

Silicon Standard Recovery Diode

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

$I_F = 40\text{ A}$

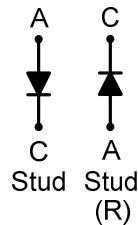
Features

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

Note:

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

DO-5 Package



Maximum ratings, at $T_j = 25\text{ }^\circ\text{C}$, 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_{RMS}		35	70	140	280	420	V
DC blocking voltage	V_{DC}		50	100	200	400	600	V
Continuous forward current	I_F	$T_C \leq 150\text{ }^\circ\text{C}$	40	40	40	40	40	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$, $t_p = 8.3\text{ ms}$	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 $T_j = 25\text{ }^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Conditions	1N1183A(R)	1N1184A(R)	1N1186A(R)	1N1188A(R)	1N1190A(R)	Unit
Diode forward voltage	V_F	$I_F = 40\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$	1.1	1.1	1.1	1.1	1.1	V
Reverse current	I_R	$V_R = 50\text{ V}$, $T_j = 25\text{ }^\circ\text{C}$	10	10	10	10	10	μA
		$V_R = 50\text{ V}$, $T_j = 140\text{ }^\circ\text{C}$	15	15	15	15	15	mA

Thermal characteristics

Thermal resistance, junction - case	R_{thJC}		1.25	1.25	1.25	1.25	1.25	$^\circ\text{C/W}$
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Figure .1- Typical Forward Characteristics

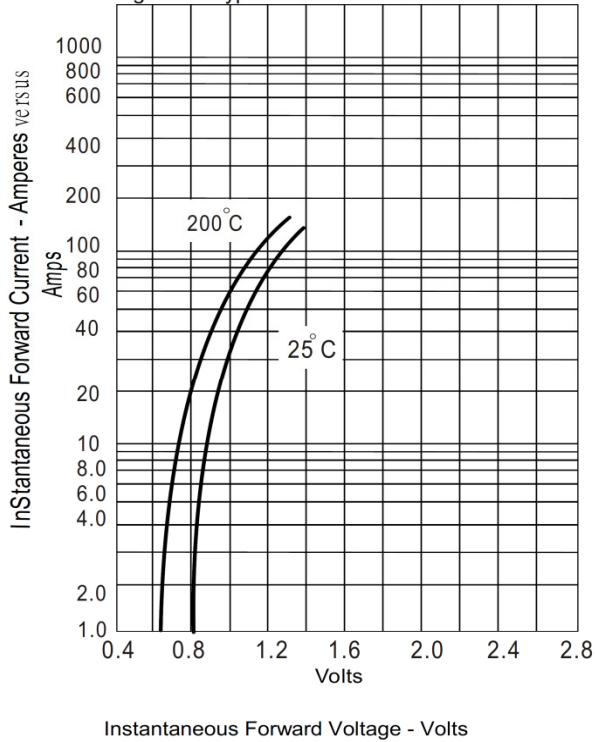


Figure .2- Forward Derating Curve

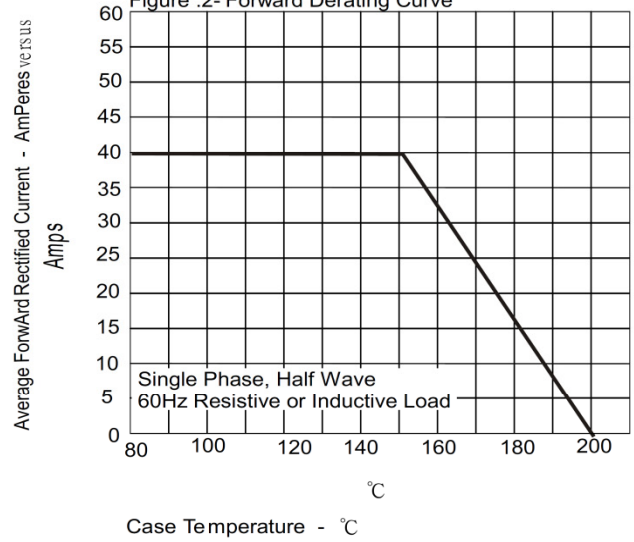


Figure .3- Peak Forward Surge Current

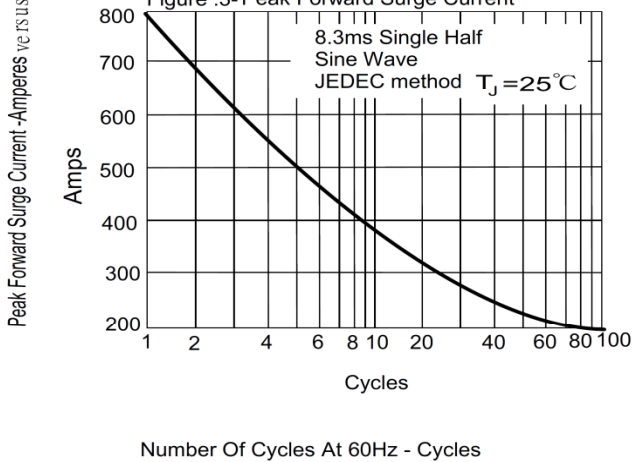


Figure .4- Typical Reverse Characteristics

