



## Silicon Standard Recovery Diode

## MSRTA30080(A) thru MSRTA300160(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	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	$I_F$	$T_C \leq 100\text{ }^\circ\text{C}$	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	MSRTA30080(A)	MSRTA300120(A)	MSRTA300160(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	$I_R$	$V_R = 200\text{ V}$ , $T_J = 25\text{ }^\circ\text{C}$	20	20	20	$\mu\text{A}$
		$V_R = 200\text{ V}$ , $T_J = 150\text{ }^\circ\text{C}$	10	10	10	mA

### Thermal characteristics

Parameter	Symbol	MSRTA30080(A)	MSRTA300120(A)	MSRTA300160(A)	Unit
Thermal resistance, junction - case	$R_{\theta JC}$	0.28	0.28	0.80	$^\circ\text{C/W}$



Figure.1 Typical Forward Characteristics

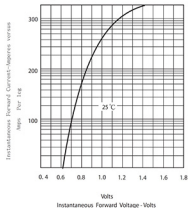


Figure.2 Forward Derating Curve

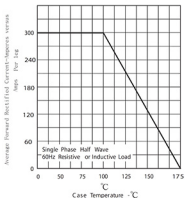


Figure.3 Peak Forward Surge Current

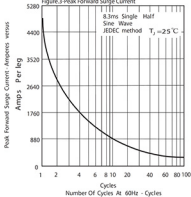


Figure 4 Typical Reverse Characteristics

