



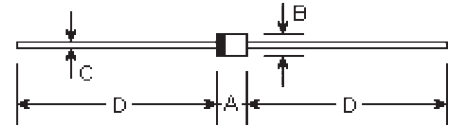
PR1000R THRU PR1800R

PHOTOFLASH RECTIFIER
Reverse Voltage - 1000 to 1800 Volts
Forward Current - 0.5 Ampere

Features

- Fast switching
- Low leakage
- Low forward voltage drop
- High current capability
- High surge capability
- High reliability

R-1



Mechanical Data

- **Case:** Molded plastic, R-1
- **Epoxy:** UL94V-0 rate flame retardant
- **Lead:** MIL-STD-202E method 208C guaranteed
- **Mounting Position:** Any
- **Weight:** 0.007 ounce, 0.20 gram

| DIMENSIONS | | | | | |
|------------|--------|-------|-------|------|------|
| DIM | inches | | mm | | Note |
| | Min. | Max. | Min. | Max. | |
| A | 0.114 | 0.138 | 2.9 | 3.5 | |
| B | 0.095 | 0.099 | 2.42 | 2.51 | ϕ |
| C | 0.020 | 0.024 | 0.5 | 0.6 | ϕ |
| D | 1.000 | - | 25.40 | - | |

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, derate current by 20%.

| | Symbols | PR1000R | PR1200R | PR1400R | PR1600R | PR1800R | Units |
|--|----------------|-------------|---------|---------|---------|---------|------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 1000 | 1200 | 1400 | 1600 | 1800 | Volts |
| Maximum RMS voltage | V_{RMS} | 700 | 840 | 980 | 1120 | 1260 | Volts |
| Maximum DC blocking voltage | V_{DC} | 1000 | 1200 | 1400 | 1600 | 1800 | Volts |
| Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$ | $I_{(AV)}$ | 500 | | | | | mAmps |
| Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method) | I_{FSM} | 30.0 | | | | | Amps |
| Maximum instantaneous forward voltage at 0.5A DC | V_F | 1.5 | | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ | I_R | 5.0 | | | | | μA |
| Maximum reverse recovery time (Note 1) | T_{rr} | 300.0 | | | | | nS |
| Typical junction capacitance (Note 2) | C_j | 10 | | | | | μF |
| Operating and storage temperature range | T_J, T_{STG} | -65 to +175 | | | | | $^\circ\text{C}$ |

Notes:

(1) Test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

(2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT DERATING CURVE

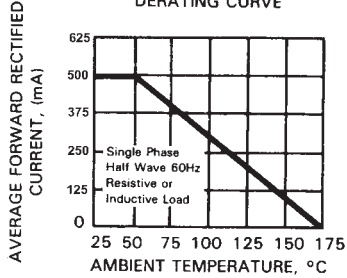


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

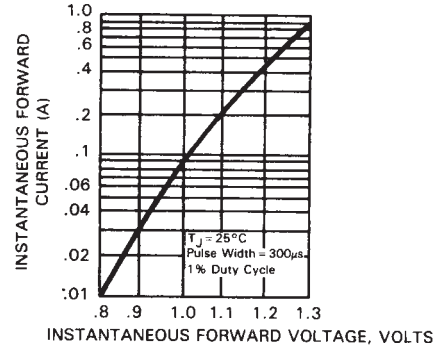


FIG. 3 - MAXIMUM NON-REPETITIVE SURGE CURRENT

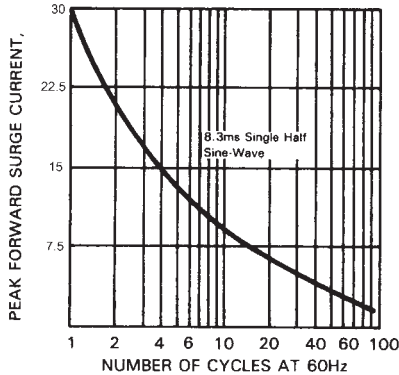


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

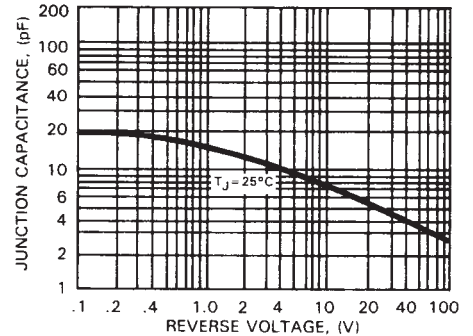
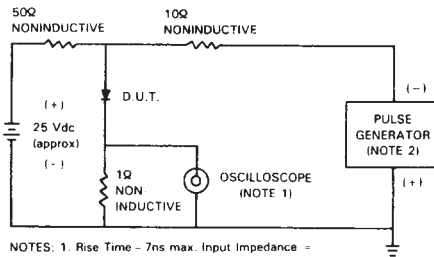


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

