America Semiconductor

MSRTA500120(A) thru MSRTA500160(A)

Silicon Standard Recovery Diode

V_{RRM} = 600 V - 1600 V

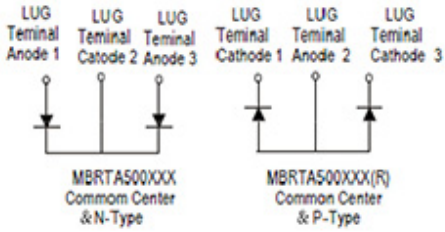
I_F = 500 A

Features

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

Heavy Three Tower Package





Maximum ratings, at T_j = 25 °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	$T_C \leq 125$ °C	500	500	500	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	4400	4400	4400	A
Operating temperature	T_j		-40 to 175	-40 to 175	-40 to 175	°C
Storage temperature	T_{stg}		-40 to 175	-40 to 175	-40 to 175	°C

Electrical characteristics, at Tj = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	MSRTA500120(A)	MSRTA500140(A)	MSRTA500160(A)	Unit
Diode forward voltage	V_F	I_F = 500 A, T_j = 25 °C	1.2	1.2	1.2	V
Reverse current	I_R	V_R = 600 V, T_j = 25 °C	25	25	25	µA
		V_R = 600 V, T_j = 150 °C	10	10	10	mA
Thermal characteristics						
Thermal resistance, junction - case	R_{thJC}		0.12	0.12	0.12	°C/W

Figure .1- Typical Forward Characteristics

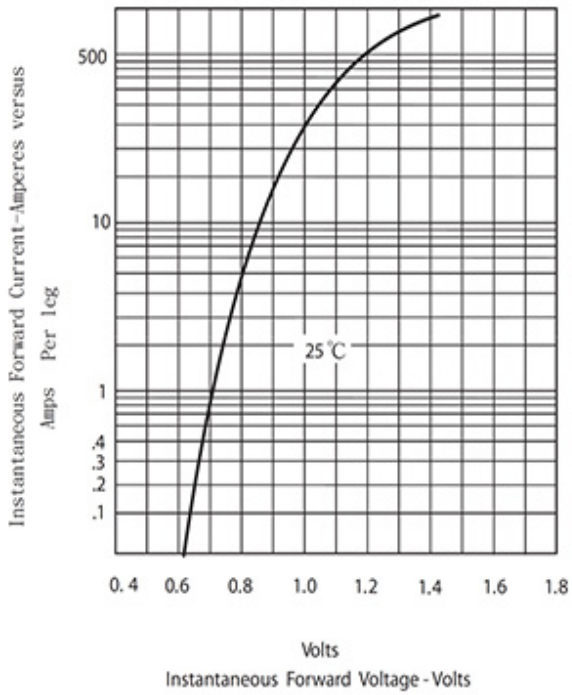


Figure. 2 Forward Derating Curve

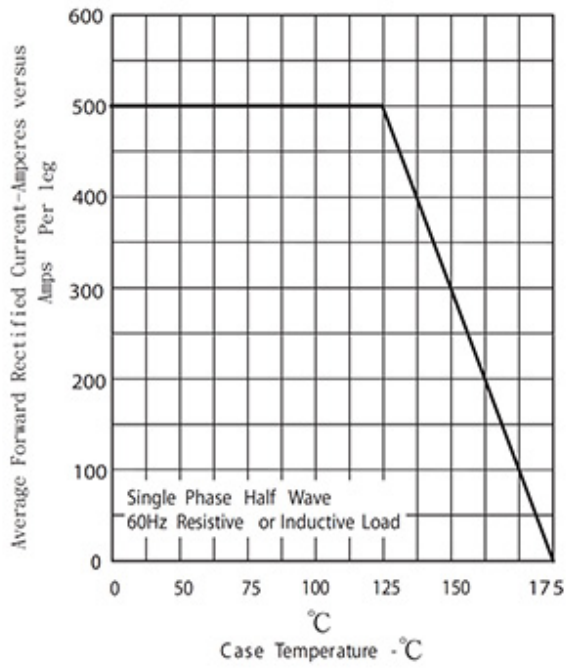


Figure.3-Peak Forward Surge Current

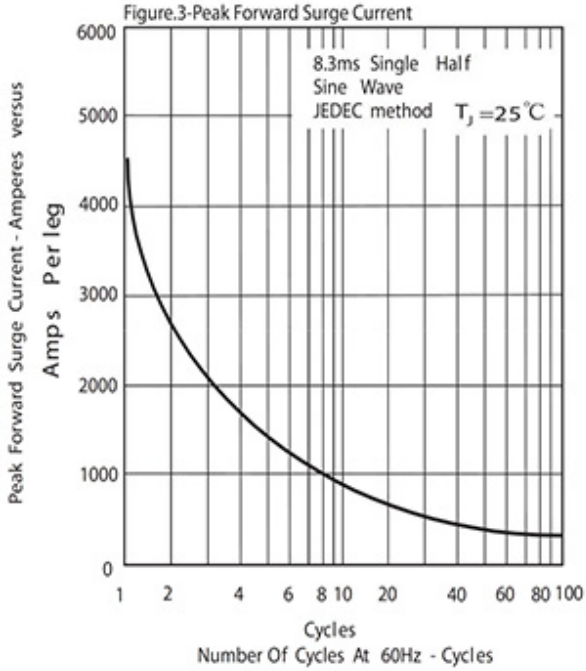


Figure .4 -Typical Reverse Characteristics

