



Silicon Fast Recovery Diode

1N3879 thru
1N3883R

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

$I_F = 6\text{ A}$

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 $T_J = 25\text{ }^{\circ}\text{C}$, 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	$T_C \leq 100\text{ }^{\circ}\text{C}$	6	6	6	6	6	A
Surge non-repetitive forward current, Half Sine Wave	I_{FSM}	$T_C = 25\text{ }^{\circ}\text{C}$, $t_p = 8.3\text{ ms}$	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 $T_J = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

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

Recovery Time

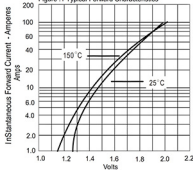
Maximum reverse recovery time	T_{RR}	$I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{RR} = 0.25\text{ A}$	200	200	200	200	200	ns
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Thermal characteristics

Thermal resistance, junction - case	$R_{\theta JC}$		2.5	2.5	2.5	2.5	2.5	$^{\circ}\text{C/W}$
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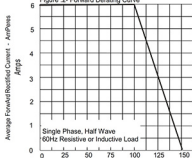


Figure 1-Typical Forward Characteristics



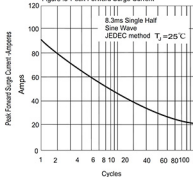
Instantaneous Forward Voltage - Volts

Figure 2- Forward Derating Curve



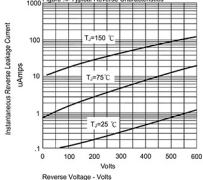
Case Temperature - °C

Figure 3-Peak Forward Surge Current



Number Of Cycles At 60Hz - Cycles

Figure 4-Typical Reverse Characteristics



Reverse Voltage - Volts