

# TS200R THRU T S2010R

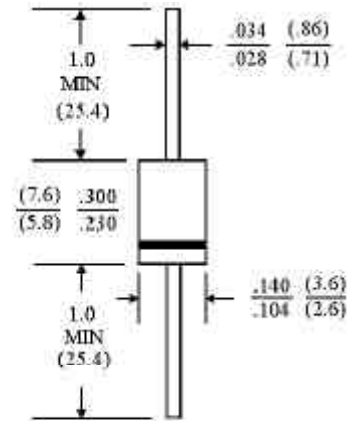
FAST SWITCHING PLASTIC RECTIFIER

VOLTAGE - 50 to 1000 Volts CURRENT - 2.0 Amperes

## FEATURES

- High current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 utilizing Flame Retardant Epoxy Molding Compound
- 2.0 ampere operation at  $T_A=55^\circ\text{C}$  with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Fast switching for high efficiency
- Low leakage

DO-15



Dimensions in inches and (millimeters)

## 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

## 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%.

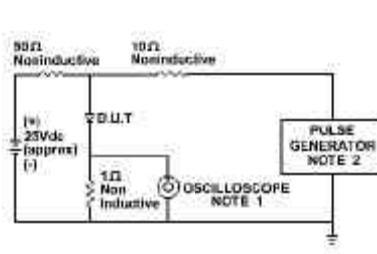
	TS200R	TS201R	TS202R	TS204R	TS206R	TS208R	S2010R	UNITS
Peak Reverse Voltage, Repetitive; $V_{RM}$ :	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length at $T_A=55^\circ\text{C}$	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 $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=100^\circ\text{C}$	5.0							$\mu\text{gA}$
	500							$\mu\text{gA}$
Typical Junction capacitance (Note 1) CJ	35							pF
Typical Thermal Resistance (Note 3) R $\theta$ KJA	22							$^\circ\text{C/W}$
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:

- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- Reverse Recovery Test Conditions:  $I_F=5A$ ,  $I_R=1A$ ,  $I = .25A$
- 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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NOTE: 1. Rise Time = 7ns max.  
 Input Impedance = 1 megohm. 22pF  
 2. Rise Time = 10ns max.  
 Source Impedance = 50 Ohms

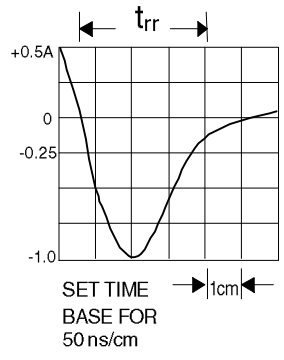


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

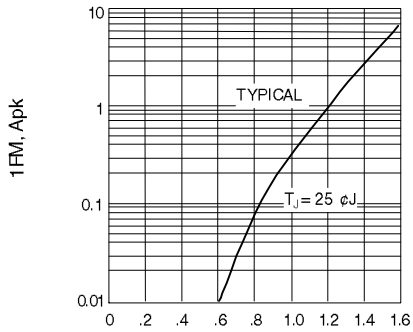


Fig. 2-FORWARD CHARACTERISTICS

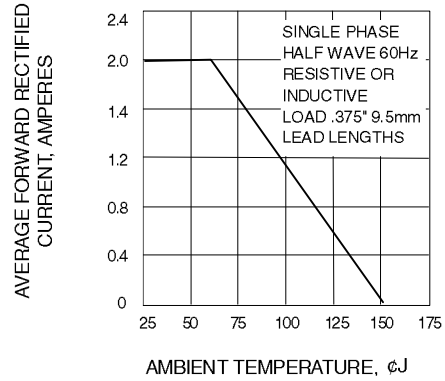


Fig. 3-FORWARD CURRENT DERATING CURVE

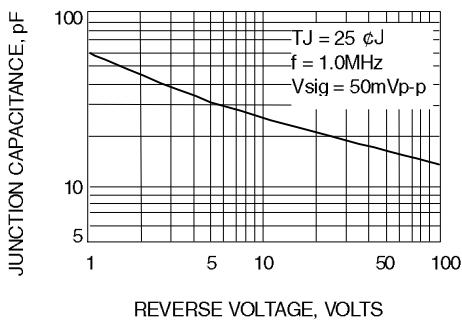


Fig. 4-TYPICAL JUNCTION CAPACITANCE

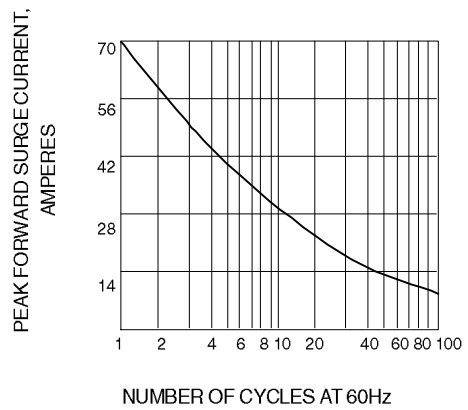


Fig. 5-PEAK FORWARD SURGE CURRENT