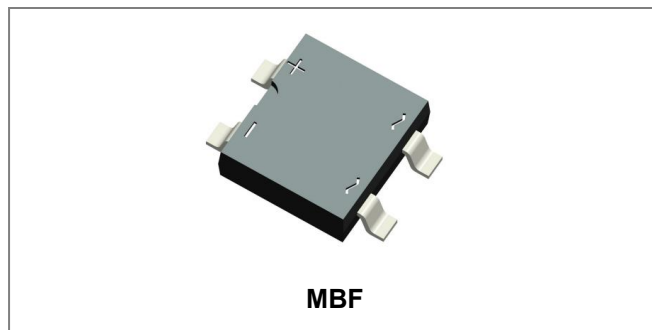




THE DATASHEET OF MB05F



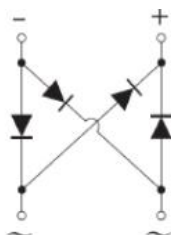
MB05F THRU MB10F SINGLE PHASE 0.8AMP SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER



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-0
- This is a Pb – Free Device
- “-HF” suffix is for Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: MBF, Molded plastic
- Terminals: Plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting Position: Any
- Lead Free: For RoHS / Lead Free Version

Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

| Type Number | Symbol | MB05F | MB1F | MB2F | MB4F | MB6F | MB8F | MB10F | Units | |
|--|-----------------------|--------|-------|-------|-------|------------|-------|--------|-------|---|
| MB05F-HF THRU MB10F-HF Marking Code | | MB05FH | MB1FH | MB2FH | MB4FH | MB6FH | MB8FH | MB10FH | | |
| Peak Repetitive Reverse Voltage DC Blocking Voltage | V_{RRM} V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 480 | 700 | V | |
| Average Rectified Output Current (Note1)@ $T_A=40^{\circ}\text{C}$ (Note 2)@ $T_A=40^{\circ}\text{C}$ | I_o | | | | | 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 |

Electrical Characteristics: @T_A=25°C unless otherwise specified

| Type Number | Symbol | MB05F | MB1F | MB2F | MB4F | MB6F | MB8F | MB10F | Units |
|---|-----------------|----------|-------|-------|-------|-------|-------|--------|-------|
| MB05F-HF THRU MB10F-HF Marking Code | | MB05FH | MB1FH | MB2FH | MB4FH | MB6FH | MB8FH | MB10FH | |
| Forward Voltage per element @I _F =0.8A | V _{FM} | 1.1 | | | | | | | V |
| Peak Reverse Current @T _A = 25°C At Rated DC Blocking Voltage @T _A = 125°C | I _R | 5 500 | | | | | | | μA |
| Typical Junction Capacitance (Note 3) | C _j | 13 | | | | | | | pF |

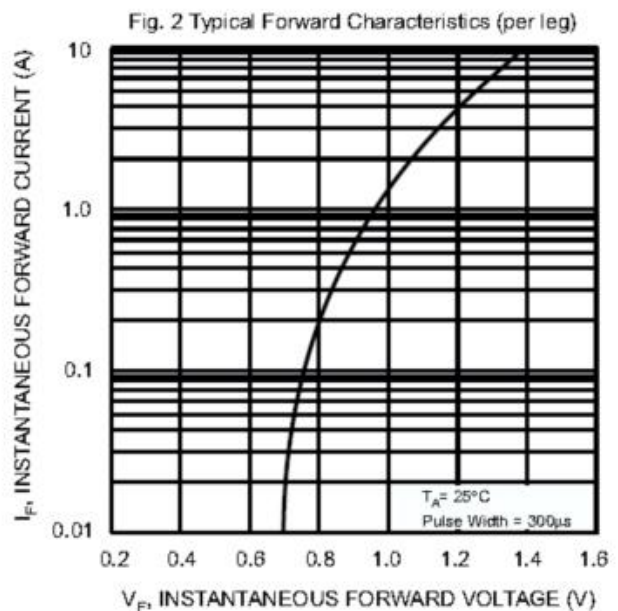
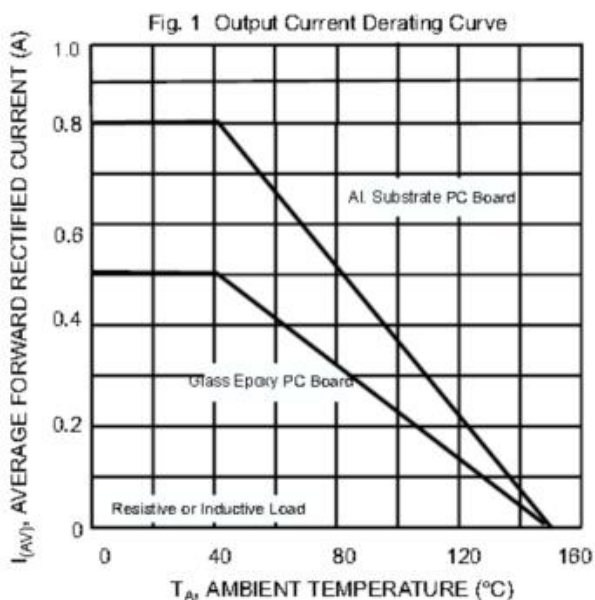
* Pulse width < 300 μs, duty cycle < 2%

