

**FAST RECOVERY RECTIFIERS**

**REVERSE VOLTAGE – 50 to 1000 Volts  
FORWARD CURRENT – 1.5 Ampere**

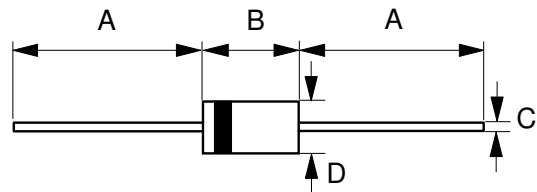
**FEATURES**

- Fast switching for high efficiency
- Low cost
- Diffused junction
- Low forward voltage drop
- Low reverse leakage current
- High current capability
- The plastic material carries UL recognition 94V-0

**MECHANICAL DATA**

- Case: JEDEC DO-41, molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.34 grams (Approximate)
- Mounting Position: Any
- Marking: PR150X

**DO - 41**



DO - 41		
DIM	MIN	MAX
A	25.4	--
B	4.10	5.20
C	0.71 Ø	0.86 Ø
D	2.00 Ø	2.70 Ø
All dimension in millimeter		

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

**ABSOLUTE RATINGS**

PARAMETER	SYMBOL	PR1501S	PR1502S	PR1503S	PR1504S	PR1505S	PR1506S	PR1507S	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Average rectified output current per device @ $T_A=50^\circ\text{C}$	$I_{(AV)}$	1.5							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	50							A
Operating temperature range	$T_J$	-55 to +125							°C
Storage temperature range	$T_{STG}$	-55 to +150							°C

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITION	SYMBOL	MAX.						UNIT
Forward voltage	$I_F = 1.5\text{A}$ $T_J = 25^\circ\text{C}$	$V_F$	1.2						V
Leakage current	$V_R$ at rated $T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$	$I_R$	5 100						uA
Typical junction capacitance (Note 1)		$C_J$	30			20			pF

**THERMAL CHARACTERISTICS**

PARAMETER	SYMBOL	TYP.			UNIT
Thermal resistance junction to ambient	$R_{thJA}$	50			°C/W
Thermal resistance junction to case	$R_{thJC}$	15			

**DYNAMIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITION	SYMBOL	MAX.			UNIT
Reverse recovery time	$I_F = 0.5\text{A}$ , $I_{RR} = 0.25\text{A}$ , $I_R = 1.0\text{A}$	$T_{RR}$	150	250	500	ns

**Note :**

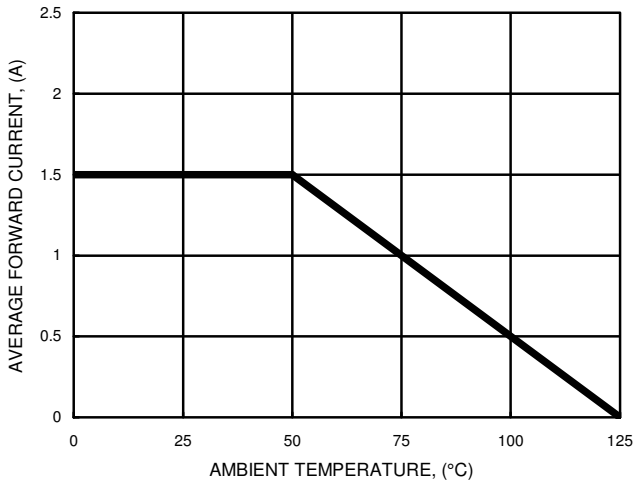
(1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC

REV.7, APR-2018, KDBC03

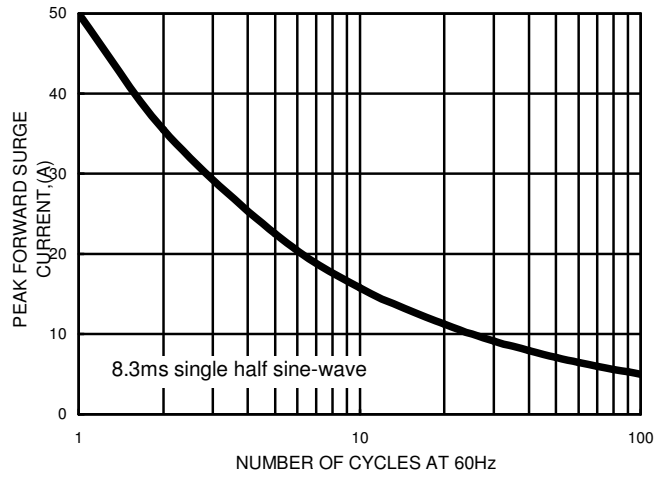
**RATING AND CHARACTERISTIC CURVES**  
**PR1501S thru PR1507S**



