



# 1. DATA SHEET

## PS150R~PS1510R

### FAST SWITCHING PLASTIC RECTIFIER

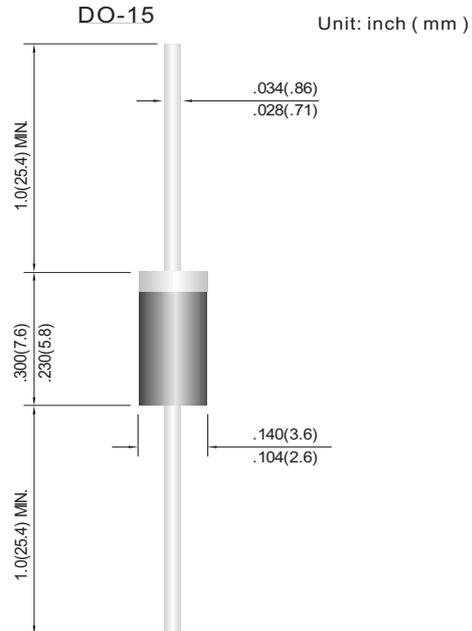
**VOLTAGE 50 to 1000 Volts CURRENT - 1.5 Amperes**

#### FEATURES

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

#### MECHANICAL DATA

Case: Molded plastic, DO-15  
 Terminals: Axial leads, solderable to MIL-STD-202, Method 208  
 Polarity: Color Band denotes cathode end  
 Mounting Position: Any  
 Weight: 0.015 ounce, 0.4 gram



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

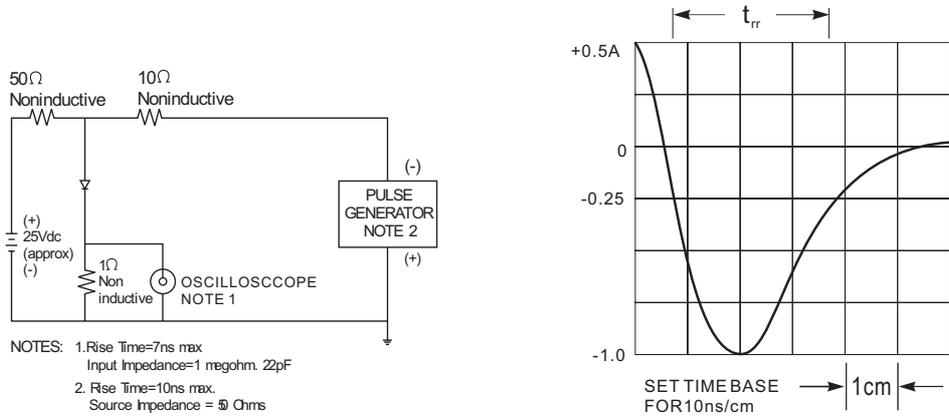
Resistive or inductive load, 60Hz.

	PS150R	PS151R	PS152R	PS154R	PS156R	PS158R	PS1510R	UNIT
Maximum Recurrent Peak Reverse Voltage	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 Current .375"(9.5mm) lead length at $T_A=55^\circ\text{C}$	1.5							A
Peak Forward Surge Current, IFM (surge):8.3ms single half sine-wave superimposed on rated load(JEDEC method)	50.0							A
Maximum Forward Voltage at 1.5A	1.30							V
Maximum Full Load Reverse Current Full Cycle Average ,.375",9.5mm Lead Length at $T_A=25^\circ\text{C}$	5.0							$\mu\text{A}$
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$	500							$\mu\text{A}$
Maximum Reverse Recovery Time(Note 1)	150		250		500			ns
Typical Junction capacitance (Note 2)	25							pF
Typical Junction Resistance(Note 3) $R_{\theta JA}$	45							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range $T_J$	-55 to +150							$^\circ\text{C}$

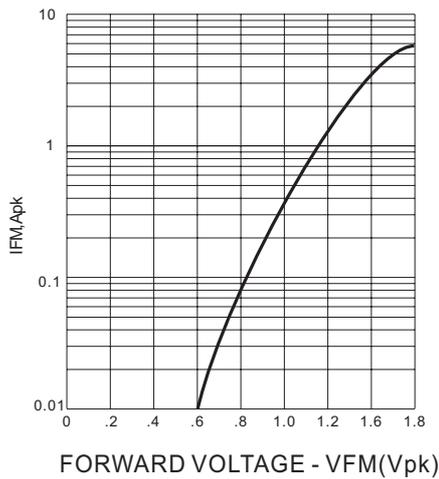
NOTES: 1. Reverse Recovery Test Conditions:  $I_F=.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{RR}=.25\text{A}$   
 2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC  
 3. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted



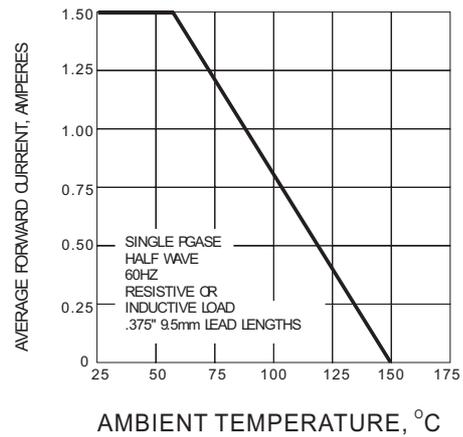
### RATING AND CHARACTERISTIC CURVES



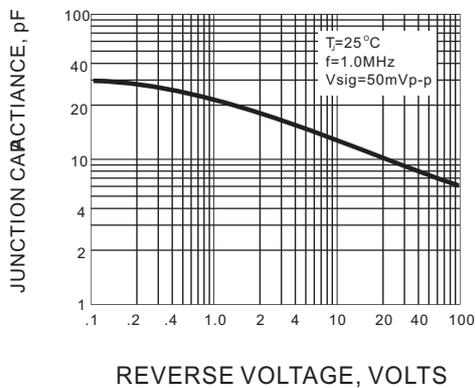
**Fig. 1 -REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



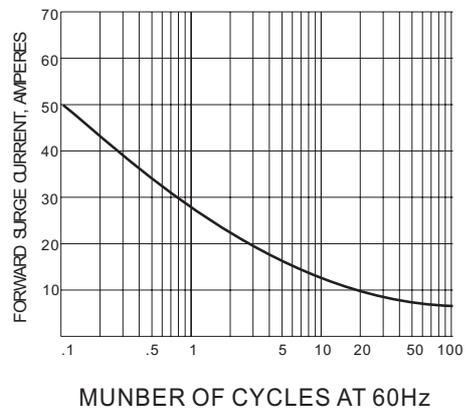
**Fig. 2 -FORWARD CHARACTERISTICS**



**Fig. 3 -FORWARD CURRENT DERATING CURVE**



**Fig. 4 -TYPICAL JUNCTION CAPACITANCE vs. REVERSE VOLTAGE**



**Fig. 5 -PEAK FORWARD SURGE CURRENT**