10 AMPERES SCHOTTKY BARRIER RECTIFIERS

| VOLTAGE | 40 to 200 Volts |
| :---: | :---: |
| CURRENT | 10 Amperes |

## FEATURES

－Plastic package has Underwriters Laboratory
Flammability Classification 94V－0．
Flame Retardant Epoxy Molding Compound．
－Low power loss，high efficiency．
－High current capability
－For use in low voltage，high frequency inverters free wheeling，and polarlity protection applications．
－Lead free in compliance with EU RoHS ．

## MECHANICAL DATA

－Case：TO－220AC molded plastic
－Terminals：solder plated，solderable per MIL－STD－750，Method 2026
－Polarity：As marked．


## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at $25^{\circ} \mathrm{C}$ ambient temperature unless otherwise specified．Single phase，half wave， 60 Hz ，resistive or inductive load．
For capacitive load，derate current by $20 \%$

| PARAMETER | SYMBOL | MBR1040 | MBR1045 | MBR1050 | MBR1060 | MBR1080 | MBR1090 | MBR10100 | MBR10150 | MBR10200 | UNITS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maximum Recurrent Peak Reverse Voltage | $\mathrm{V}_{\text {RRM }}$ | 40 | 45 | 50 | 60 | 80 | 90 | 100 | 150 | 200 | V |
| Maximum RMS Voltage | $\mathrm{V}_{\text {RMS }}$ | 28 | 31.5 | 35 | 42 | 56 | 63 | 70 | 105 | 140 | V |
| Maximum DC Blocking Voltage | $V_{D C}$ | 40 | 45 | 50 | 60 | 80 | 90 | 100 | 150 | 200 | V |
| Maximum Average Forward（See Figure 1） | $\mathrm{I}_{\text {F（AV）}}$ | 10 |  |  |  |  |  |  |  |  | A |
| Peak Forward Surge Current ： 8.3 ms single half sine－wave superimposed on rated load（JEDEC method） | $\mathrm{I}_{\text {FSM }}$ | 100 |  |  |  | 120 |  |  |  |  | A |
| Maximum Forward Voltage at 10A | $V_{\text {F }}$ | 0. |  | 0. |  |  | 0.85 |  |  | ． 92 | V |
| $\left.\begin{array}{ll}\text { Maximum DC Reverse Current at Rated DC Blocking } & \mathrm{T}_{\mathrm{J}}=25^{\circ} \mathrm{C} \\ \mathrm{T}_{\mathrm{J}}=100^{\circ} \mathrm{C}\end{array} \right\rvert\,$ | $I_{R}$ | $\begin{aligned} & 0.1 \\ & 20 \end{aligned}$ |  |  |  |  |  |  |  |  | mA |
| Typical Thermal Resistance | $\mathrm{R}_{\text {өJC }}$ | 3 |  |  |  |  |  |  |  |  | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |
| Operating Junction and Storage Temperature Range | $\mathrm{T}_{\mathrm{J}}, \mathrm{T}_{\text {STG }}$ | -55 to +150 |  |  |  |  |  |  | -65 to +175 |  | ${ }^{\circ} \mathrm{C}$ |

## RATING AND CHARACTERISTIC CURVES



Fig．1－FORWARD CURRENT DERATING CURVE


Fig．3－TYPICAL REVERSE CHARACTERISTICS


Fig．2－MAXIMUM NON－REPETITIVE SURGE CURRENT

instantaneous forward voltage，volts

Fig．4－TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

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