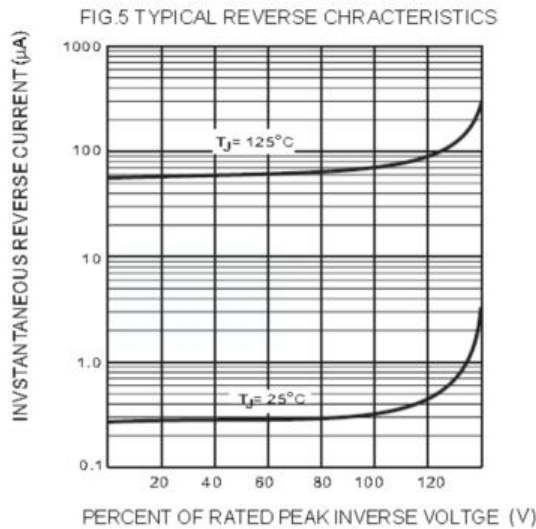
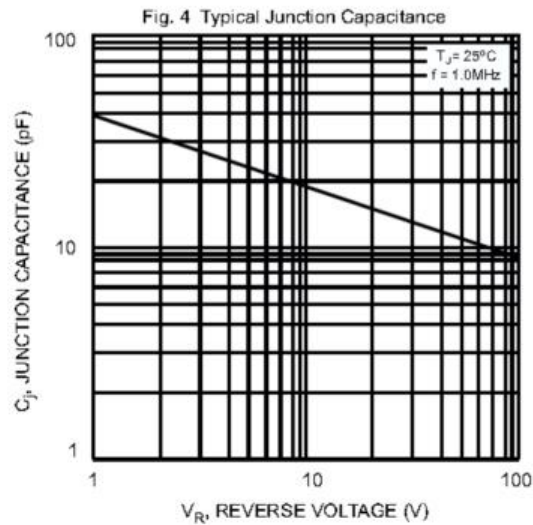
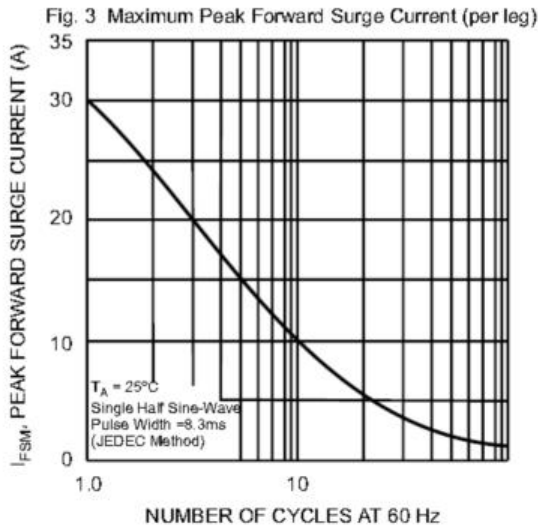
Thermal-Mechanical Specifications: @T_A=25°C unless otherwise specified

| Type Number | Symbol | MB05F | MB1F | MB2F | MB4F | MB6F | MB8F | MB10F | Units |
|--|-----------------------------------|---------|-------|-------|-------|-------|-------|--------|-------|
| MB05F-HF THRU MB10F-HF Marking Code | | MB05FH | MB1FH | MB2FH | MB4FH | MB6FH | MB8FH | MB10FH | |
| Typical Thermal Resistance per leg | R _{θJA} | 60 | | | | | | | °C/W |
| | R _{θJL} | 16 | | | | | | | |
| Operating Junction and Storage Temperature Range | T _J , T _{STG} | -55+150 | | | | | | | °C |

Note: 1. Mounted on glass epoxy PC board with 1.3mm² solder pad.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
3. Thermal Resistance From Junction to Ambient

