



**America Semiconductor**

**Silicon Standard  
Recovery Diode**

**MSRTA30020(A) thru  
MSRTA30060(A)**

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

**$I_F = 300\text{ A}$**

**Features**

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

**Heavy Three Tower Package**



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

Parameter	Symbol	Conditions	MSRTA30020(A)	MSRTA30040(A)	MSRTA30060(A)	Unit
Repetitive peak reverse voltage	$V_{RRM}$		200	400	600	V
DC blocking voltage	$V_{DC}$		200	400	600	V
Continuous forward current	$I_F$	$T_C \leq 100\text{ }^\circ\text{C}$	300	300	300	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ ms}$	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  $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified**

Parameter	Symbol	Conditions	MSRTA30020(A)	MSRTA30040(A)	MSRTA30060(A)	Unit
Diode forward voltage	$V_F$	$I_F = 300\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$	1.1	1.1	1.1	V
Reverse current	$I_R$	$V_R = 200\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$	25	25	20	$\mu\text{A}$
		$V_R = 200\text{ V}$ , $T_j = 150\text{ }^\circ\text{C}$	10	10	10	mA

**Thermal characteristics**

Thermal resistance, junction - case	$R_{thJC}$		0.28	0.28	0.28	$^\circ\text{C/W}$
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## MSRTA30020(A) thru MSRTA30060(A)

Figure.1 Typical Forward Characteristics

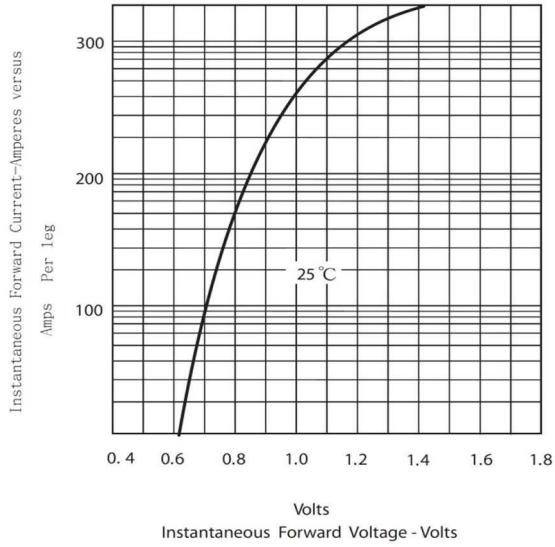


Figure.2 Forward Derating Curve

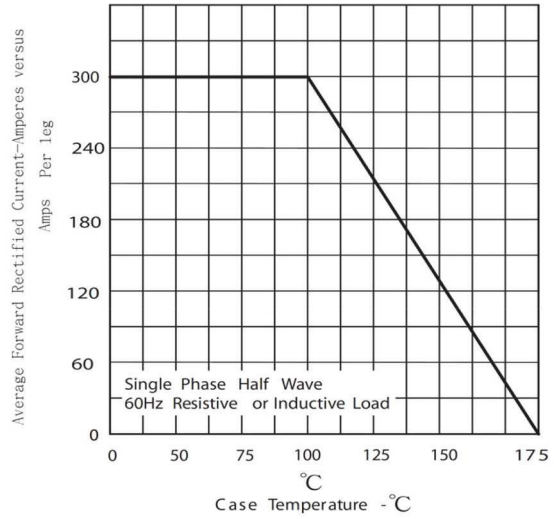


Figure.3-Peak Forward Surge Current

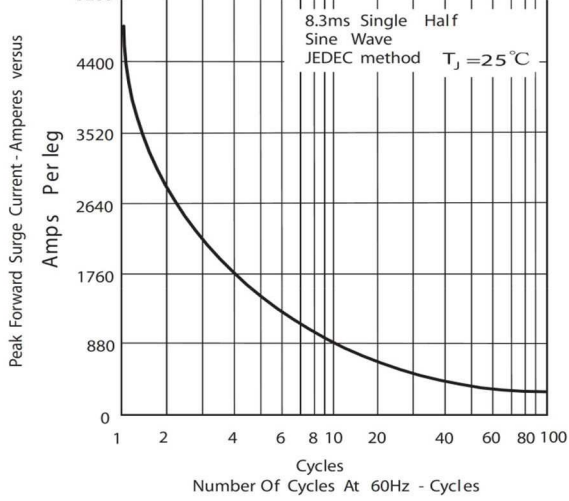


Figure .4 -Typical Reverse Characteristics

