



America Semiconductor

Silicon Standard Recovery Diode

Features

- High Surge Capability
- Types up to 1600 V V_{RRM}

**MSRTA30080(A) thru
MSRTA300160(A)**

$V_{RRM} = 200 \text{ V} - 1600 \text{ V}$

$I_F = 300 \text{ A}$

Heavy Three Tower Package



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

Parameter	Symbol	Conditions	MSRTA30080(A)	MSRTA300120(A)	MSRTA300160(A)	Unit
Repetitive peak reverse voltage	V_{RRM}		800	1200	1600	V
DC blocking voltage	V_{DC}		800	1200	1600	V
Continuous forward current	I_F	$T_C \leq 100^\circ\text{C}$	300	300	300	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25^\circ\text{C}$, $t_p = 8.3 \text{ ms}$	3800	3800	3800	A
Operating temperature	T_j		-40 to 175	-40 to 175	-40 to 175	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to 175	-40 to 175	-40 to 175	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	MSRTA30080(A)	MSRTA300120(A)	MSRTA300160(A)	Unit
Diode forward voltage	V_F	$I_F = 300 \text{ A}$, $T_j = 25^\circ\text{C}$	1.1	1.1	1.1	V
Reverse current	I_R	$V_R = 200 \text{ V}$, $T_j = 25^\circ\text{C}$	20	20	20	μA
		$V_R = 200 \text{ V}$, $T_j = 150^\circ\text{C}$	10	10	10	mA

Thermal characteristics

Thermal resistance, junction - case	R_{thJC}		0.28	0.28	0.80	$^\circ\text{C/W}$
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MSRTA30080(A) thru MSRTA300160(A)

Figure.1 Typical Forward Characteristics

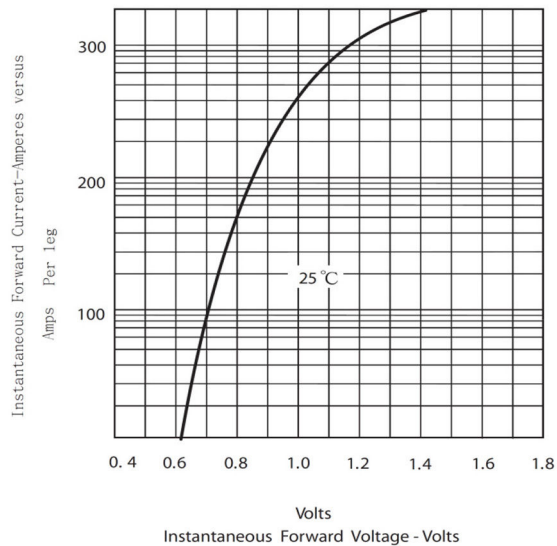


Figure.2 Forward Derating Curve

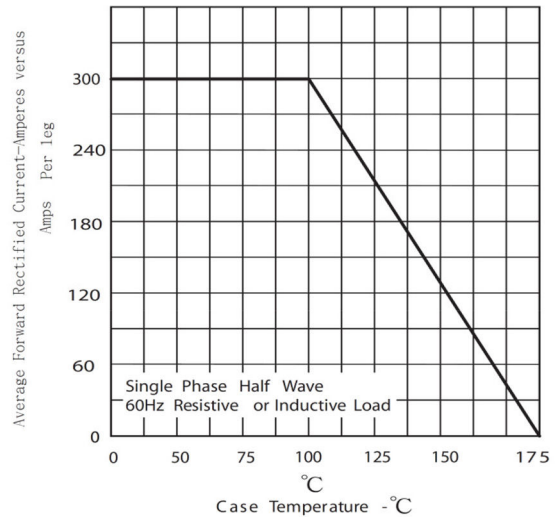


Figure.3-Peak Forward Surge Current

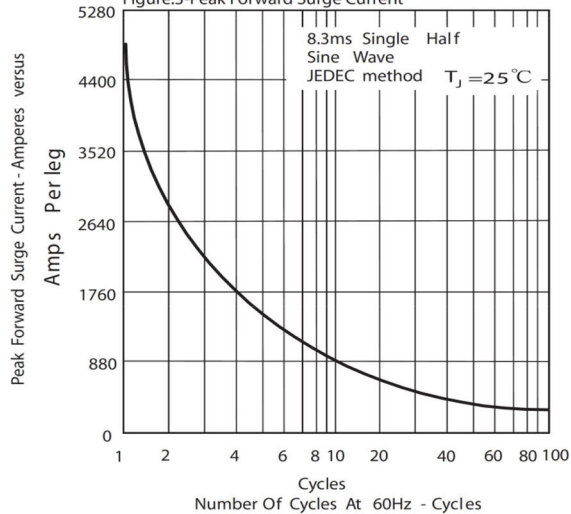


Figure .4 -Typical Reverse Characteristics

