

# America Semiconductor



"In America Semi We Trust"

MANUFACTURER OF WORLD CLASS HIGH POWER SEMICONDUCTORS

## America Semiconductor

Silicon Power Schottky Diode

### MBRF60020 thru MBRF60045R

$V_{RRM} = 20\text{ V} - 45\text{ V}$   
 $I_F = 600\text{ A}$

TO-244AB Package



- Features**
- High Surge Capability
  - Types up to 45 V  $V_{RRM}$

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

Parameter	Symbol	Conditions	MBRF60020 (R)	MBRF60030 (R)	MBRF60035 (R)	MBRF60040 (R)	MBRF60045 (R)	Unit
Repetitive peak reverse voltage	$V_{RRM}$		20	30	35	40	45	V
RMS reverse voltage	$V_{RMS}$		14	21	25	28	32	V
DC blocking voltage	$V_{DC}$		20	30	35	40	45	V
Continuous forward current	$I_F$	$T_C \leq 130\text{ }^\circ\text{C}$	600	600	600	600	600	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ ms}$	4000	4000	4000	4000	4000	A
Operating temperature	$T_J$		-40 to 175	-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	-40 to 175	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	MBRF60020 (R)	MBRF60030 (R)	MBRF60035 (R)	MBRF60040 (R)	MBRF60045 (R)	Unit
Diode forward voltage	$V_F$	$I_F = 300\text{ A}$ , $T_J = 25\text{ }^\circ\text{C}$	0.65	0.65	0.65	0.65	0.65	V
Reverse current	$I_R$	$V_R = 20\text{ V}$ , $T_J = 25\text{ }^\circ\text{C}$	10	10	10	10	10	mA
		$V_R = 20\text{ V}$ , $T_J = 125\text{ }^\circ\text{C}$	200	200	200	200	200	mA

**Thermal characteristics**

Parameter	Symbol	Conditions	MBRF60020 (R)	MBRF60030 (R)	MBRF60035 (R)	MBRF60040 (R)	MBRF60045 (R)	Unit
Thermal resistance, junction - case	$R_{\theta JC}$		0.28	0.28	0.28	0.28	0.28	$^\circ\text{C/W}$

