America Semiconductor

Silicon Power Schottky Diode

MBR6020 thru MBR6040R

V_{RRM} = 20 V - 100 V

I_F = 60 A

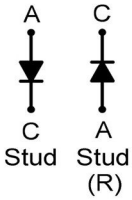
Features

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

DO-5 Package

Note:

1. Standard polarity: Stud is cathode.
2. Reverse polarity (R): Stud is anode.
3. Stud is base.



Maximum ratings, at T_j = 25 °C, unless otherwise specified ("R" devices have leads reversed)

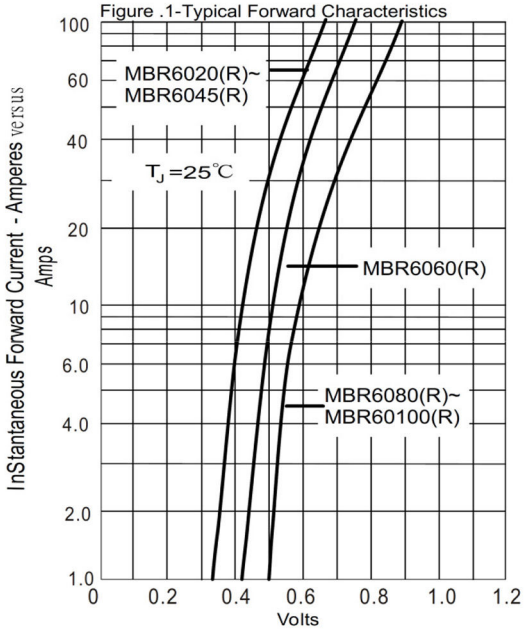
Parameter	Symbol	Conditions	MBR6020 (R)	MBR6030 (R)	MBR6035 (R)	MBR6040 (R)	Unit
Repetitive peak reverse voltage	V_{RRM}		20	30	35	40	V
RMS reverse voltage	V_{RMS}		14	21	25	28	V
DC blocking voltage	V_{DC}		20	30	35	40	V
Continuous forward current	I_F	$T_C \leq 100$ °C	60	60	60	60	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	700	700	700	700	A
Operating temperature	T_j		-65 to 150	-65 to 150	-65 to 150	-65 to 150	°C
Storage temperature	T_{stg}		-65 to 175	-65 to 175	-65 to 175	-65 to 175	°C

Electrical characteristics, at Tj = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	MBR6020 (R)	MBR6030(R)	MBR6035 (R)	MBR6040 (R)	Unit
Diode forward voltage	V_F	I_F = 60 A, T_j = 25 °C	0.65	0.65	0.65	0.65	V
Reverse current	I_R	V_R = 20 V, T_j = 25 °C V_R = 20 V, T_j = 125 °C	5 150	5 150	5 150	5 150	mA
Thermal characteristics							
Thermal resistance, junction - case	R_{thJC}		1.0	1.0	1.0	1.0	°C/W

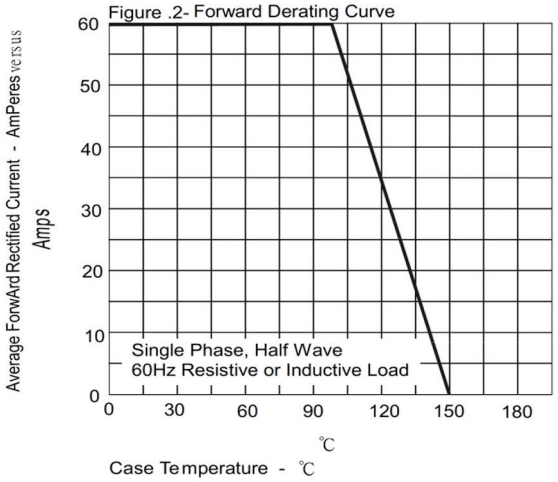
RoHS Compliant

Figure .1-Typical Forward Characteristics



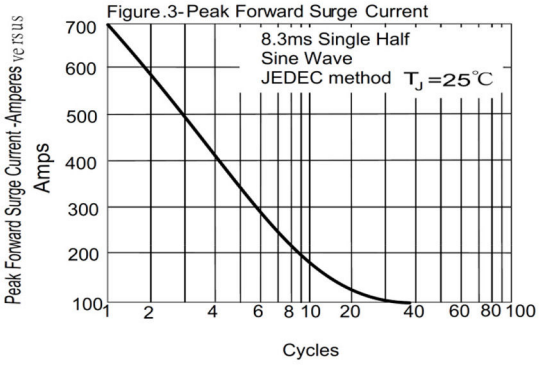
Instantaneous Forward Voltage - Volts

Figure .2- Forward Derating Curve



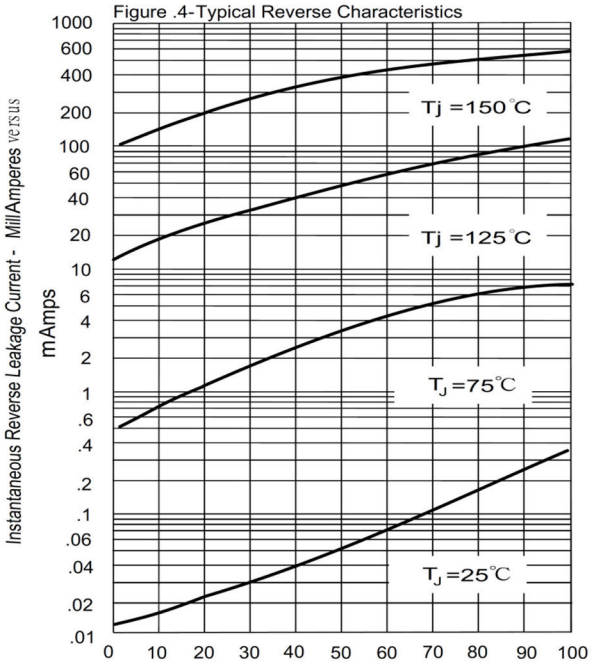
Case Temperature - ℃

Figure .3-Peak Forward Surge Current



Number Of Cycles At 60Hz - Cycles

Figure .4-Typical Reverse Characteristics



Reverse Voltage - Volts