

**Silicon Standard
Recovery Diode**

$$V_{RRM} = 50 \text{ V} - 600 \text{ V}$$

$$I_F = 40 \text{ A}$$

Features

- High Surge Capability
- Types up to 600 V V_{RRM}

DO-5 Package
Note:

1. Standard polarity: Stud is cathode.
2. Reverse polarity (R): Stud is anode.
3. Stud is base.


Maximum ratings, at $T_J = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Conditions	1N1183A(R)	1N1184A(R)	1N1186A(R)	1N1188A(R)	1N1190A(R)	Unit
Repetitive peak reverse voltage	V_{RRM}		50	100	200	400	600	V
RMS reverse voltage	V_{RRMS}		35	70	140	280	420	V
DC blocking voltage	V_{DC}		50	100	200	400	600	V
Continuous forward current	I_F	$T_C \leq 150^\circ\text{C}$	40	40	40	40	40	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25^\circ\text{C}$, $t_p = 8.3 \text{ ms}$	800	800	800	800	800	A
Operating temperature	T_J		-65 to 200	-65 to 200	-65 to 200	-65 to 200	-65 to 200	$^\circ\text{C}$
Storage temperature	T_{stg}		-65 to 200	-65 to 200	-65 to 200	-65 to 200	-65 to 200	$^\circ\text{C}$

Electrical characteristics, at $T_J = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Conditions	1N1183A(R)	1N1184A(R)	1N1186A(R)	1N1188A(R)	1N1190A(R)	Unit
Diode forward voltage	V_F	$I_F = 40 \text{ A}$, $T_J = 25^\circ\text{C}$	1.1	1.1	1.1	1.1	1.1	V
Reverse current	I_R	$V_R = 50 \text{ V}$, $T_J = 25^\circ\text{C}$	10	10	10	10	10	μA
		$V_R = 50 \text{ V}$, $T_J = 140^\circ\text{C}$	15	15	15	15	15	mA
Thermal characteristics								
Thermal resistance, junction - case	$R_{\theta JC}$		1.25	1.25	1.25	1.25	1.25	$^\circ\text{C/W}$



Figure 1- Typical Forward Characteristics

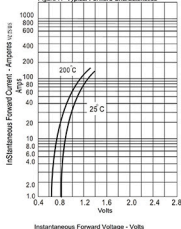


Figure 2- Forward Derating Curve

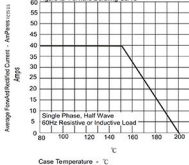


Figure 3- Peak Forward Surge Current

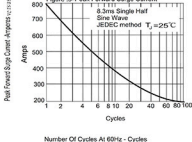


Figure 4- Typical Reverse Characteristics

