

Features

- High Surge Capability
- Types up to 100 V V_{RRM}

$$V_{RRM} = 20 \text{ V} - 100 \text{ V}$$

$$I_F = 400 \text{ A}$$

Twin Tower Package


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

Parameter	Symbol	Conditions	MBR40045CT (R)	MBR40060CT (R)	MBR40080CT (R)	MBR400100CT (R)	Unit
Repetitive peak reverse voltage	V_{RRM}		45	60	80	100	V
RMS reverse voltage	V_{RMS}		32	42	56	70	V
DC blocking voltage	V_{DC}		45	60	80	100	V
Continuous forward current	I_F	$T_C \leq 125^\circ\text{C}$	400	400	400	400	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25^\circ\text{C}$, $t_p = 8.3 \text{ ms}$	3000	3000	3000	3000	A
Operating temperature	T_j		-40 to 175	-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	-40 to 175	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	MBR40045CT (R)	MBR40060CT (R)	MBR40080CT (R)	MBR400100CT (R)	Unit
Diode forward voltage	V_F	$I_F = 200 \text{ A}$, $T_j = 25^\circ\text{C}$	0.65	0.8	0.84	0.84	V
Reverse current	I_R	$V_R = 20 \text{ V}$, $T_j = 25^\circ\text{C}$	5	5	5	5	mA
		$V_R = 20 \text{ V}$, $T_j = 125^\circ\text{C}$	200	200	200	200	

Thermal characteristics

Thermal resistance, junction - case	$R_{\theta JC}$		0.35	0.35	0.35	0.35	$^\circ\text{C/W}$
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Figure .1-Typical Forward Characteristics

