



America Semiconductor

Silicon Standard Recovery Diode

MSRTA500120(A) thru MSRTA500160(A)

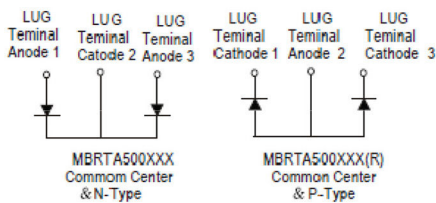
$V_{RRM} = 600\text{ V} - 1600\text{ V}$

$I_F = 500\text{ A}$

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	MSRTA500120(A)	MSRTA500140(A)	MSRTA500160(A)	Unit
Repetitive peak reverse voltage	V_{RRM}		1200	1400	1600	V
RMS reverse voltage	V_{RMS}		848	990	1131	V
DC blocking voltage	V_{DC}		1200	1400	1600	V
Continuous forward current	I_F	$T_C \leq 125\text{ }^\circ\text{C}$	500	500	500	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$, $t_p = 8.3\text{ ms}$	4400	4400	4400	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	MSRTA500120(A)	MSRTA500140(A)	MSRTA500160(A)	Unit
Diode forward voltage	V_F	$I_F = 500\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$	1.2	1.2	1.2	V
Reverse current	I_R	$V_R = 600\text{ V}$, $T_j = 25\text{ }^\circ\text{C}$	25	25	25	μA
		$V_R = 600\text{ V}$, $T_j = 150\text{ }^\circ\text{C}$	10	10	10	mA

Thermal characteristics

Parameter	Symbol	MSRTA500120(A)	MSRTA500140(A)	MSRTA500160(A)	Unit
Thermal resistance, junction - case	R_{thJC}	0.12	0.12	0.12	$^\circ\text{C/W}$





Figure .1- Typical Forward Characteristics

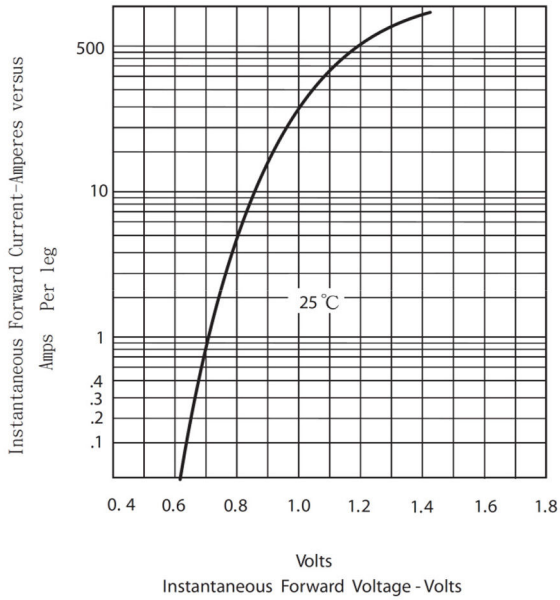


Figure.2 Forward Derating Curve

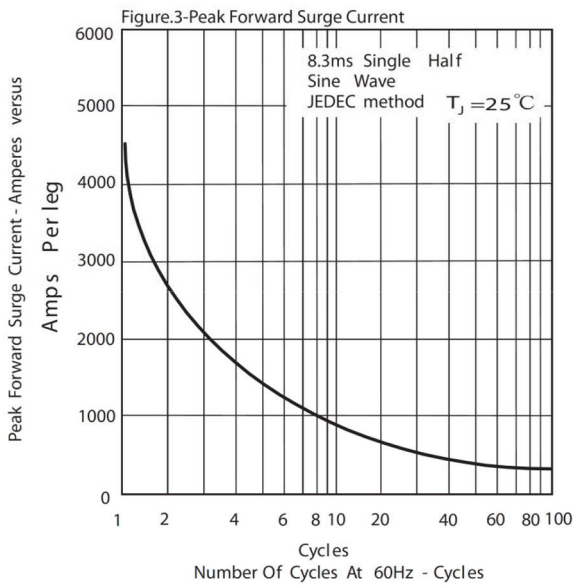
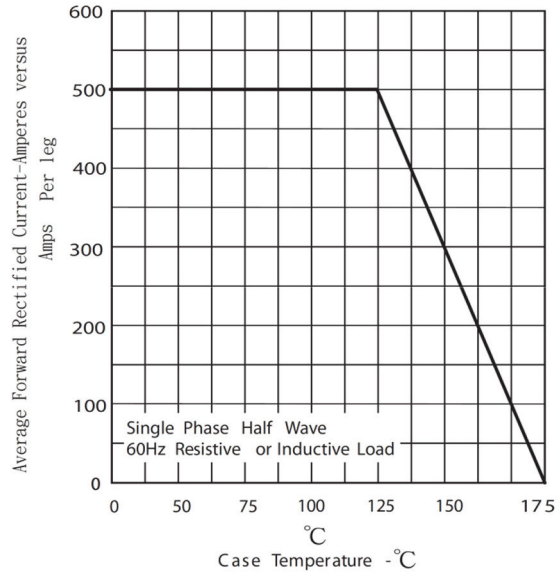


Figure .4 -Typical Reverse Characteristics

