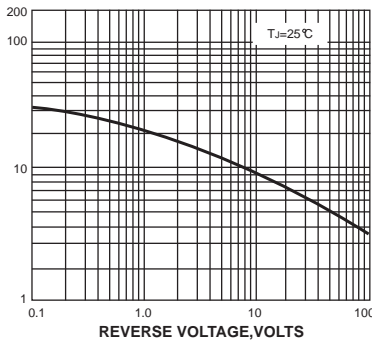
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

