

Silicon Super Fast Recovery Diode

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

$I_F = 400 \text{ A}$

Features

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

Three Tower Package



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

Parameter	Symbol	Conditions	MURT40040 (R)	MURT40060 (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	$T_C \leq 125^\circ\text{C}$	400	400	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25^\circ\text{C}$, $t_p = 8.3 \text{ ms}$	3300	3300	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	MURT40040 (R)	MURT40060 (R)	Unit
Diode forward voltage	V _F	I _F = 200 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	3	3	mA
Recovery Time					
Maximum reverse recovery time	T _{RR}	I _F =0.5 A, I _R =1.0 A, I _{RR} = 0.25 A	180	240	nS
Thermal characteristics					
Thermal resistance, junction - case	R _{thJC}		0.14	0.14	°C/W

Figure .1- Typical Forward Characteristics

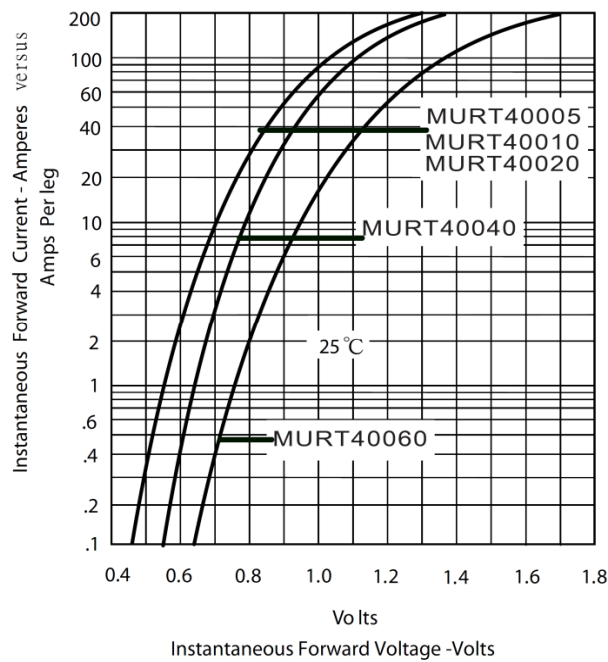


Figure .2- Forward Derating Curve

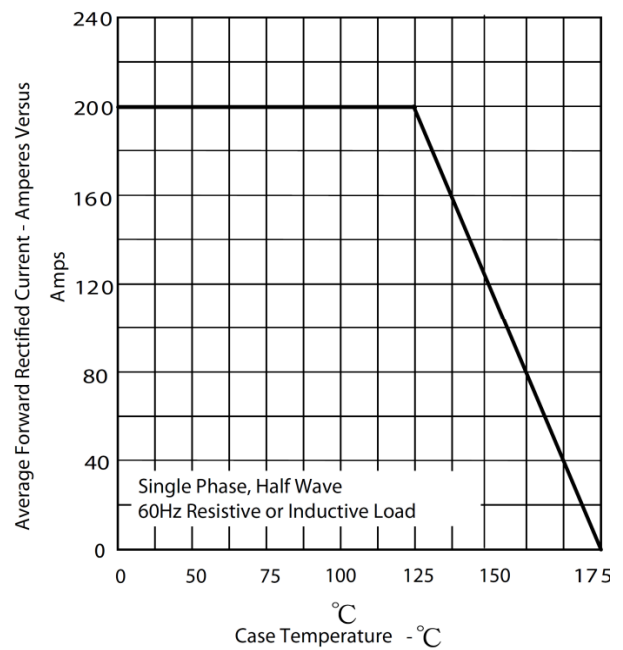


Figure.3- Peak Forward Surge Current

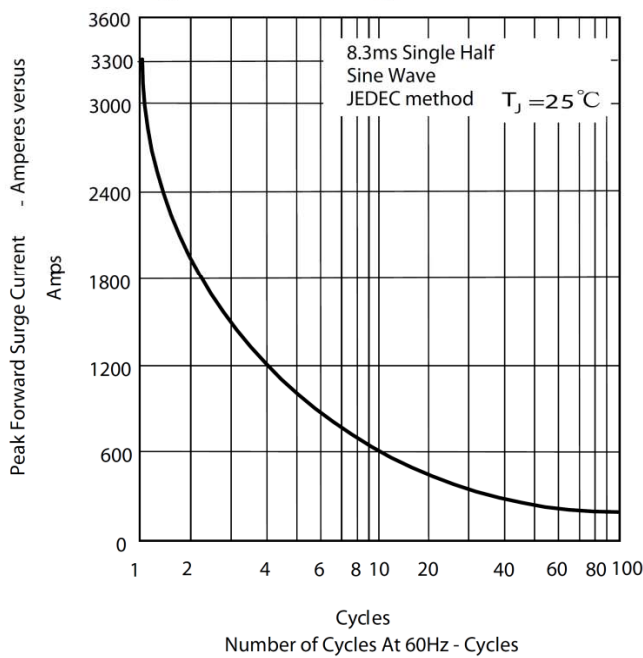
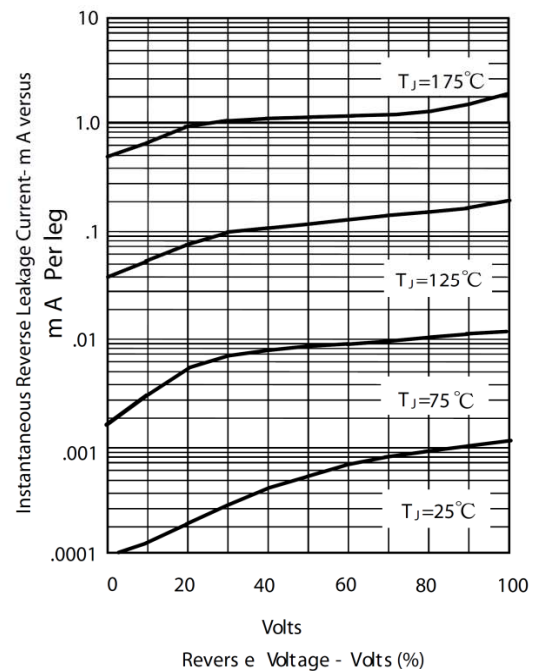
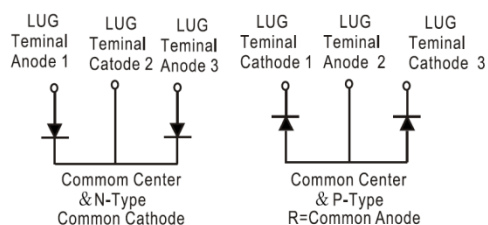
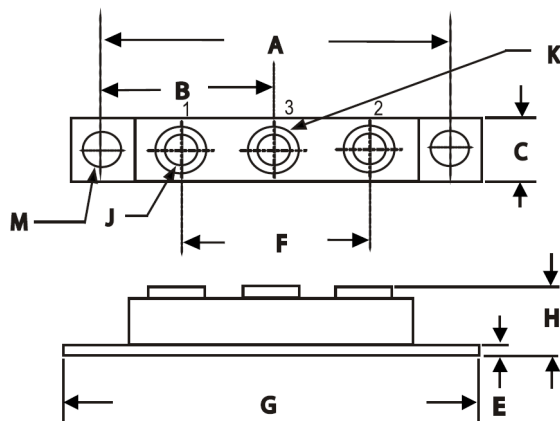


Figure.4- Typical Reverse Characteristics



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



DIM	Inches		Millimeters	
	Min	Max	Min	Max
A	3.150	NOM	80.01	NOM
B	1.565	1.585	39.75	40.26
C	.700	.800	17.78	20.32
E	.119	.132	3.02	3.35
F	1.327	REF	33.72	REF
G	3.550	3.65	90.17	92.71
H	—	.73	—	18.30
J	1/4 -20 UNC FULL			
K	.472	.511	12.00	13.00
M	.275	.295	6.99	7.49
N	2.380	2.46	60.50	62.50