America Semiconductor

MUR5040 thru MUR5060R

Silicon Super Fast Recovery Diode

V_{RRM} = 50 V - 600 V

I_F = 50 A

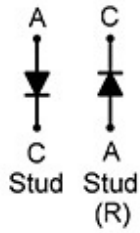
Features

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

DO-5 Package

Note:

1. Standard polarity: Stud is cathode.
2. Reverse polarity (R): Stud is anode.
3. Stud is base.



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

Parameter	Symbol	Conditions	MUR5040 (R)	MUR5060 (R)	Unit
Repetitive peak reverse voltage	V_{RRM}		400	600	V
RMS reverse voltage	V_{RMS}		280	420	V
DC blocking voltage	V_{DC}		400	600	V
Continuous forward current	I_F	$T_C \leq$ 125 °C	50	50	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	600	600	A
Operating temperature	T_j		-65 to 175	-65 to 175	°C
Storage temperature	T_{stg}		-65 to 175	-65 to 175	°C

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

Parameter	Symbol	Conditions	MUR5040 (R)	MUR5060 (R)	Unit
Diode forward voltage	V_F	I_F = 50 A, T_j = 25 °C	1.3	1.7	V
Reverse current	I_R	V_R = 50 V, T_j = 25 °C	10	10	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	75	90	nS

Figure .1-Typical Forward Characteristics

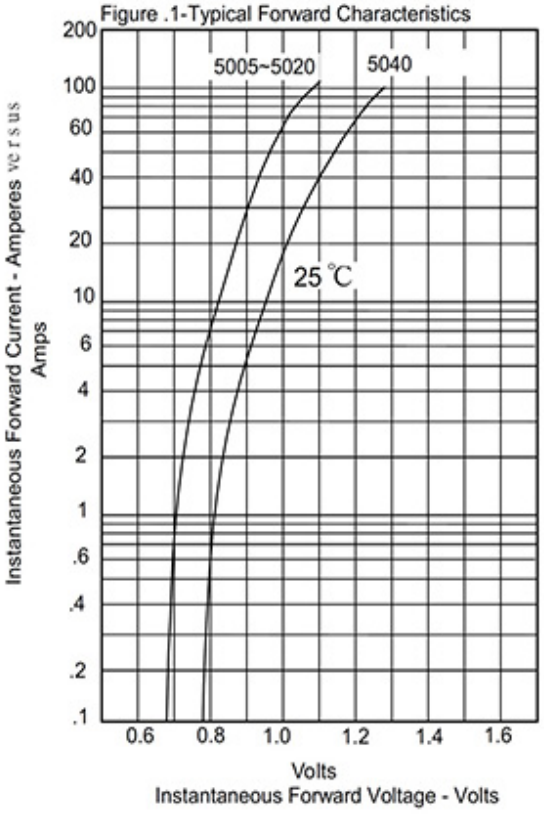


Figure .2-Forward Derating Curve

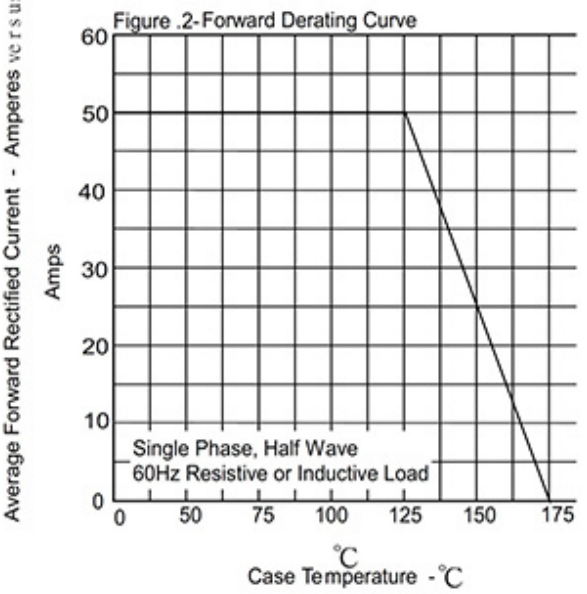


Figure.3- Peak Forward Surge Current

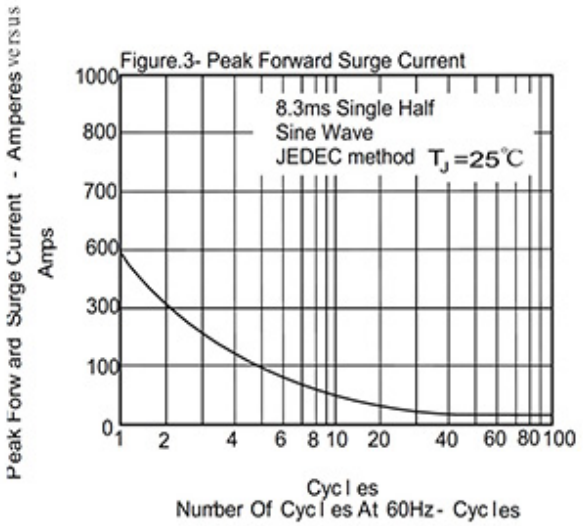


Figure.4- Typeical Reverse Characteristics