



MB05S – MB10S

SURFACE MOUNT BRIDGE RECTIFIERS

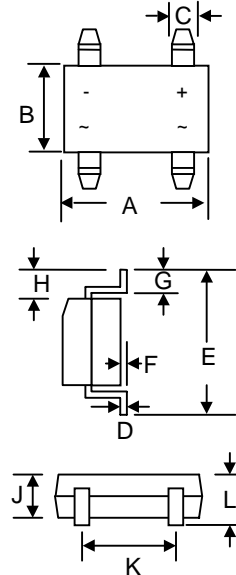
Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- Designed for Surface Mount Application
- Plastic Material – UL Flammability 94V-O
- UL Recognized File # E476623

Mechanical Data

- Case: MB-S, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Weight: 0.22 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version,**

MB-S



| MB-S | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 4.50 | 4.95 |
| B | 3.60 | 4.10 |
| C | 0.60 | 0.80 |
| D | 0.15 | 0.35 |
| E | 6.40 | 7.00 |
| F | — | 0.20 |
| G | 0.50 | 1.10 |
| H | 1.30 | 1.70 |
| J | 2.30 | 2.70 |
| K | 2.30 | 2.70 |
| L | — | 3.00 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.
 Single Phase, half wave, 60Hz, 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 | V_{RRM} | | | | | | | | |
| Working Peak Reverse Voltage | V_{RWM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| DC Blocking Voltage | V_{DC} | | | | | | | | |
| RMS Reverse Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current (Note 1)@T _c =100°C (Note 2)@T _c =100°C | $I_{F(AV)}$ | 0.5 0.8 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 30 | | | | | | | A |
| I ² t Rating for Fusing (t < 8.3ms) | I ² t | 3.735 | | | | | | | A ² s |
| Forward Voltage per element @I _F =0.5A @I _F =0.8A | V_{FM} | 0.95 1.0 | | | | | | | V |
| Peak Reverse Current @T _A =25°C At Rated DC Blocking Voltage @T _A =125°C | I_R | 5.0 200 | | | | | | | uA |
| Typical Junction Capacitance per leg (Note 3) | C_J | 13 | | | | | | | pF |
| Typical Thermal Resistance per leg | $R_{\theta JA}$ | 60 | | | | | | | °C/W |
| | $R_{\theta JL}$ | 16 | | | | | | | |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55to+150 | | | | | | | °C |

- Note:1. Mounted on glass epoxy PC board with 1.3mm² solder pad.
 2. Mounted on aluminum substrate PC board with 1.3mm² solder pad.
 3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.





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Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

