

# PS200R THRU PS2010R

## FAST SWITCHING PLASTIC RECTIFIER

VOLTAGE - 50 to 1000 Volts CURRENT - 2.0 Amperes

### FEATURES

- High current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- 2.0 ampere operation at  $T_A=55\text{ }^{\circ}\text{C}$  with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Fast switching for high efficiency
- Low leakage

### MECHANICAL DATA

Case: Molded plastic , DO-15

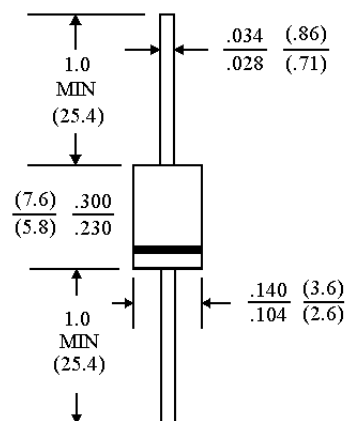
Terminals: Plated axial leads, solderable per MIL-STD-202, Method 208

Polarity: Color band denotes cathode

Mounting Position: Any

Weight: 0.015 ounce, 0.4 gram

### DO-15



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25  $^{\circ}\text{C}$  ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	PS200R	PS201R	PS202R	PS204R	PS206R	PS208R	PS2010R	UNITS
Peak Reverse Voltage, Repetitive; $V_{RM}$ :	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_A=55\text{ }^{\circ}\text{C}$	2.0							A
Peak Forward Surge Current, $I_{FM}$ (surge) 8.3msec. single half sine-wave superimposed on rated load (JEDEC method)	70.0							A
Maximum Forward Voltage at 2.0A DC	1.3							V
Maximum Reverse Current $T_J=25\text{ }^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_J=100\text{ }^{\circ}\text{C}$	5.0 500							$\mu\text{g A}$ $\mu\text{g A}$
Typical Junction capacitance (Note 1) $C_J$	35							pF
Typical Thermal Resistance (Note 3) $R_{\theta JKJA}$	22							$^{\circ}\text{C}/\text{W}$
Maximum Reverse Recovery Time(Note 2)	150	150	150	150	250	500	500	ns
Operating and Storage Temperature Range $T_J, T_{STG}$	-55 TO +150							$^{\circ}\text{C}$

### NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions:  $I_F=.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=.25\text{A}$
3. Thermal Resistance from Junction to Ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B. mounted.

# RATING AND CHARACTERISTIC CURVES

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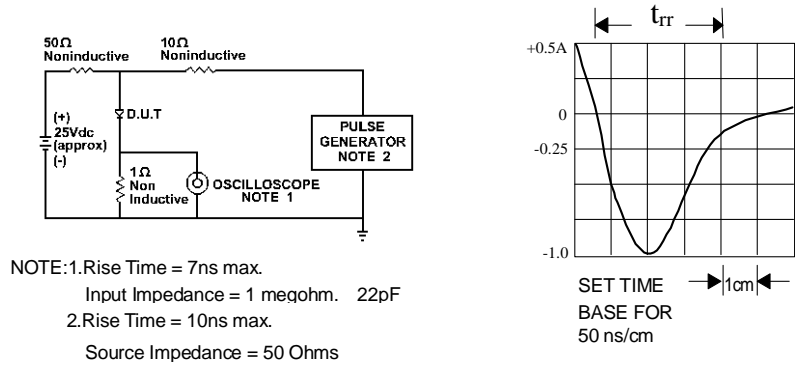


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

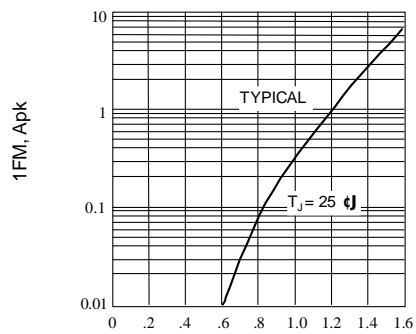


Fig. 2-FORWARD CHARACTERISTICS

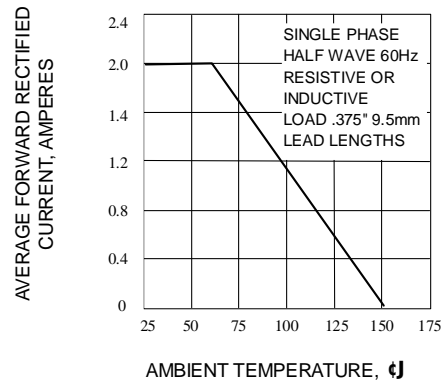


Fig. 3-FORWARD CURRENT DERATING CURVE

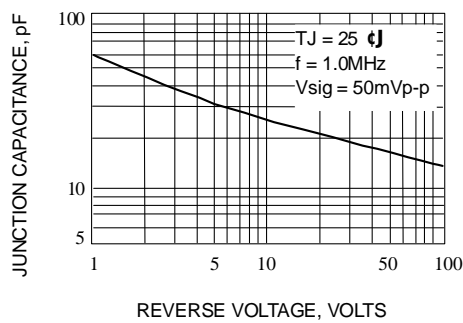


Fig. 4-TYPICAL JUNCTION CAPACITANCE

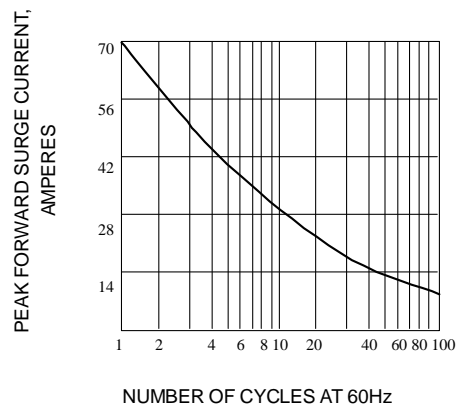


Fig. 5-PEAK FORWARD SURGE CURRENT