Ratings and Characteristics Curves



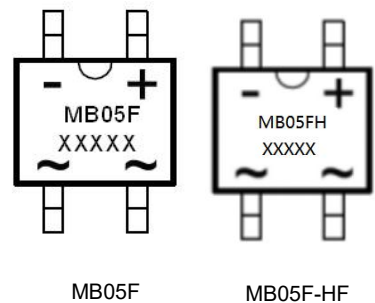


Ordering Information

| Device | Package | Plating | Shipping |
|-----------------------------|---------|---------|----------------|
| MB05F THRU MB10F | MBF | Pure Sn | 5000pcs / reel |
| MB05FTR THRU MB10F TR | MBF | Pure Sn | 5000pcs / reel |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

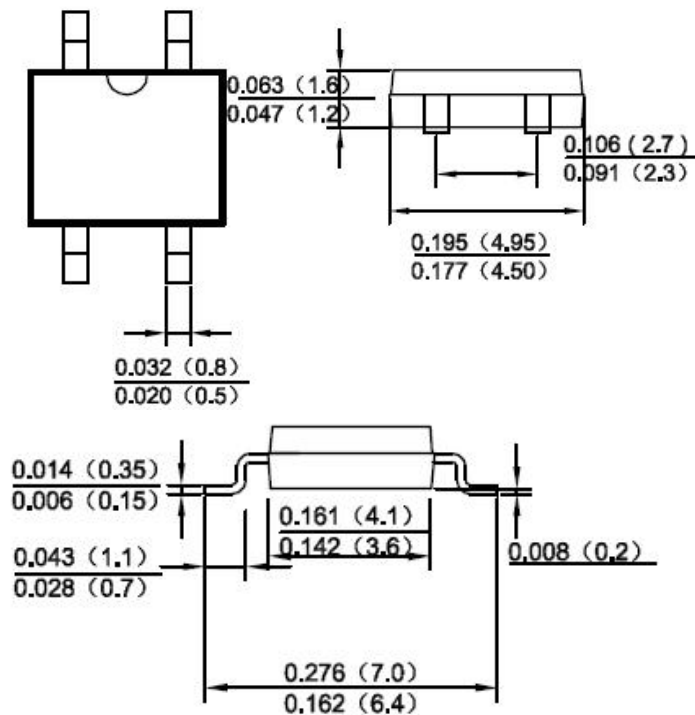
Marking Diagram



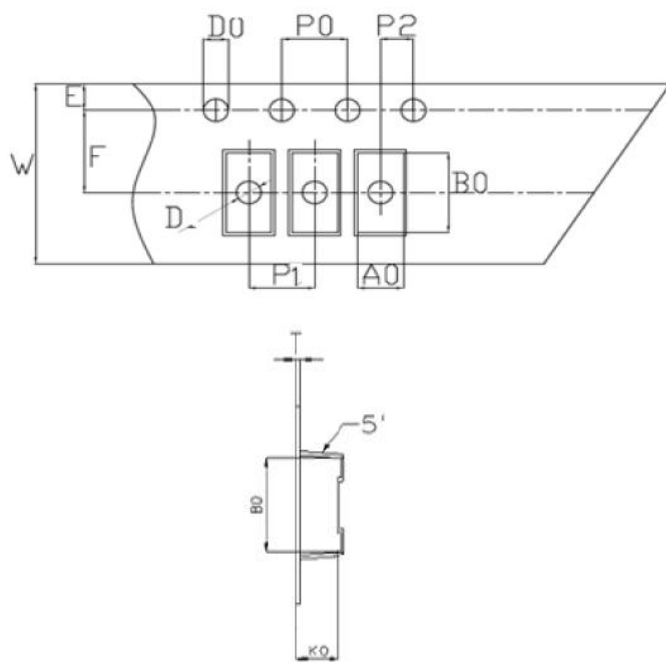
Where XXXXX is YYWWL
 MB05F = Type Number
 MB05FH = Marking Code
 YY = Year
 WW = Week
 L = Lot Number

Cautions: Molding resin
 Epoxy resin UL:94V-0

Mechanical Dimensions MBF(Inches/Millimeters)



Carrier Tape & Reel Specification MBF



| SYMBOL | Millimeters | |
|--------|-------------|-------|
| | Min. | Max. |
| A0 | 5.21 | 5.41 |
| B0 | 7.10 | 7.30 |
| D0 | 1.50 | 1.60 |
| D1 | 1.40 | 1.60 |
| P0 | 3.90 | 4.10 |
| P1 | 7.90 | 8.10 |
| P2 | 1.95 | 2.05 |
| E | 1.65 | 1.85 |
| K0 | 1.55 | 1.75 |
| F | 5.45 | 5.55 |
| W | 11.90 | 12.10 |
| T | 0.24 | 0.30 |
| 10P0 | 39.80 | 40.20 |

**Technical Data
Data Sheet N1456, Rev. B**





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