



**America Semiconductor**

**Silicon Super Fast Recovery Diode**

**MURT20040 thru MURT20060R**

**V<sub>RRM</sub> = 50 V - 600 V  
I<sub>F</sub> = 200 A**

**Features**

- High Surge Capability
- Types up to 600 V V<sub>RRM</sub>

**Three Tower Package**



**Maximum ratings, at T<sub>j</sub> = 25 °C, unless otherwise specified ("R" devices have leads reversed)**

Parameter	Symbol	Conditions	MURT20040 (R)	MURT20060 (R)	Unit
Repetitive peak reverse voltage	V <sub>RRM</sub>		400	600	V
RMS reverse voltage	V <sub>RMS</sub>		283	424	V
DC blocking voltage	V <sub>DC</sub>		400	600	V
Continuous forward current	I <sub>F</sub>	T <sub>C</sub> ≤ 140 °C	200	200	A
Surge non-repetitive forward current, Half Sine Wave	I <sub>F,SM</sub>	T <sub>C</sub> = 25 °C, t <sub>p</sub> = 8.3 ms	2000	2000	A
Operating temperature	T <sub>j</sub>		-40 to 175	-40 to 175	°C
Storage temperature	T <sub>stg</sub>		-40 to 175	-40 to 175	°C

**Electrical characteristics, at T<sub>j</sub> = 25 °C, unless otherwise specified**

Parameter	Symbol	Conditions	MURT20040 (R)	MURT20060 (R)	Unit
Diode forward voltage	V <sub>F</sub>	I <sub>F</sub> = 100 A, T <sub>j</sub> = 25 °C	1.35	1.7	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> = 50 V, T <sub>j</sub> = 25 °C	25	25	μA
		V <sub>R</sub> = 50 V, T <sub>j</sub> = 125 °C	1	1	mA
<b>Recovery Time</b>					
Maximum reverse recovery time	T <sub>RR</sub>	I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>RR</sub> = 0.25 A	90	160	nS
<b>Thermal characteristics</b>					
Thermal resistance, junction - case	R <sub>thJC</sub>		0.18	0.18	°C/W





Figure .1- Typical Forward Characteristics

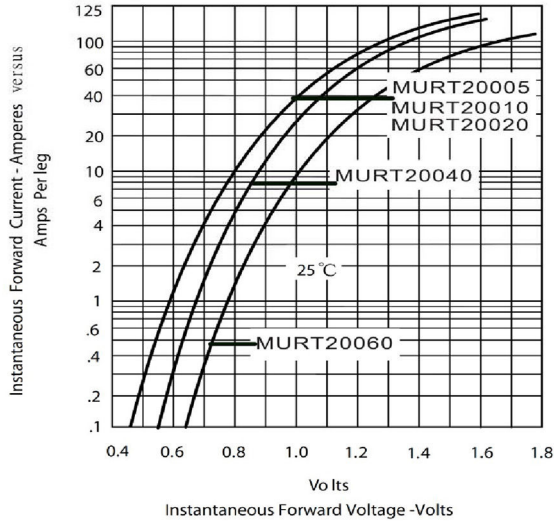


Figure .2- Forward Derating Curve

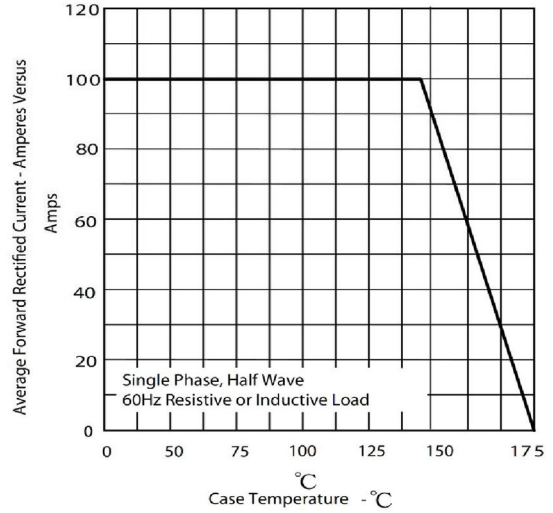


Figure.3- Peak Forward Surge Current

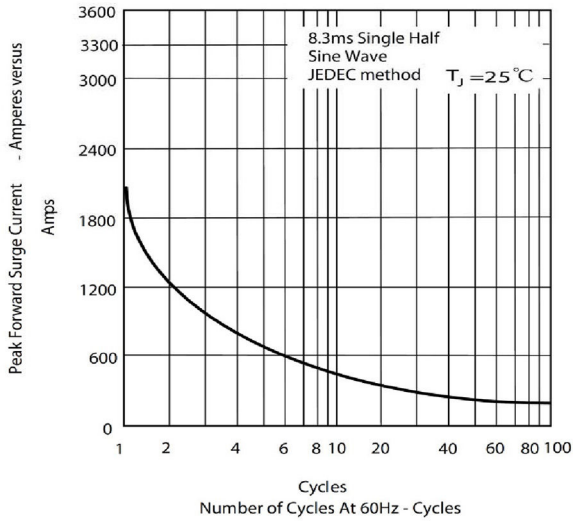


Figure.4- Typical Reverse Characteristics

