

HIGH VOLTAGE FAST RECOVERY RECTIFIER

VOLTAGE RANGE 1200 to 2000 Volts CURRENT 0.2 to 0.5 Ampere

FEATURES

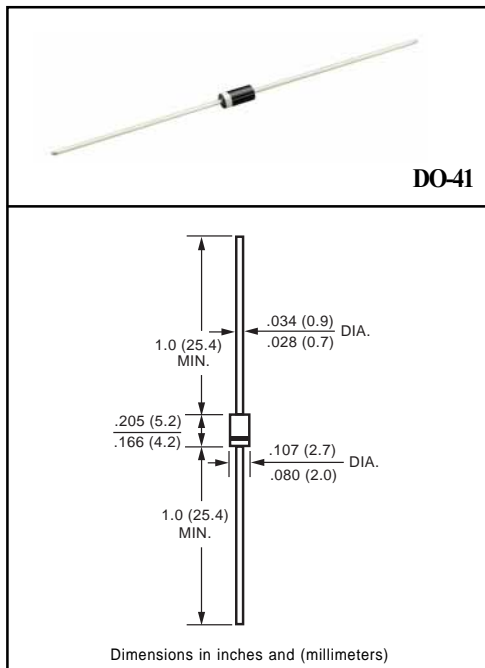
- *Fast switching
- *Low leakage
- *High current capability
- *High surge capability
- *High reliability

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.35 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.



MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

| RATINGS | SYMBOL | R1200F | R1500F | R1800F | R2000F | UNITS |
|--|-----------------------------------|--------------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 1200 | 1500 | 1800 | 2000 | Volts |
| Maximum RMS Volts | V _{RMS} | 840 | 1050 | 1260 | 1400 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 1200 | 1500 | 1800 | 2000 | Volts |
| Maximum Average Forward Rectified Current at TA = 50°C | I _O | 500 | | | 200 | mAmps |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 30 | | | | Amps |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to + 150 | | | | °C |

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | R1200F | R1500F | R1800F | R2000F | UNITS |
|---|-----------------|--------|--------|--------|--------|-------|
| Maximum Instantaneous Forward Voltage at 0.5A/0.2A DC | V _F | 2.5 | | | 4.0 | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C | I _R | 5.0 | | | | uAmps |
| Maximum Full Load Reverse Current Average, Full Cycle .375", (9.5mm) lead length at TL = 55°C | | 100 | | | | uAmps |
| Maximum Reverse Recovery Time (Note) | t _{rr} | 500 | | | | nSec |

NOTES : Test Conditions: I_F = 0.5A, I_R = -1.0A, I_{RR} = -0.25A

RATING AND CHARACTERISTIC CURVES (R1200F THRU R2000F)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

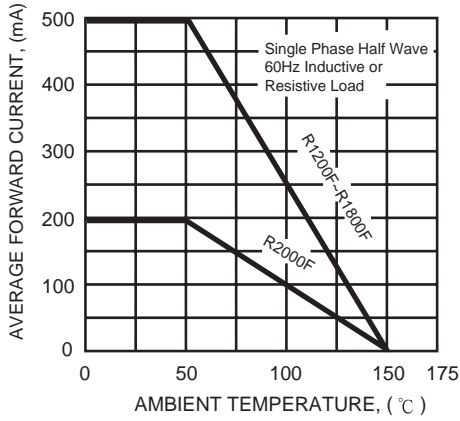


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

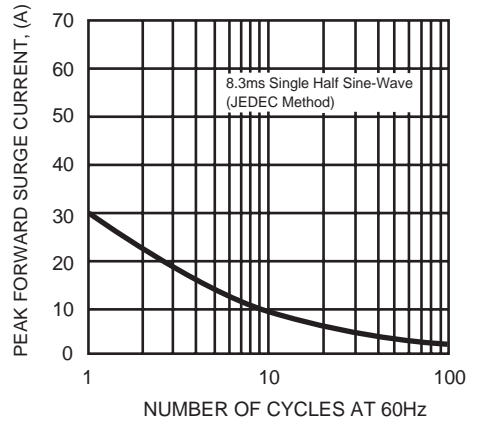
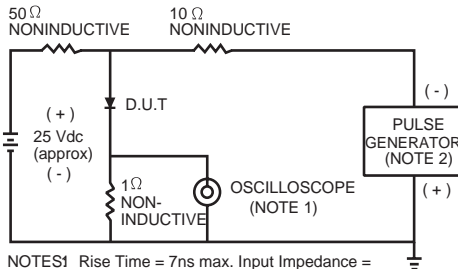


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



- NOTES
1. Rise Time = 7ns max. Input Impedance = 1 megohm. 22 pF.
 2. Rise Time = 10ns max. Source Impedance = 50 ohms.

