

# TS150R THRU TS1510R

FAST SWITCHING PLASTIC RECTIFIER

VOLTAGE - 50 to 1000 Volts CURRENT - 1.5 Amperes

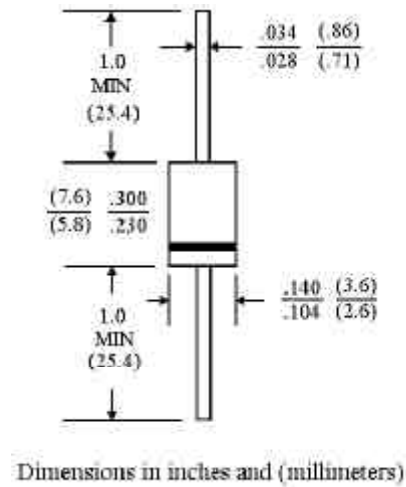
## FEATURES

- High current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 utilizing Flame Retardant Epoxy Molding Compound
- 1.5 ampere operation at  $T_A=50^\circ\text{C}$  with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- 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



## 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%.

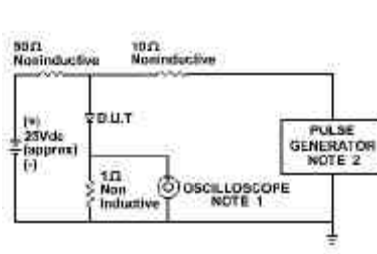
	TS150R	TS151R	TS152R	TS154R	TS156R	TS158R	TS1510R	UNITS
Peak Reverse Voltage, Repetitive; VRM:	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_A=55^\circ\text{C}$	1.5							A
Peak Forward Surge Current, $I_{FM}$ (surge) 8.3msec. single half sine-wave superimposed on rated load (JEDEC method)	50							A
Maximum Forward Voltage at 1.5A 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							$\mu\text{gA}$
Typical Junction capacitance (Note 1) $C_J$	25							$\mu\text{F}$
Typical Thermal Resistance (Note 3) $R_{\theta\text{KJA}}$	45							$^\circ\text{C/W}$
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:  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I = 0.25\text{A}$
- 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

TS150R THRU T S1510R



NOTE:1.Rise Time = 7ns max.  
 Input Impedance = 1 megohm. 22pF  
 2.Rise Time = 10ns max.  
 Source Impedance = 50 Ohms

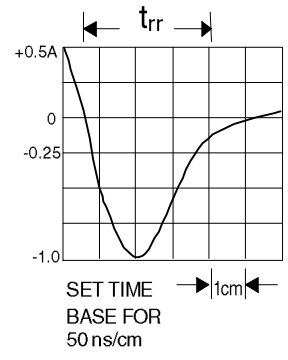


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

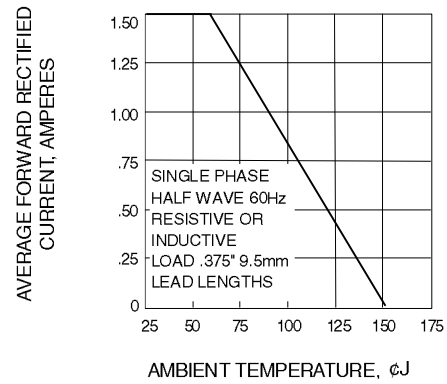
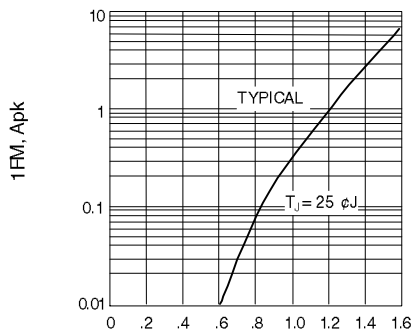


Fig. 2-FORWARD CHARACTERISTICS

Fig. 3-FORWARD CURRENT DERATING CURVE

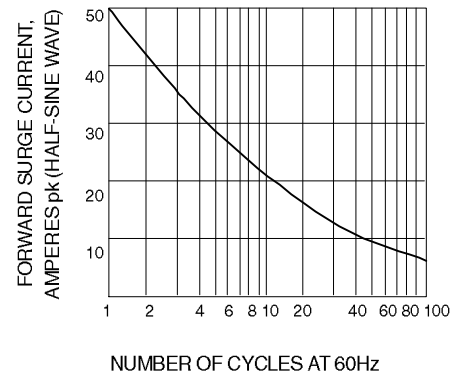
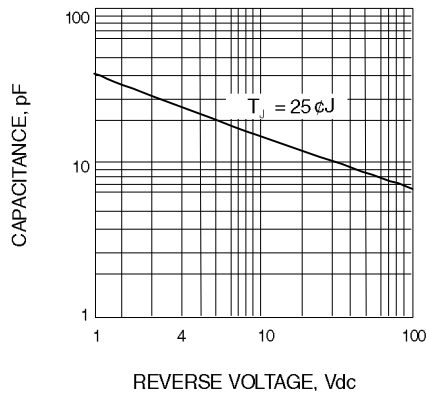


Fig. 4-TYPICAL JUNCTION CAPACITANCE vs. REVERSE VOLTAGE

Fig. 5-PEAK FORWARD SURGE CURRENT