



# MBR50045CT thru MBR500100CTR

## Silicon Power Schottky Diode

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

$I_F = 500\text{ A}$

### Features

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

Twin Tower Package



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

Parameter	Symbol	Conditions	MBR50045CT (R)	MBR50060CT (R)	MBR50080CT (R)	MBR500100CT (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	$I_F$	$T_C \leq 100\text{ °C}$	500	500	500	500	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ °C}$ , $t_p = 8.3\text{ ms}$	3500	3500	3500	3500	A
Operating temperature	$T_j$		-40 to 150	-40 to 150	-40 to 150	-40 to 150	°C
Storage temperature	$T_{stg}$		-40 to 175	-40 to 175	-40 to 175	-40 to 175	°C

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

Parameter	Symbol	Conditions	MBR50045CT (R)	MBR50060CT (R)	MBR50080CT (R)	MBR500100CT (R)	Unit
Diode forward voltage	$V_F$	$I_F = 250\text{ A}$ , $T_j = 25\text{ °C}$	0.75	0.8	0.88	0.88	V
Reverse current	$I_R$	$V_R = 20\text{ V}$ , $T_j = 25\text{ °C}$	1	1	1	1	mA
		$V_R = 20\text{ V}$ , $T_j = 125\text{ °C}$	20	20	20	20	

### Thermal characteristics

Parameter	Symbol	Conditions	MBR50045CT (R)	MBR50060CT (R)	MBR50080CT (R)	MBR500100CT (R)	Unit
Thermal resistance, junction - case	$R_{thJC}$		0.12	0.12	0.12	0.12	°C/W

Figure .1-Typical Forward Characteristics

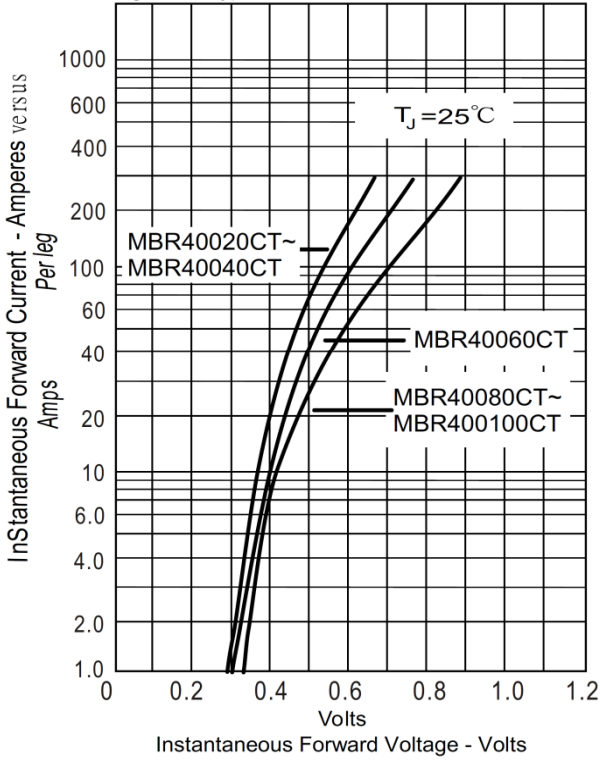


Figure .2- Forward Derating Curve

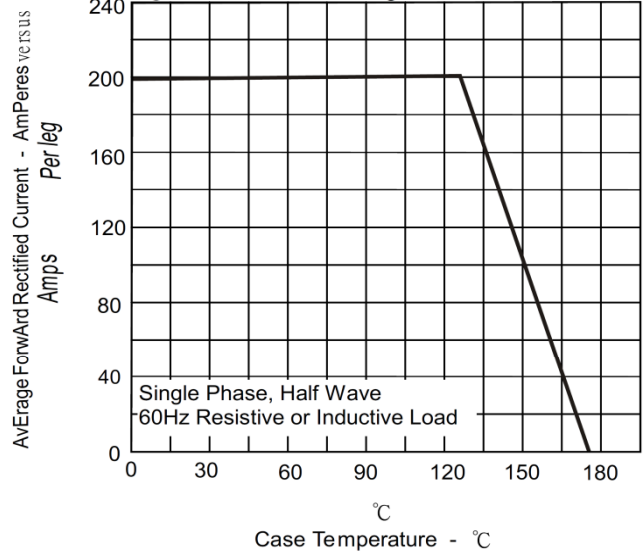


Figure .3-Peak Forward Surge Current

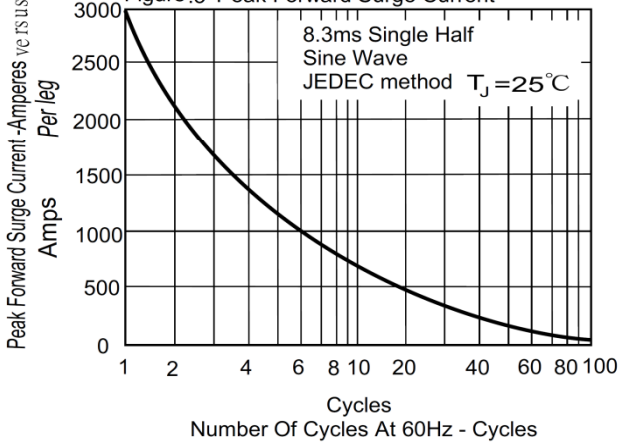


Figure .4- Typical Reverse Characteristics

