

### FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

### MAXIMUM RATINGS

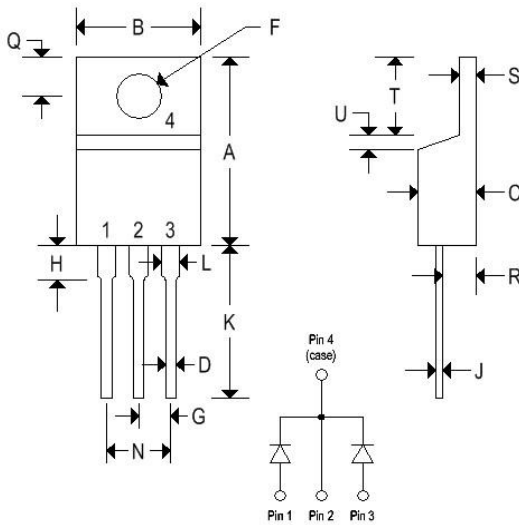
Rating	Symbol	MBR2060CT	MBR2070CT	MBR2080CT	MBR2090CT	MBR20100CT	Unit
Peak repetitive reverse voltage	$V_{RRM}$						
Working peak reverse voltage	$V_{RWM}$	60	70	80	90	100	V
DC blocking voltage	$V_R$						
Average rectified forward current (Rated $V_R$ )	$I_{F(AV)}$	10 @ $T_C = 133^\circ\text{C}$					A
Peak repetitive forward current (Rated $V_R$ , square wave, 20kHz)	$I_{FRM}$	20 @ $T_C = 133^\circ\text{C}$					A
Non-repetitive peak surge current (surge applied at rated load conditions, halfwave, single phase, 60Hz)	$I_{FSM}$	150					A
Peak repetitive reverse surge current (2.0 $\mu\text{s}$ , 1.0kHz)	$I_{RRM}$	0.5					A
Operating junction temperature range	$T_J$	-65 to +150					$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-65 to +175					$^\circ\text{C}$
Voltage rate of change (Rated $V_R$ )	$dv/dt$	1000					V/ $\mu\text{s}$
Maximum thermal resistance							
Junction to case	$R_{\theta JC}$	2.0					$^\circ\text{C}/\text{W}$
Junction to ambient	$R_{\theta JA}$	60					

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	MBR2060CT	MBR2070CT	MBR2080CT	MBR2090CT	MBR20100CT	Unit
Maximum instantaneous forward voltage <sup>(1)</sup> ( $I_F = 10\text{A}$ , $T_C = 125^\circ\text{C}$ ) ( $I_F = 10\text{A}$ , $T_C = 25^\circ\text{C}$ ) ( $I_F = 20\text{A}$ , $T_C = 125^\circ\text{C}$ ) ( $I_F = 20\text{A}$ , $T_C = 25^\circ\text{C}$ )	$V_F$			0.75 0.85 0.85 0.95			V
Maximum instantaneous reverse current <sup>(1)</sup> (Rated dc voltage, $T_C = 125^\circ\text{C}$ ) (Rated dc voltage, $T_C = 25^\circ\text{C}$ )	$I_R$			150 0.15			mA

### MECHANICAL CHARACTERISTICS

Case	TO-220AB
Marking	Alpha-numeric
Pin out	Cathode band



	TO-220AB			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.570	0.620	14.480	15.750
B	0.380	0.405	9.660	10.280
C	0.160	0.190	4.070	4.820
D	0.025	0.035	0.640	0.880
F	0.142	0.147	3.610	3.730
G	0.095	0.105	2.420	2.660
H	0.110	0.155	2.800	3.930
J	0.018	0.025	0.460	0.640
K	0.500	0.562	12.700	14.270
L	0.045	0.060	1.150	1.520
N	0.190	0.210	4.830	5.330
Q	0.100	0.120	2.540	3.040
R	0.080	0.110	2.040	2.790
S	0.045	0.055	1.150	1.390
T	0.235	0.255	5.970	6.470
U	-	0.050	-	1.270

