

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}

Twin Tower Package



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

Parameter	Symbol	Conditions	MUR40005CT (R)	MUR40010CT (R)	MUR40020CT (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_{DC}		50	100	200	V
Continuous forward current	I_F	$T_C \leq 125\text{ }^\circ\text{C}$	400	400	400	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$, $t_p = 8.3\text{ ms}$	2400	2400	2400	A
Operating temperature	T_j		-40 to 175	-40 to 175	-40 to 175	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to 175	-40 to 175	-40 to 175	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	MUR40005CT (R)	MUR40010CT (R)	MUR40020CT (R)	Unit
Diode forward voltage	V_F	$I_F = 125\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$	1.3	1.3	1.3	V
Reverse current	I_R	$V_R = 50\text{ V}$, $T_j = 25\text{ }^\circ\text{C}$	25	25	25	μA
		$V_R = 50\text{ V}$, $T_j = 125\text{ }^\circ\text{C}$	3	3	3	mA

Recovery Time

Maximum reverse recovery time	T_{RR}	$I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{RR} = 0.25\text{ A}$	90	90	90	nS
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Thermal characteristics

Thermal resistance, junction	R_{thJC}		0.14	0.14	0.14	$^\circ\text{C/W}$
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Figure .1- Typical Forward Characteristics

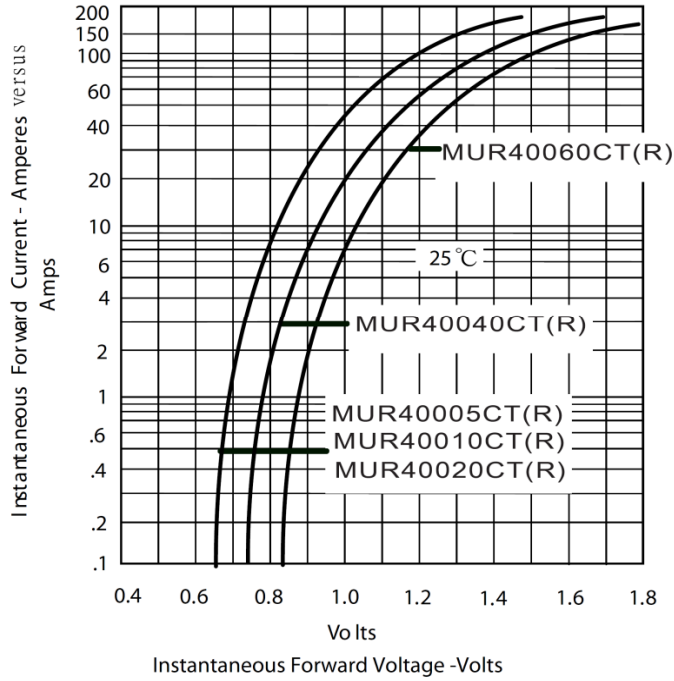


Figure .2- Forward Derating Curve

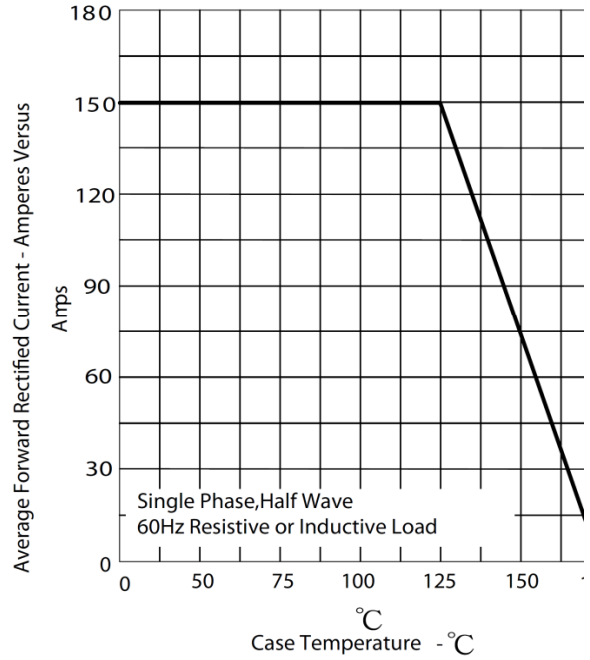


Figure.3- Peak Forward Surge Current

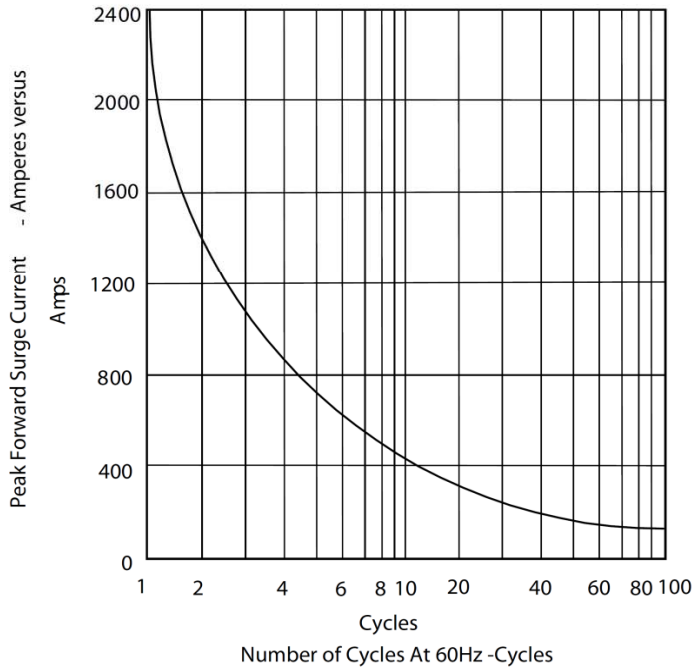


Figure.4- Typical Reverse Characteristics

