



## Silicon Power Schottky Diode

## MBRT30020 thru MBRT30040R

$V_{RRM} = 20\text{ V} - 100\text{ V}$   
 $I_F = 300\text{ A}$

### Features

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

Three Tower Package



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

Parameter	Symbol	Conditions	MBRT30020 (R)	MBRT30030 (R)	MBRT30035 (R)	MBRT30040 (R)	Unit
Repetitive peak reverse voltage	$V_{RRM}$		20	30	35	40	V
RMS reverse voltage	$V_{RMS}$		14	21	25	28	V
DC blocking voltage	$V_{DC}$		20	30	35	40	V
Continuous forward current	$I_F$	$T_C \leq 125\text{ }^\circ\text{C}$	300	300	300	300	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ ms}$	2500	2500	2500	2500	A
Operating temperature	$T_j$		-40 to 150	-40 to 150	-40 to 150	-40 to 150	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-40 to 175	-40 to 175	-40 to 175	-40 to 175	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	MBRT30020 (R)	MBRT30030(R)	MBRT30035 (R)	MBRT30040 (R)	Unit
Diode forward voltage	$V_F$	$I_F = 150\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$	0.75	0.75	0.75	0.75	V
Reverse current	$I_R$	$V_R = 20\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$	1	1	1	1	mA
		$V_R = 20\text{ V}$ , $T_j = 125\text{ }^\circ\text{C}$	20	20	20	20	
<b>Thermal characteristics</b>							
Thermal resistance, junction - case	$R_{\theta JC}$		0.16	0.16	0.16	0.16	$^\circ\text{C/W}$



Figure 1- Typical Forward Characteristics

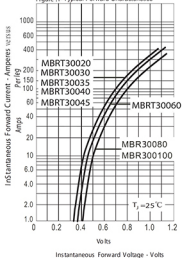


Figure 2- Forward Derating Curve

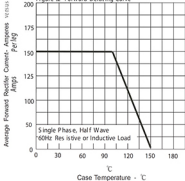


Figure 3- Peak Forward Surge Current

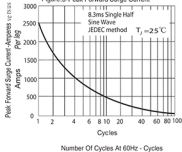


Figure 4- Typical Reverse Characteristics

