

**Silicon Super Fast
Recovery Diode**
**MUR5005 thru
MUR5020R**
 $V_{RRM} = 50 \text{ V} - 600 \text{ V}$
 $I_F = 50 \text{ A}$
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 $T_j = 25^\circ\text{C}$, unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	MUR5005 (R)	MUR5010 (R)	MUR5020 (R)	Unit
Repetitive peak reverse voltage	V_{RRM}		50	100	200	V
RMS reverse voltage	V_{RMS}		35	70	140	V
DC blocking voltage	V_{OC}		50	100	200	V
Continuous forward current	I_F	$T_C \leq 125^\circ\text{C}$	50	50	50	A
Surge non-repetitive forward current, Half Sine Wave	I_{FSM}	$T_C = 25^\circ\text{C}$, $t_p = 8.3 \text{ ms}$	600	600	600	A
Operating temperature	T_j		-65 to 175	-65 to 175	-65 to 175	$^\circ\text{C}$
Storage temperature	T_{stg}		-65 to 175	-65 to 175	-65 to 175	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	MUR5005 (R)	MUR5010 (R)	MUR5020 (R)	Unit
Diode forward voltage	V_F	$I_F = 50 \text{ A}$, $T_j = 25^\circ\text{C}$	1	1	1	V
Reverse current	I_R	$V_R = 50 \text{ V}$, $T_j = 25^\circ\text{C}$	10	10	10	μA
		$V_R = 50 \text{ V}$, $T_j = 125^\circ\text{C}$	3	3	3	mA

Recovery Time

Parameter	Symbol	Conditions	MUR5005 (R)	MUR5010 (R)	MUR5020 (R)	Unit
Maximum reverse recovery time	T_{RR}	$I_F = 0.5 \text{ A}$, $I_R = 1.0 \text{ A}$, $I_{RR} = 0.25 \text{ A}$	75	75	75	nS



Figure 1-Typical Forward Characteristics

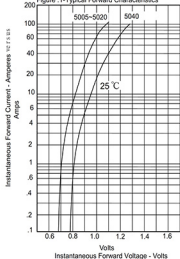


Figure 2-Forward Derating Curve

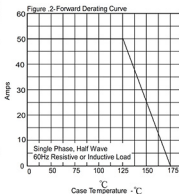


Figure 4- Typical Reverse Characteristics

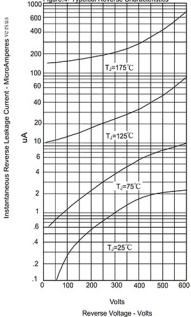


Figure 3- Peak Forward Surge Current

