

### 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

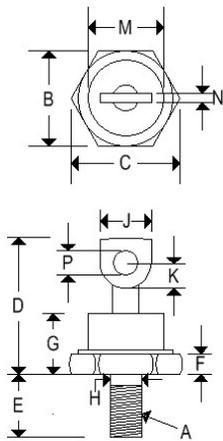
Rating	Symbol	MBR7535	MBR7545	Unit
Peak repetitive reverse voltage	$V_{RRM}$	35	45	V
Working peak reverse voltage	$V_{RWM}$			
DC blocking voltage	$V_R$			
Peak repetitive forward current (Rated $V_R$ , square wave, 20kHz)	$I_{FRM}$	150 @ $T_C = 90^\circ\text{C}$		A
Average rectified forward current (Rated $V_R$ )	$I_o$	75 @ $T_C = 90^\circ\text{C}$		A
Non-repetitive peak surge current (surge applied at rated load conditions, halfwave, single phase, 60Hz)	$I_{FSM}$	1000		A
Operating junction and storage temperature range	$T_J, T_{stg}$	-65 to +150		$^\circ\text{C}$
Peak operating junction temperature (Forward current applied)	$T_{J(pk)}$	175		$^\circ\text{C}$
Voltage rate of change (Rated $V_R$ )	$dv/dt$	1000		V/ $\mu\text{s}$
Maximum thermal resistance Junction to case	$R_{\theta JC}$	0.80		$^\circ\text{C}/\text{W}$

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

Parameter	Symbol	MBR7535	MBR7545	Unit
Instantaneous forward voltage <sup>(1)</sup> ( $I_F = 60\text{A}, T_C = 125^\circ\text{C}$ ) ( $I_F = 220\text{A}, T_C = 120^\circ\text{C}$ )	$V_F$	0.60 0.90		V
Instantaneous reverse current <sup>(1)</sup> (Rated dc voltage, $T_C = 125^\circ\text{C}$ )	$I_R$	150	250	mA
Capacitance ( $V_R = 5.0\text{Vdc}, 100\text{kHz} \leq f \leq 1.0\text{MHz}$ )	$C_t$	4000		pF

**MECHANICAL CHARACTERISTICS**

<b>Case</b>	DO-5(R)
<b>Marking</b>	Alpha-numeric
<b>Normal polarity</b>	Cathode is stud
<b>Reverse polarity</b>	Anode is stud (add "R" suffix)



	DO-5(R)			
	Inches		Millimeters	
	Min	Max	Min	Max
<b>A</b>	¼-28 UNF2A threads			
<b>B</b>	0.669	0.688	16.990	17.480
<b>C</b>	-	0.794	-	20.160
<b>D</b>	-	1.000	-	25.400
<b>E</b>	0.422	0.453	10.720	11.510
<b>F</b>	0.115	0.200	2.920	5.080
<b>G</b>	-	0.450	-	11.430
<b>H</b>	0.220	0.249	5.580	6.320
<b>J</b>	0.250	0.375	6.350	9.530
<b>K</b>	0.156	-	3.960	-
<b>M</b>	-	0.667	-	16.940
<b>N</b>	0.030	0.080	0.760	2.030
<b>P</b>	0.140	0.175	3.560	4.450

FIGURE 1 – TYPICAL FORWARD VOLTAGE

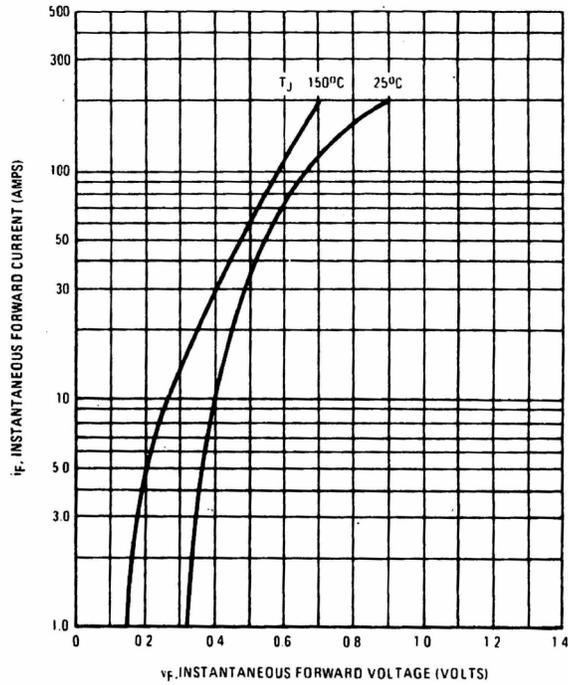


FIGURE 2 – CURRENT DERATING

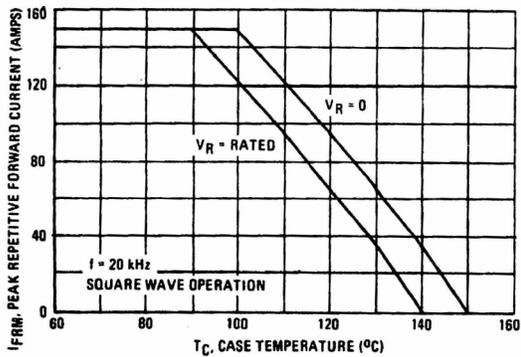


FIGURE 3 – TYPICAL REVERSE OPERATION

