

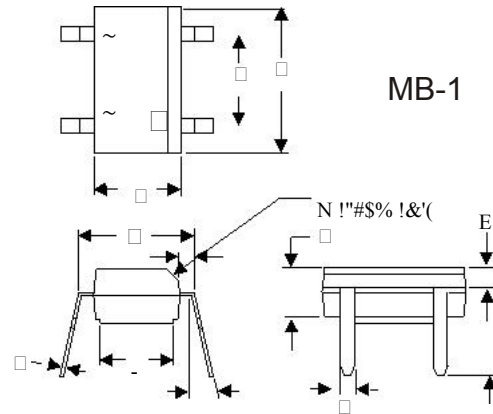
MB05M thru MB10M

0.5 A Single-Phase Glass Passivated Bridge Rectifiers

Rectifier Reverse Voltage 50 to 1000V

Features

- This series is UL listed under the Recognized Component Index, file number E142814
- Ideal for surface mount application
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Surge overload ratings to 30 amperes
- High temperature soldering guaranteed 265°C/10 seconds at 5 lbs (2.3kg) tension



Mechanical Data

Case: Molded plastic
 Terminals: Plated leads solderable per MIL-STD-202, Method 208
 Polarity: Marked on body
 Mounting Position: Any

| | A | B | C | D | E | F | G | H | K | L | N |
|--|------|--------|------|--------|---|---|---|---|---|---|---|
| | .195 | .205 | 4.95 | 3.21 | | | | | | | |
| | .095 | .105 | 2.41 | 2.67 | | | | | | | |
| | .144 | .161 | 3.65 | 4.10 | | | | | | | |
| | .179 | .190 | 4.55 | 4.83 | | | | | | | |
| | .039 | .049 | 0.99 | 1.24 | | | | | | | |
| | .090 | .106 | 2.30 | 2.70 | | | | | | | |
| | .017 | .029 | 0.43 | 0.74 | | | | | | | |
| | .132 | .148 | 3.35 | 3.75 | | | | | | | |
| | .006 | .016 | 0.15 | 0.41 | | | | | | | |
| | .137 | .147 | 3.48 | 3.73 | | | | | | | |
| | □ 1□ | □ □ #5 | □ 1□ | □ □ #5 | | | | | | | |
| | .020 | .028 | 0.51 | 0.71 | | | | | | | |

Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.
 For Capacitive load derate current by 20%.

| Parameter | Symbol | MB05M | MB1M | MB2M | MB4M | MB6M | MB8M | MB10M | unit |
|---|------------------|--------------|------|------|------|------|------|-------|-----------|
| Maximum repetitive peak reverse voltage | VRRM | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS bridge input voltage | VRMS | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | VDC | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified output current at TA=40°C (*3) | IF(AV) | 0.5 0.8* | | | | | | | A |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | IFSM | 30 | | | | | | | A |
| Rating for fusing (t<8.3ms) | I ² t | 10 | | | | | | | zsec A |
| Typical thermal resistance per element (1) | ReJA | 110 | | | | | | | °C /W |
| Typical junction capacitance per element (2) | Cj | 25.0 | | | | | | | pF |
| Operating junction and storage temperature range | TJ, TSTG | -55 to + 150 | | | | | | | °C |

Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.
 For Capacitive load derate by 20 %.

| Parameter | Symbol | MB05M | MB1M | MB2M | MB4M | MB6M | MB8M | MB10M | Unit |
|---|--------|-----------|------|------|------|------|------|-------|------|
| Maximum instantaneous forward voltage drop per leg at 0.5A | VF | 1.1 | | | | | | | V |
| Maximum DC reverse current at rated TA =25°C DC blocking voltage per element TA =125°C | IR | 10 500 | | | | | | | μA |

Notes: (1) Thermal resistance from Junction to Ambient on P.C. board mounting.
 (2) Measured at 2.0MHz and applied reverse voltage of 4.0 volts.
 (3) R-load on aluminum substrate TA=25°C.

Rating and Characteristic Curves (TA=25°C Unless otherwise noted) MB05M thru MB10M

Fig. 1 Derating Curve for Output Rectified Current

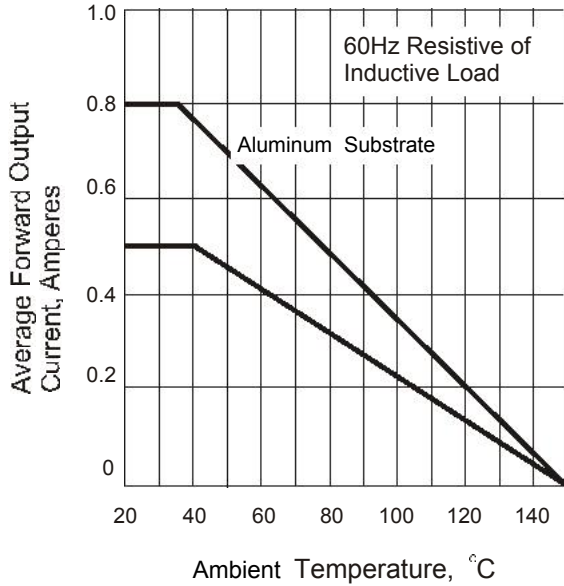


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

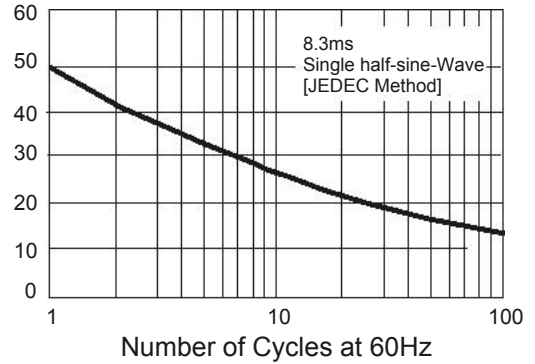


Fig. 3 Typical Instantaneous Forward Characteristics

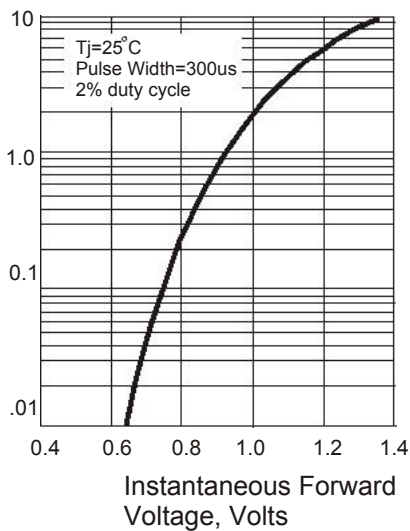


Fig. 4 Typical Revers Characteristics

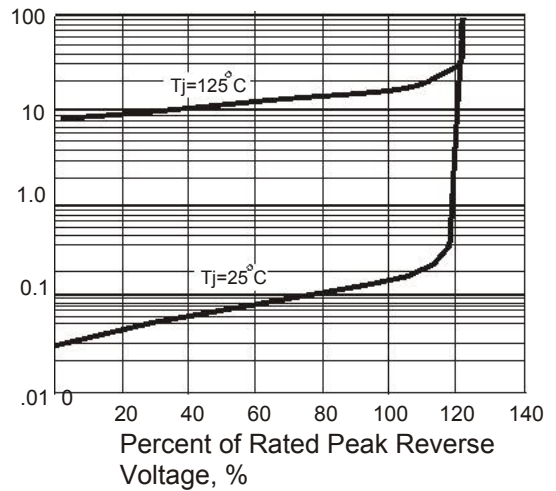


Fig. 5 Typical Junction Capacitance

