

**FAST RECOVERY RECTIFIERS**

**REVERSE VOLTAGE – 50 to 1000 Volts  
FORWARD CURRENT – 1.0 Ampere**

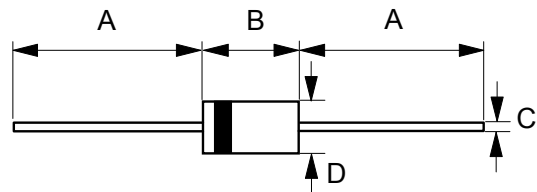
**FEATURES**

- Low cost
- Diffused junction
- Low forward voltage drop
- Low reverse leakage current
- High current capability

**MECHANICAL DATA**

- Case: JEDEC DO-41, molding compound has UL flammability classification 94V-0
- Polarity: Color band denotes cathode
- Weight: 0.326 grams (Approximate)
- Mounting Position: Any

**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	PR1001	PR1002	PR1003	PR1004	PR1005	PR1006	PR1007	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 @ $T_A=75^\circ C$	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30							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	$I_F = 1.0A$ $T_J = 25^\circ C$	$V_F$	1.2						V
Leakage current	$V_R$ at rated $T_J = 25^\circ C$ $T_J = 100^\circ C$	$I_R$	5 100						uA
Typical junction capacitance (Note 1)		$C_J$	25			15			pF

**THERMAL CHARACTERISTICS**

PARAMETER	SYMBOL	TYP.			UNIT
Thermal resistance (Note 2)	$R_{thJA}$	55			°C/W
	$R_{thJL}$	14			
	$R_{thJC}$	12			

**DYNAMIC ELECTRICAL CHARACTERISTICS**

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

**Note :**

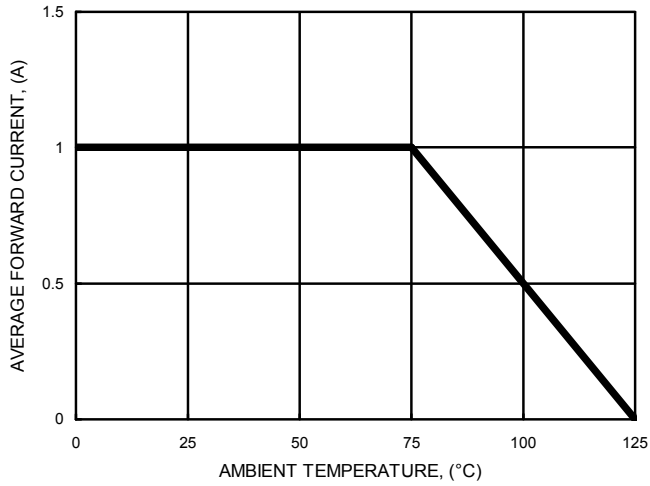
- (1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC
- (2) Thermal resistance junction to ambient and case,

REV. 4, MAY-2015, KDBC04

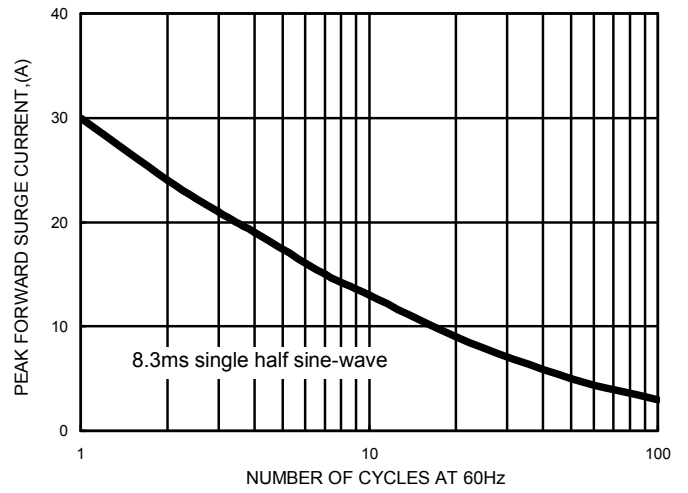
**RATING AND CHARACTERISTIC CURVES**  
**PR1001 thru PR1007**



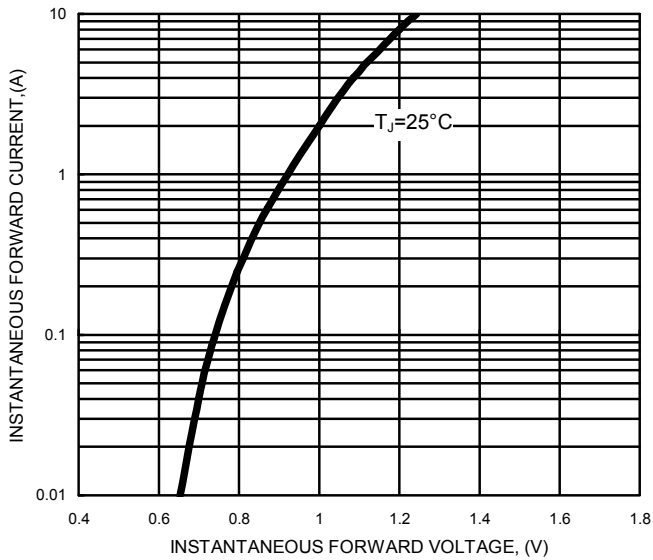
**FIG.1- FORWARD CURRENT DERATING CURVE**



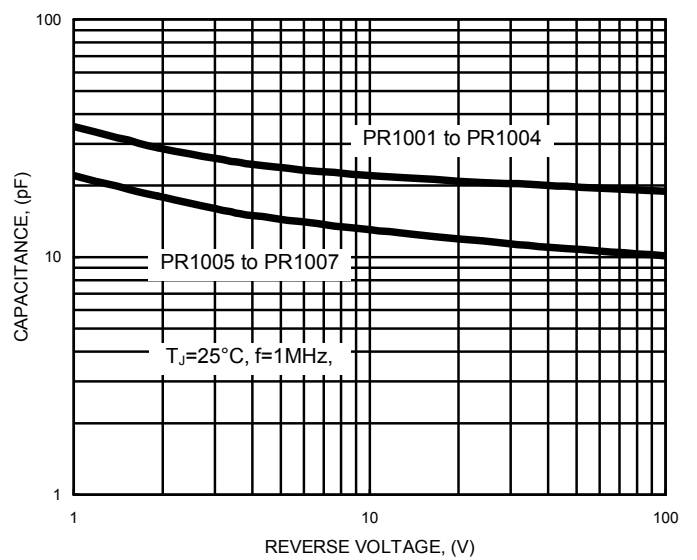
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



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