

**MBRF12045 thru
MBRF120100R**

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

$I_F = 120\text{ A}$

Features

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

TO-244AB Package



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

Parameter	Symbol	Conditions	MBRF12045 (R)	MBRF12060 (R)	MBRF12080 (R)	MBRF120100 (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	$T_C \leq 140\text{ }^{\circ}\text{C}$	120	120	120	120	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^{\circ}\text{C}$, $t_p = 8.3\text{ ms}$	800	800	800	800	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 $T_j = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Symbol	Conditions	MBRF12045 (R)	MBRF12060 (R)	MBRF12080 (R)	MBRF120100 (R)	Unit
Diode forward voltage	V_F	$I_F = 60\text{ A}$, $T_j = 25\text{ }^{\circ}\text{C}$	0.65	0.75	0.84	0.84	V
Reverse current	I_R	$V_R = 20\text{ V}$, $T_j = 25\text{ }^{\circ}\text{C}$	3	3	3	3	mA
		$V_R = 20\text{ V}$, $T_j = 125\text{ }^{\circ}\text{C}$	200	200	200	200	

Thermal characteristics

Thermal resistance, junction - case	R_{thJC}		0.8	0.8	0.8	0.8	$^{\circ}\text{C/W}$
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Figure .1-Typical Forward Characteristics

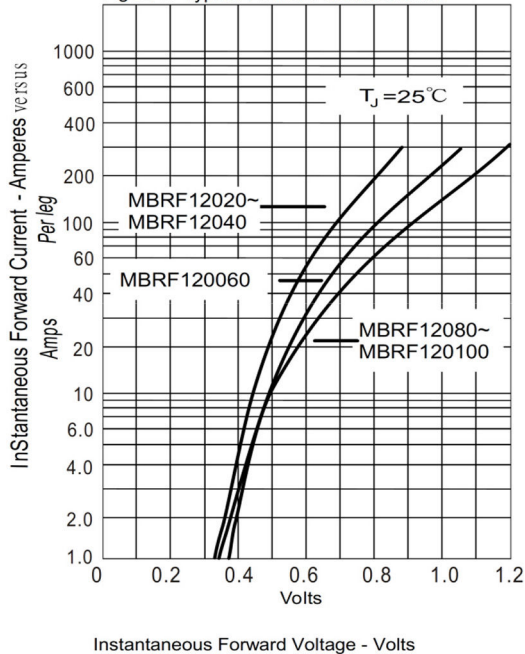


Figure .2-Forward Derating Curve

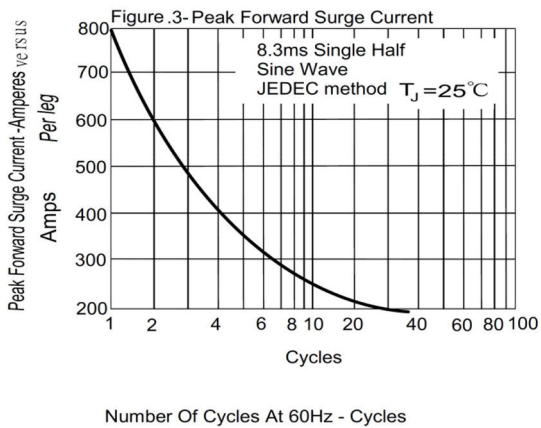
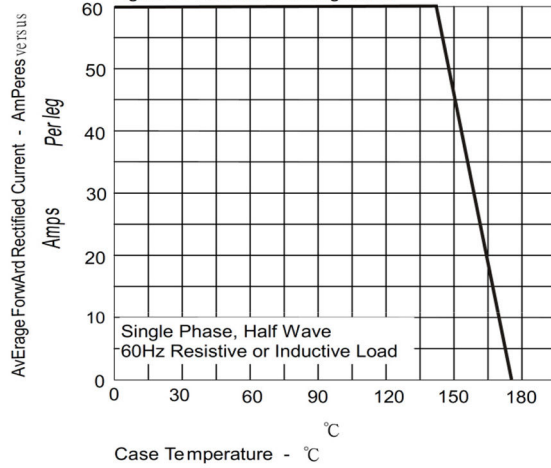


Figure .4-Typical Reverse Characteristics

