- Glass Passivated Die Construction
- Low leakage
- Ideal for printed circuit board
- Surge overload rating-30A peak
- Designed for Surface Mount Application
- Plastic Material-UL Flammability 94V-0


## Mechanical Data

- Case:Reliable low cost construction utilizing molded plastic technique
- Terminals:Plated Leads Solderable per MIL-STD-202,Method208
- Polarity:As Marked on Case
- Mounting Position:Any
- Marking:Type Number

dimensions in inches and (millimeters)


## Maximum Ratings and Electrical Characteristics

Rating 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 $20 \%$.

| TYPE NUMBER | SYMBOL | MB05S | MB1S | MB2S | MB4S | MB6S | MB8S | MB10S | UNITS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | VRrm | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
|  | VRWm |  |  |  |  |  |  |  |  |
|  | Vdc |  |  |  |  |  |  |  |  |
| RMS Reverse Voltage | $V_{\text {RMS }}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current (Note 1)@Tc=100 ${ }^{\circ} \mathrm{C}$ <br> (Note 2)@Tc=100 ${ }^{\circ} \mathrm{C}$ | IF(AV) | $\begin{aligned} & 0.5 \\ & 0.8 \end{aligned}$ |  |  |  |  |  |  | A |
| Non-Repetitive Peak Forward Surge Current 8.3 ms Single half sine-wave superimposed on rated load (JEDEC Method) | Ifsm | 30 |  |  |  |  |  |  | A |
| $1^{2} \mathrm{t}$ Rating for Fusing ( t < 8.3ms) | $1^{2} \mathrm{t}$ | 3.735 |  |  |  |  |  |  | $\mathrm{A}^{2} \mathrm{~s}$ |
| $\begin{array}{ll}\text { Forward Voltage per element } & \text { @IF=0.5A } \\ & \text { @IF=0.8A }\end{array}$ | Vfm | $\begin{gathered} 0.95 \\ 1.0 \end{gathered}$ |  |  |  |  |  |  | V |
| Peak Reverse Current <br> $@ T_{A}=25^{\circ} \mathrm{C}$ <br> At Rated DC Blocking Voltage <br> $@ T_{A}=125^{\circ} \mathrm{C}$ | IR | $\begin{aligned} & 5.0 \\ & 200 \end{aligned}$ |  |  |  |  |  |  | uA |
| Typical Junction Capacitance per leg (Note 3) | CJ | 13 |  |  |  |  |  |  | pF |
| Typical Thermal Resistance per leg | Reja | 60 |  |  |  |  |  |  | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |
|  | Rөль | 16 |  |  |  |  |  |  |  |
| Operating and Storage Temperature Range | TJ,Tstg | -55to +150 |  |  |  |  |  |  | ${ }^{\circ} \mathrm{C}$ |

Note:1. Mounted on glass epoxy PC board with $1.3 \mathrm{~mm}^{2}$ solder pad.
2. Mounted on aluminum substrate PC board with $1.3 \mathrm{~mm}^{2}$ solder pad.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

## 迪一電子 <br> MB05S THRU MB10S

Fig． 1 Output Current Derating Curve


Fig． 3 Maximum Peak Forward Surge Current（per leg） $I_{\text {FSM }}$, PEAK FORWARD SURGE CURRENT（A）


FIG． 5 TYPICAL REVERSE CHRACTERISTICS INVSTANTANEOUS REVERSE CURRENT（ $\mu \mathrm{A}$ ）


PERCENT OF RATED PEAK INVERSE VOLTGE（V）

Fig． 2 Typical Forward Characteristics（per leg）



FIG． 6 MOUNTING PAD LAYOUT



MB05S THRU MB10S

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