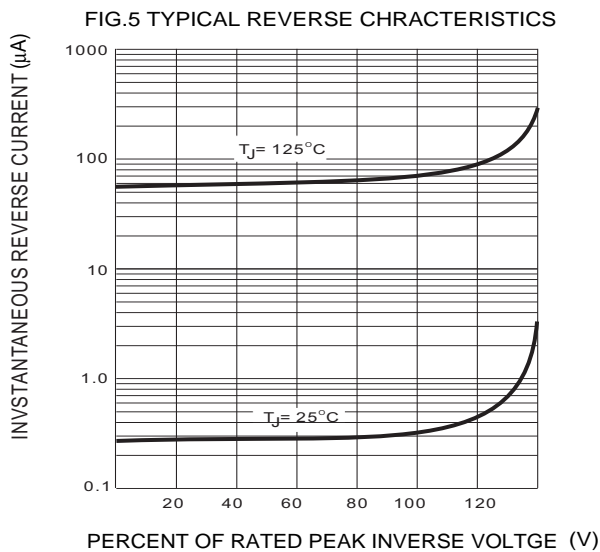
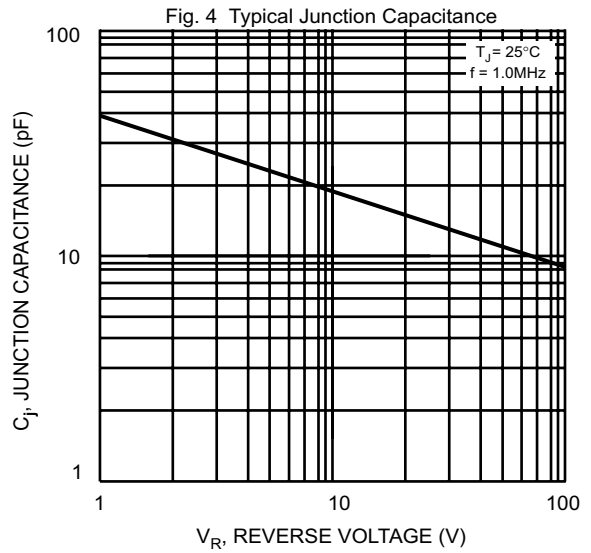
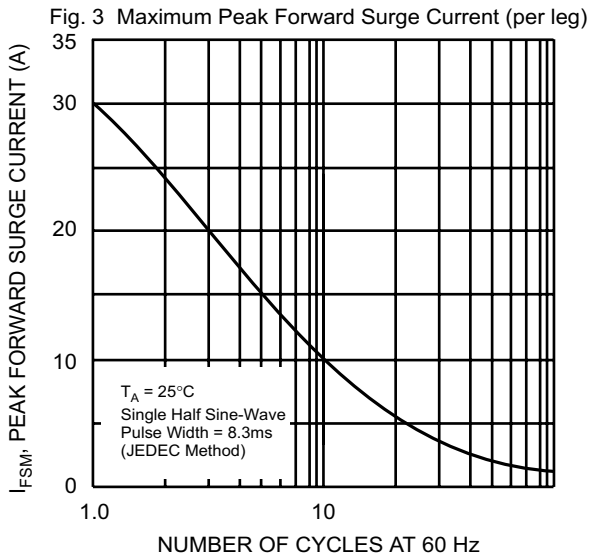
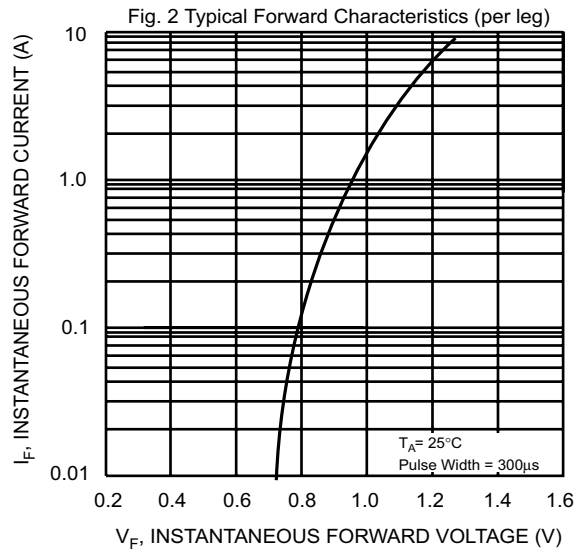
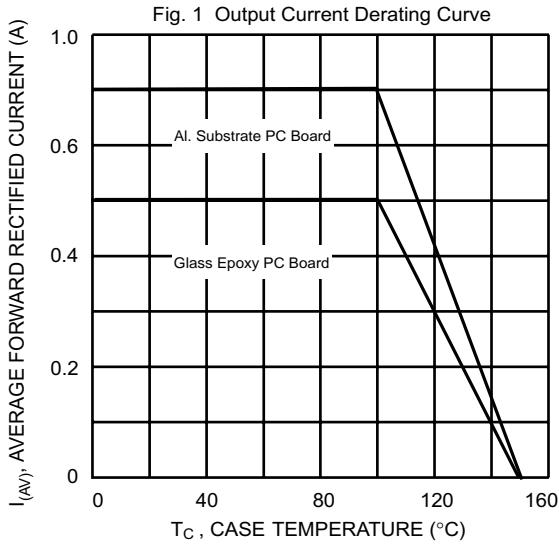


FIG.6 MOUNTING PAD LAYOUT