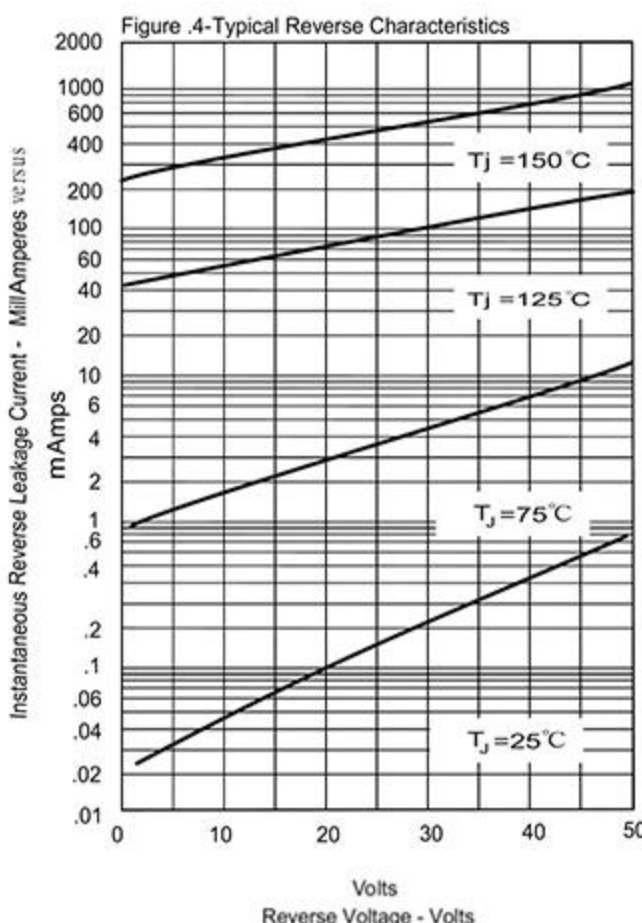
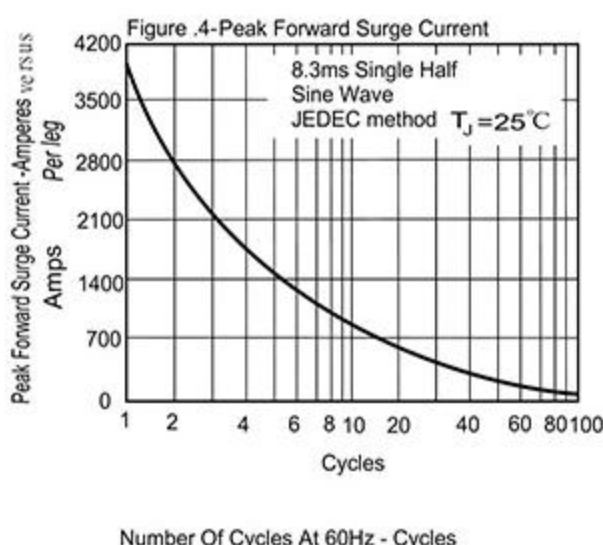
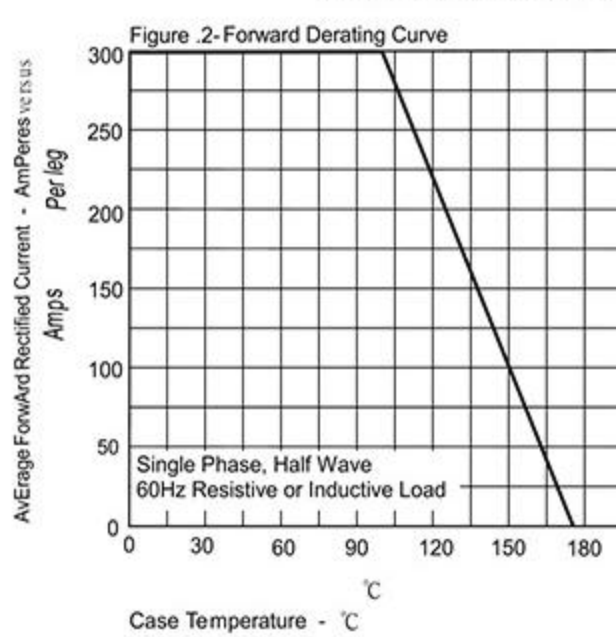
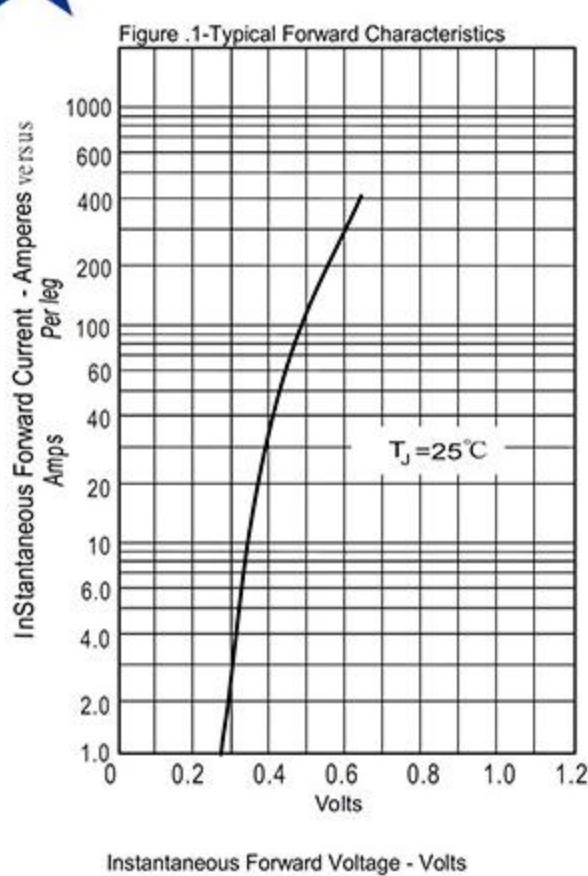


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