America Semiconductor

MURT20040 thru MURT20060R

Silicon Super Fast Recovery Diode

V_{RRM} = 50 V - 600 V
I_F = 200 A

Features
- High Surge Capability
- Types up to 600 V V_{RRM}

Three Tower Package



Maximum ratings, at T_j = 25 °C, unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	MURT20040 (R)	MURT20060 (R)	Unit
Repetitive peak reverse voltage	V_{RRM}		400	600	V
RMS reverse voltage	V_{RMS}		283	424	V
DC blocking voltage	V_{DC}		400	600	V
Continuous forward current	I_F	$T_C \leq 140$ °C	200	200	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	2000	2000	A
Operating temperature	T_j		-40 to 175	-40 to 175	°C
Storage temperature	T_{stg}		-40 to 175	-40 to 175	°C

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

Parameter	Symbol	Conditions	MURT20040 (R)	MURT20060 (R)	Unit
Diode forward voltage	V_F	I_F = 100 A, T_j = 25 °C	1.35	1.7	V
Reverse current	I_R	V_R = 50 V, T_j = 25 °C	25	25	µA
		V_R = 50 V, T_j = 125 °C	1	1	mA
Recovery Time					
Maximum reverse recovery time	T_{RR}	I_F=0.5 A, I_R=1.0 A, I_{RR}= 0.25 A	90	160	nS
Thermal characteristics					
Thermal resistance, junction - case	$R_{\theta JC}$		0.18	0.18	°C/W

Figure .1- Typical Forward Characteristics

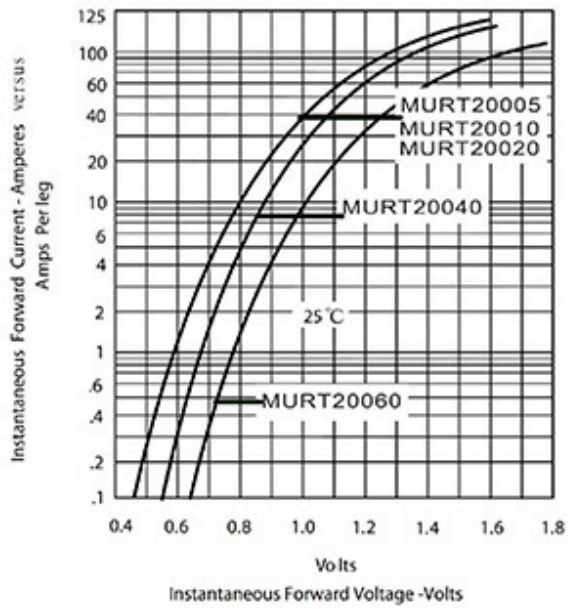


Figure .2- Forward Derating Curve

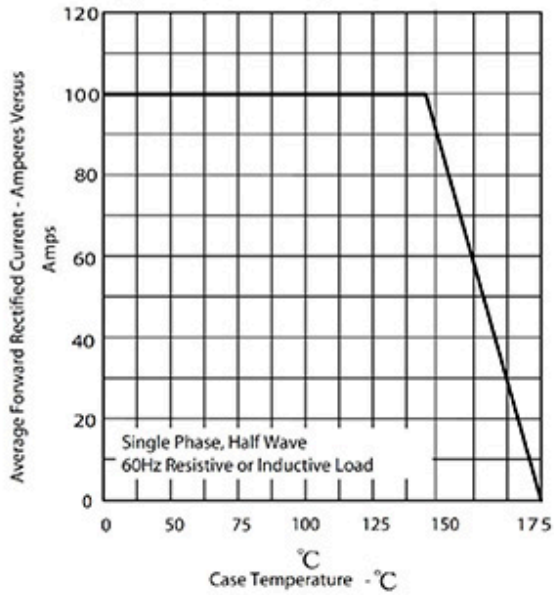


Figure.3- Peak Forward Surge Current

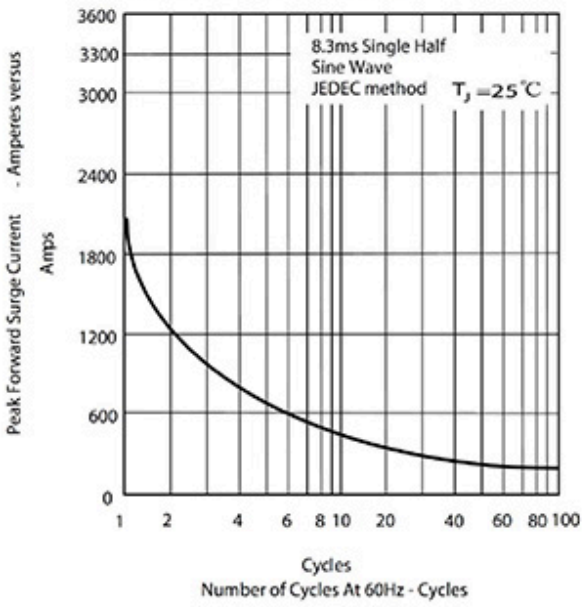


Figure.4- Typical Reverse Characteristics

