

**Silicon Super Fast
Recovery Diode**
Features

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

**MURT30040 thru
MURT30060R**

$V_{RRM} = 50 \text{ V} - 600 \text{ V}$

$I_F = 300 \text{ A}$

Three Tower Package

Maximum ratings, at $T_J = 25^\circ\text{C}$, unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	MURT30040 (R)	MURT30060 (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	$T_C \leq 125^\circ\text{C}$	300	300	A
Surge non-repetitive forward current, Half Sine Wave	I_{FSM}	$T_C = 25^\circ\text{C}$, $t_p = 8.3 \text{ ms}$	2750	2750	A
Operating temperature	T_J		-40 to 175	-40 to 175	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to 175	-40 to 175	$^\circ\text{C}$

Electrical characteristics, at $T_J = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Conditions	MURT30040 (R)	MURT30060 (R)	Unit
Diode forward voltage	V_F	$I_F = 150 \text{ A}$, $T_J = 25^\circ\text{C}$	1.35	1.7	V
Reverse current	I_R	$V_R = 50 \text{ V}$, $T_J = 25^\circ\text{C}$	25	25	μA
		$V_R = 50 \text{ V}$, $T_J = 125^\circ\text{C}$	2	2	mA

Recovery Time

Maximum reverse recovery time	T_{RR}	$I_F = 0.5 \text{ A}$, $I_R = 1.0 \text{ A}$, $I_{RR} = 0.25 \text{ A}$	150	200	nS
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Thermal characteristics

Thermal resistance, junction - case	$R_{\theta JC}$		0.16	0.16	$^\circ\text{C/W}$
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Figure .1- Typical Forward Characteristics

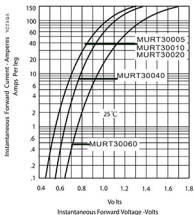


Figure .2- Forward Derating Curve

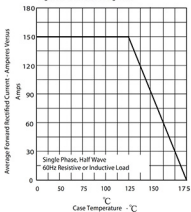


Figure.3- Peak Forward Surge Current

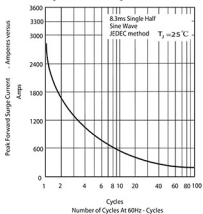


Figure.4 Typical Reverse Characteristics

