



**America Semiconductor**

**Silicon Power  
Schottky Diode**

**MBRT40045 thru  
MBRT400100R**

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

$I_F = 400\text{ A}$

**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	MBRT40045 (R)	MBRT40060 (R)	MBRT40080 (R)	MBRT400100 (R)	Unit
Repetitive peak reverse voltage	$V_{RRM}$		45	60	80	100	V
RMS reverse voltage	$V_{RMS}$		32	42	57	70	V
DC blocking voltage	$V_{DC}$		45	60	80	100	V
Continuous forward current	$I_F$	$T_C \leq 100\text{ }^\circ\text{C}$	400	400	400	400	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ ms}$	3000	3000	3000	3000	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	MBRT40045 (R)	MBRT40060(R)	MBRT40080 (R)	MBRT400100 (R)	Unit
Diode forward voltage	$V_F$	$I_F = 200\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$	0.75	0.8	0.88	0.88	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	

**Thermal characteristics**

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

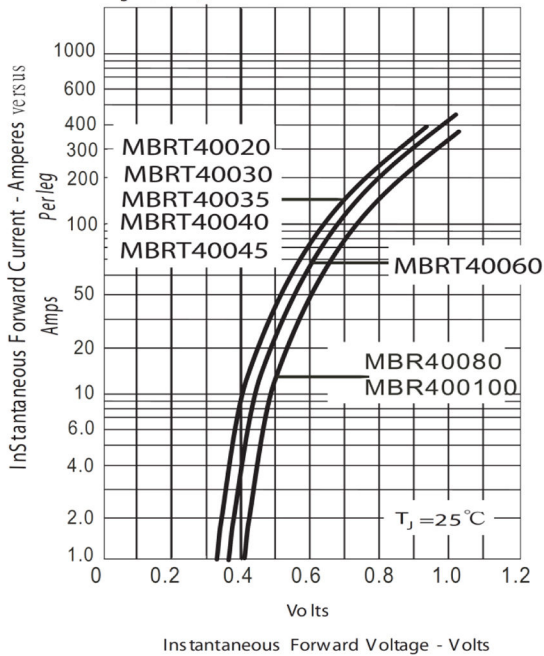


Figure .2- Forward Derating Curve

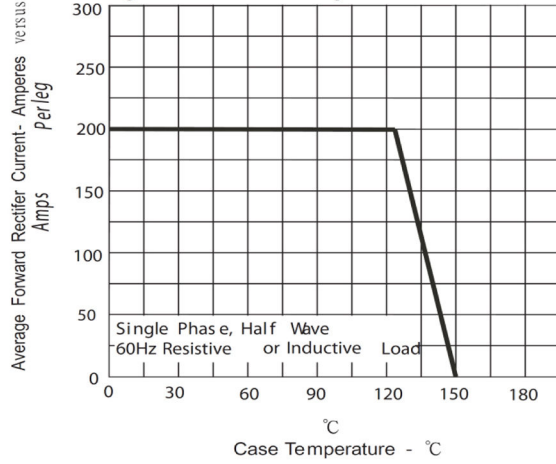


Figure.3-Peak Forward Surge Current

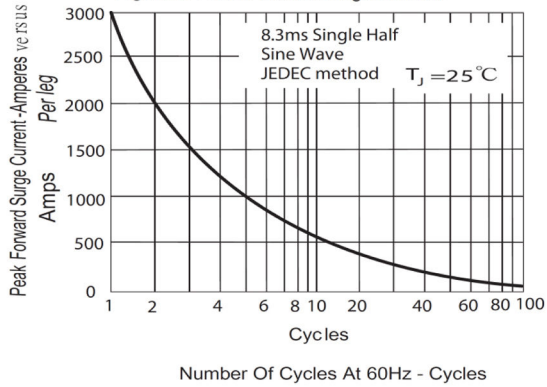


Figure .4- Typical Reverse Characteristics

