



America Semiconductor

Silicon Power Schottky Diode

MBRF30045 thru MBRF300100R

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

$I_F = 300\text{ A}$

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	MBRF30045 (R)	MBRF30060 (R)	MBRF30080 (R)	MBRF300100 (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	$T_C \leq 140\text{ }^\circ\text{C}$	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 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	MBRF30045 (R)	MBRF30060 (R)	MBRF30080 (R)	MBRF300100 (R)	Unit
Diode forward voltage	V_F	$I_F = 150\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$	0.65	0.75	0.84	0.84	V
Reverse current	I_R	$V_R = 20\text{ V}$, $T_j = 25\text{ }^\circ\text{C}$	8	8	8	8	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}		0.4	0.4	0.4	0.4	$^\circ\text{C/W}$
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