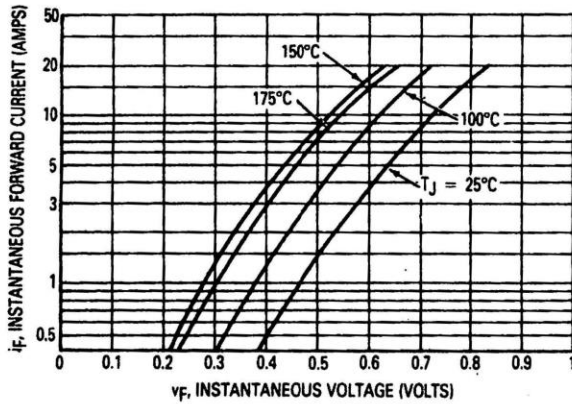


Figure 1. Typical Forward Voltage Per Diode

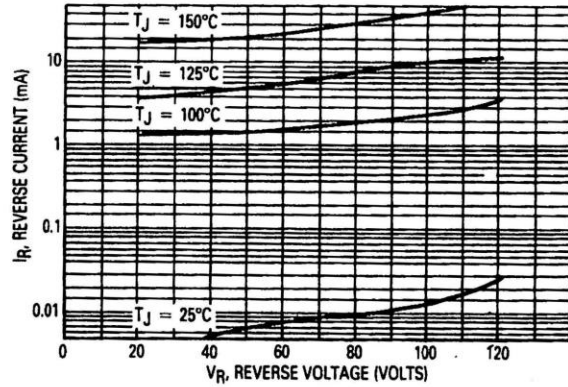


Figure 2. Typical Reverse Current Per Diode

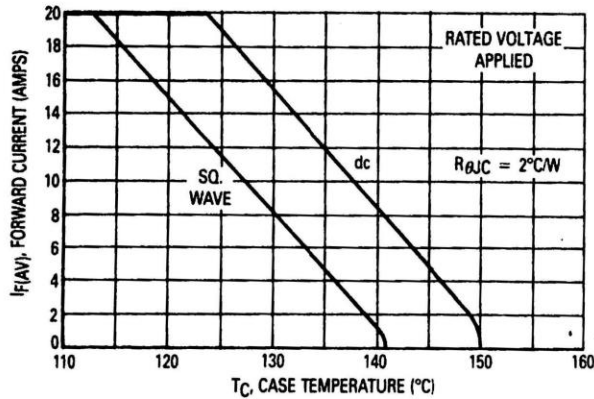


Figure 3. Current Derating, Case

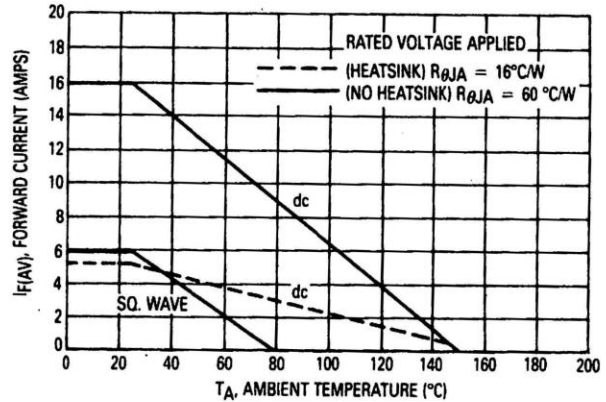


Figure 4. Current Derating, Ambient

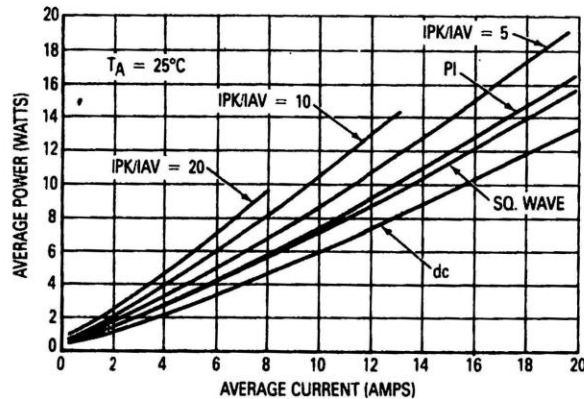


Figure 5. Average Power Dissipation and Average Current