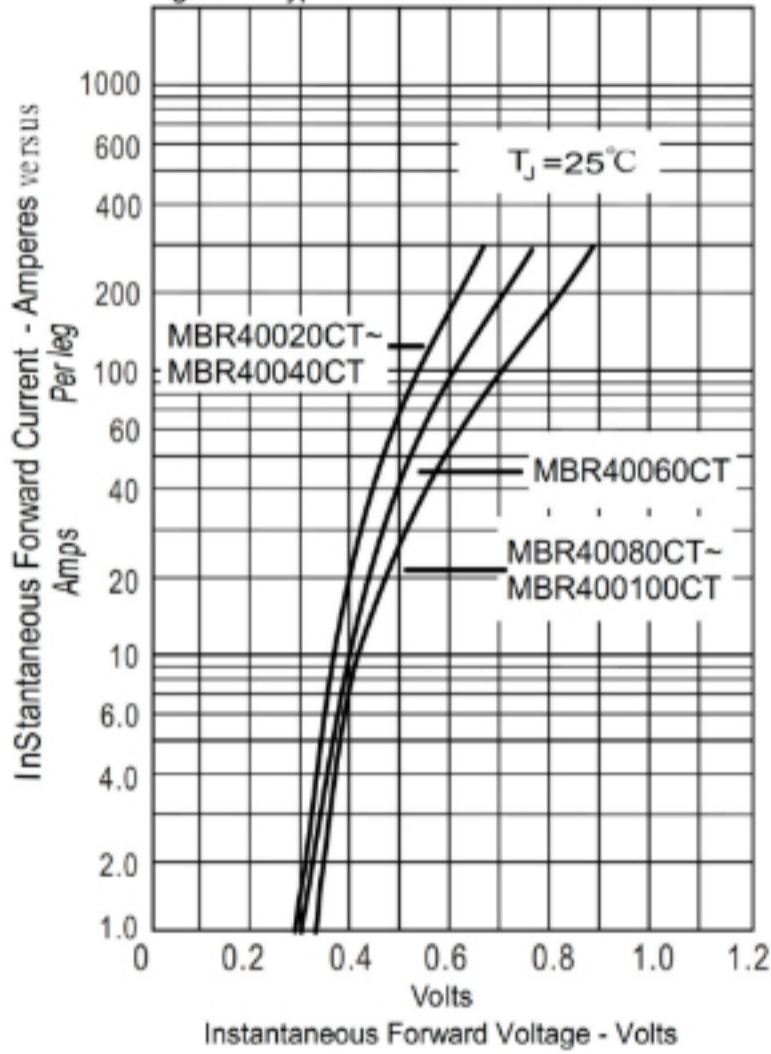


Figure .2- Forward Derating Curve

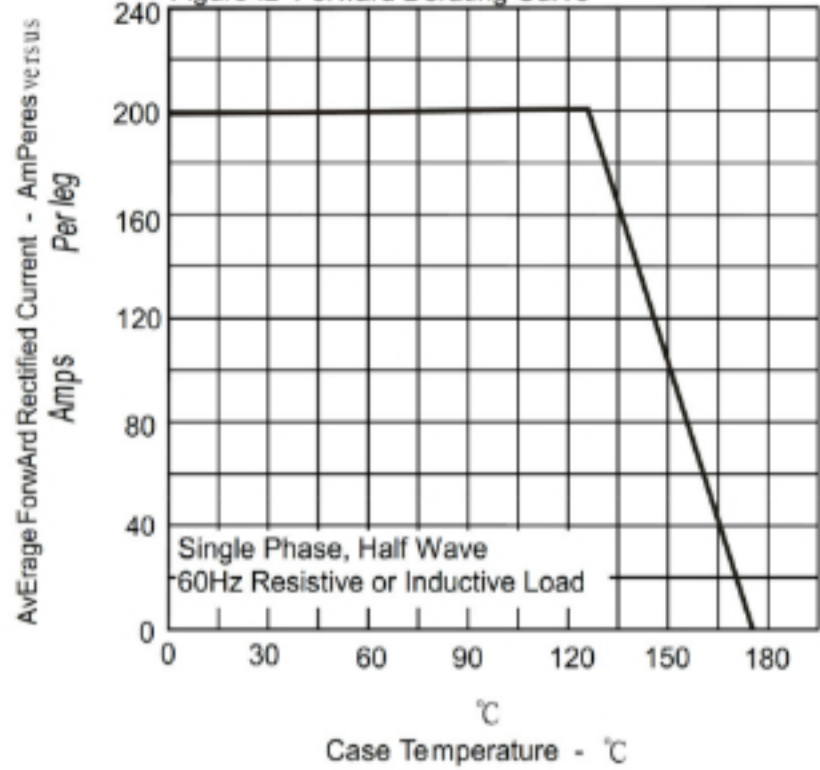


Figure .3-Peak Forward Surge Current

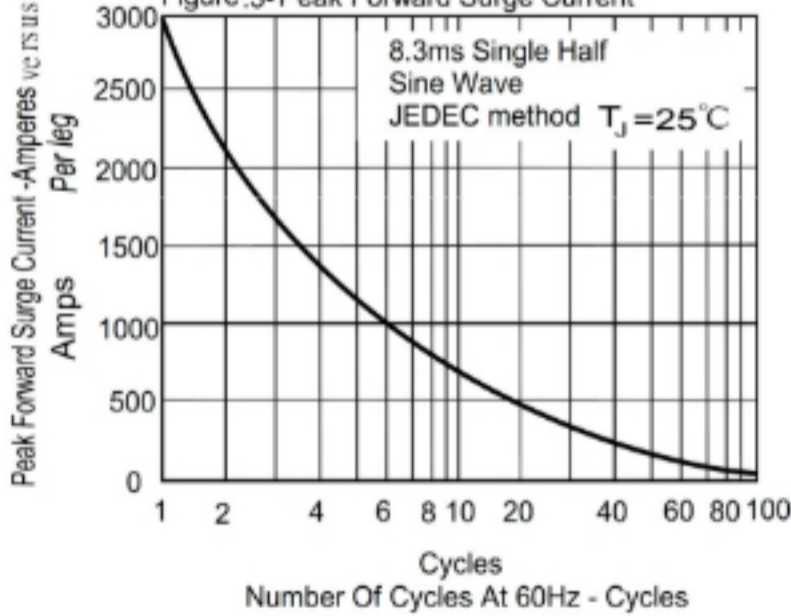


Figure .4- Typical Reverse Characteristics

