

Silicon Fast Recovery Diode

$V_{RRM} = 50 \text{ V} - 400 \text{ V}$

$I_F = 6 \text{ A}$

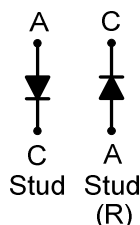
Features

- High Surge Capability
- Types up to 400 V V_{RRM}

DO-4 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 ("R" devices have leads reversed)

Parameter	Symbol	Conditions	1N3879 (R)	1N3880 (R)	1N3881 (R)	1N3882 (R)	1N3883 (R)	Unit
Repetitive peak reverse voltage	V_{RRM}		50	100	200	300	400	V
RMS reverse voltage	V_{RMS}		35	70	140	210	280	V
DC blocking voltage	V_{DC}		50	100	200	300	400	V
Continuous forward current	I_F	$T_C \leq 100^\circ\text{C}$	6	6	6	6	6	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25^\circ\text{C}$, $t_p = 8.3 \text{ ms}$	90	90	90	90	90	A
Operating temperature	T_j		-65 to 150	-65 to 150	-65 to 150	-65 to 150	-65 to 150	$^\circ\text{C}$
Storage temperature	T_{stg}		-65 to 175	-65 to 175	-65 to 175	-65 to 175	-65 to 175	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	1N3879 (R)	1N3880 (R)	1N3881 (R)	1N3882 (R)	1N3883 (R)	Unit
Diode forward voltage	V_F	$I_F = 6 \text{ A}$, $T_j = 25^\circ\text{C}$	1.4	1.4	1.4	1.4	1.4	V
Reverse current	I_R	$V_R = 50 \text{ V}$, $T_j = 25^\circ\text{C}$	15	15	15	15	15	μA
		$V_R = 50 \text{ V}$, $T_j = 150^\circ\text{C}$	3	3	3	3	3	mA

Recovery Time

Maximum reverse recovery time	T_{RR}	$I_F = 0.5 \text{ A}$, $I_R = 1.0 \text{ A}$, $I_{RR} = 0.25 \text{ A}$	200	200	200	200	200	nS
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Thermal characteristics

Thermal resistance, junction - case	R_{thJC}		2.5	2.5	2.5	2.5	2.5	$^\circ\text{C/W}$
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Figure .1-Typical Forward Characteristics

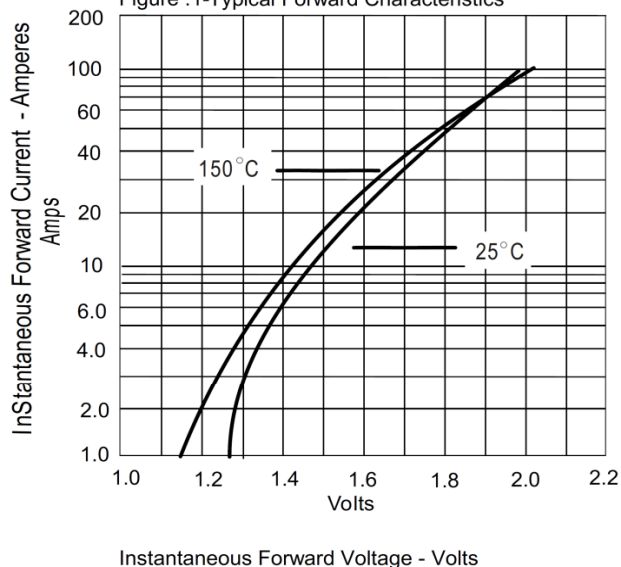


Figure .2- Forward Derating Curve

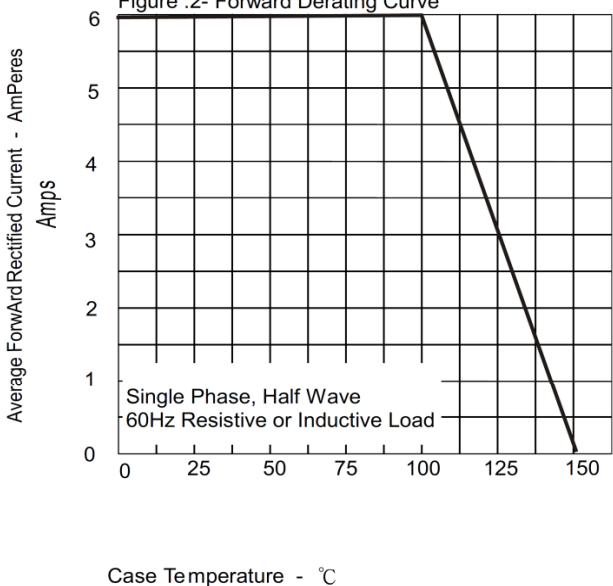


Figure .3-Peak Forward Surge Current

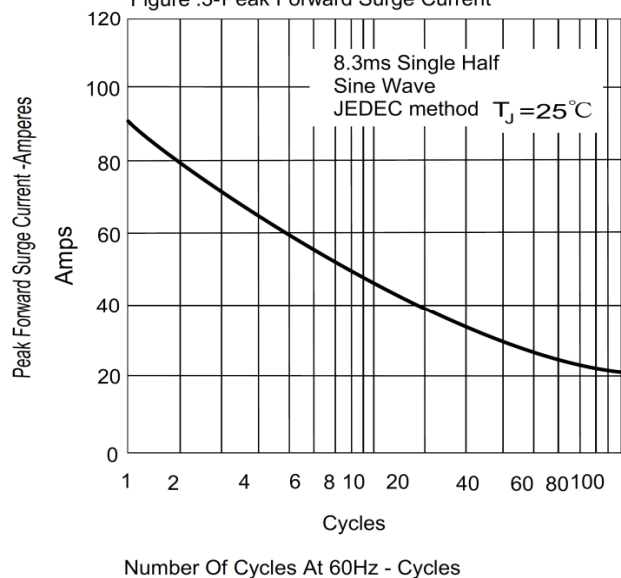


Figure .4-Typical Reverse Characteristics