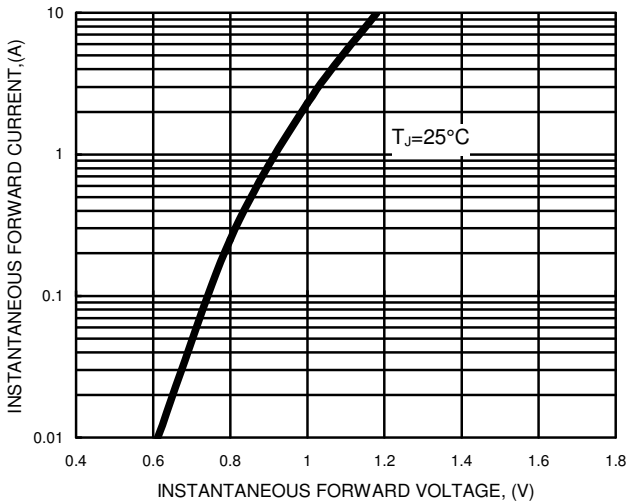
**FIG.1- FORWARD CURRENT DERATING CURVE**



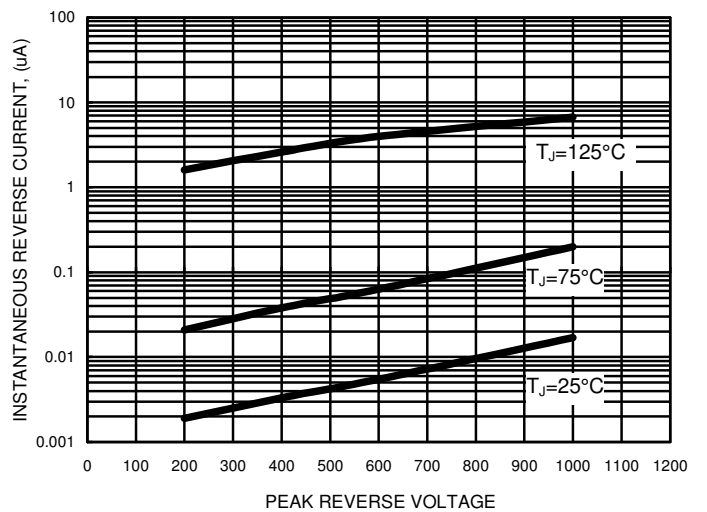
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



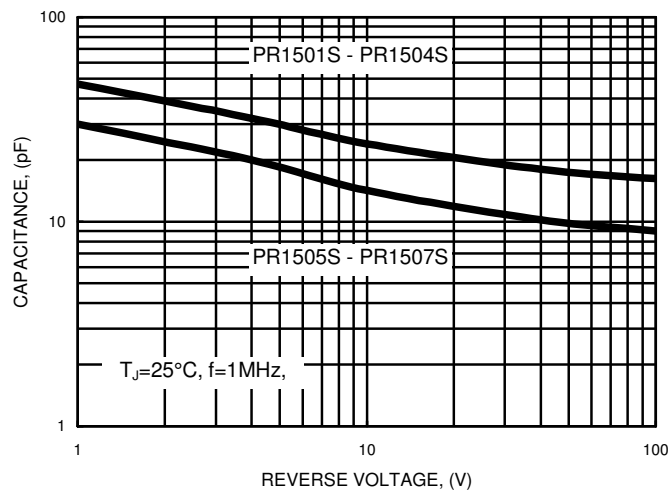
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL REVERSE CHARACTERISTICS**



**FIG.5- TYPICAL JUNCTION CAPACITANCE**



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