

| MBS | | |
|-----|---------|------|
| Dim | Min | Max |
| A | 4.40 | 4.80 |
| B | 3.40 | 3.80 |
| C | 2.35 | 2.65 |
| D | 6.50 | 7.00 |
| E | 0.15 | 0.35 |
| F | 0.90 | 1.50 |
| G | 0.20MAX | |
| H | 2.50 | 2.80 |
| I | 0.50 | 0.80 |
| K | 2.30 | 2.70 |

All Dimensions in mm

FEATURES

- Glass: passivated chip junctions
- High surge overload rating: 30A peak
- Saves space on printed circuit boards
- This series is UL recognized under Component Index, file number E239431
- Plastic material has U/L flammability classification 94V-O
- High temperature soldering guaranteed: 260°C/10 seconds at 5 lbs. (2.3kg) tension

MECHANICAL DATA

- Case: Molded plastic body over passivated junctions
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Maximum Ratings (@TA = 25°C unless otherwise specified)

| Characteristic | Symbol | MB05S | MB1S | MB2S | MB4S | MB6S | MB8S | MB10S | UNITS |
|---|-------------|--|------|------|------|------|------|-------|------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward Output current @TA=25°C | $I_{F(AV)}$ | 0.5 ¹⁾ 0.8 ²⁾ | | | | | | | A |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load | I_{FSM} | 30 | | | | | | | A |
| Current squared time $t < 8.3ms$, Ta = 25°C | I^2t | 3.74 | | | | | | | A ² s |

Thermal Characteristics

| Characteristic | Symbol | MB05S | MB1S | MB2S | MB4S | MB6S | MB8S | MB10S | UNITS |
|---|---|-----------------|------|------|------|------|------|-------|-------|
| Typical junction capacitance per leg (NOTE 3) | C_J | 13 | | | | | | | pF |
| Typical thermal resistance per leg (NOTE 1) (NOTE 2) | $R_{\theta JC}$ $R_{\theta JA}$ $R_{\theta JL}$ | 29 73 25 | | | | | | | °C/W |
| Operating junction temperature range | T_J | - 55 ---- + 150 | | | | | | | °C |
| Storage temperature range | T_{STG} | - 55 ---- + 150 | | | | | | | °C |

Electrical Characteristics (@TA = 25°C unless otherwise specified)

| Characteristic | Symbol | MB05S | MB1S | MB2S | MB4S | MB6S | MB8S | MB10S | UNITS |
|--|--------|------------|------|------|------|------|------|-------|-------|
| Maximum instantaneous forward voltage at 0.4 A | V_F | 1.0 | | | | | | | V |
| Maximum reverse current @TA=25°C at rated DC blocking voltage @TA=125°C | I_R | 5.0 100 | | | | | | | μA |

NOTES: (1) On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads

(2) On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad

(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

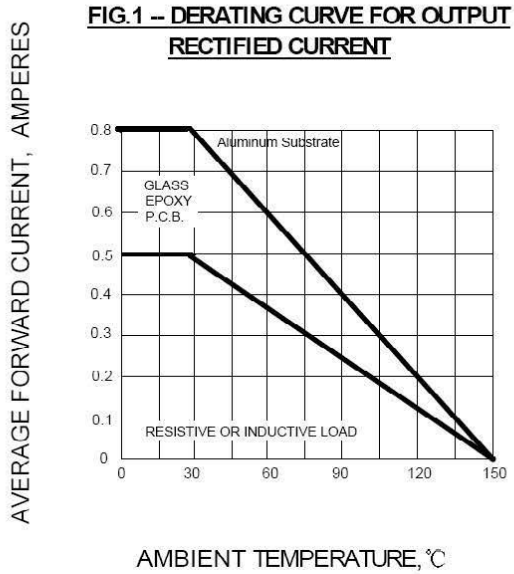


FIG.2 -- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

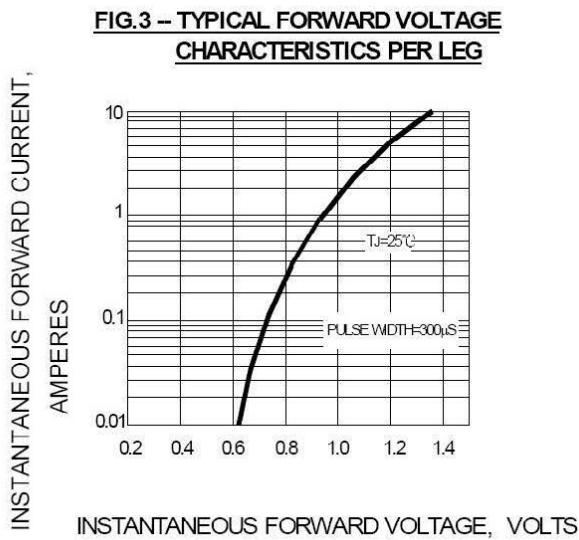
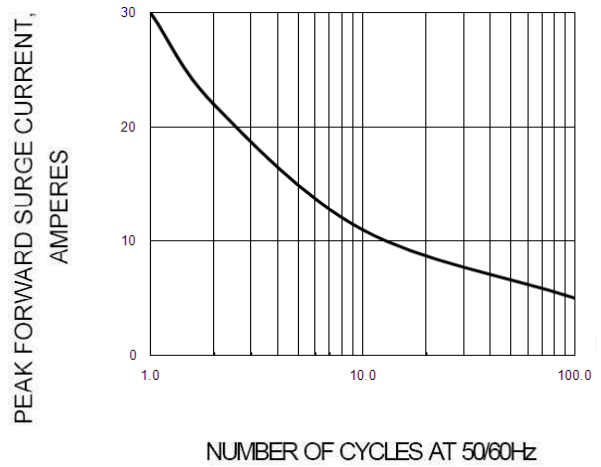


FIG.4 -- TYPICAL REVERSE CHARACTERISTIC

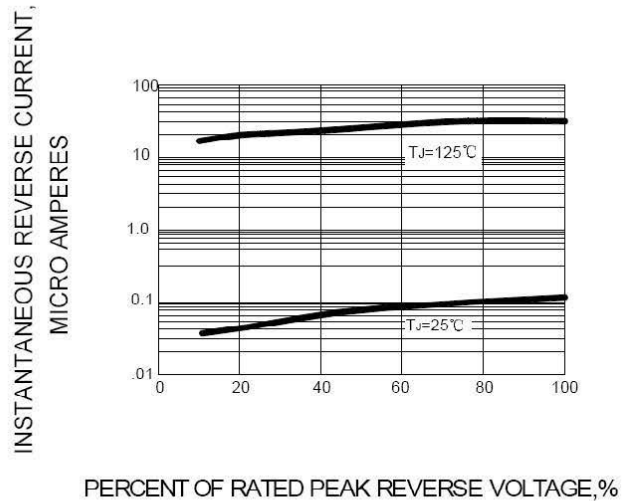
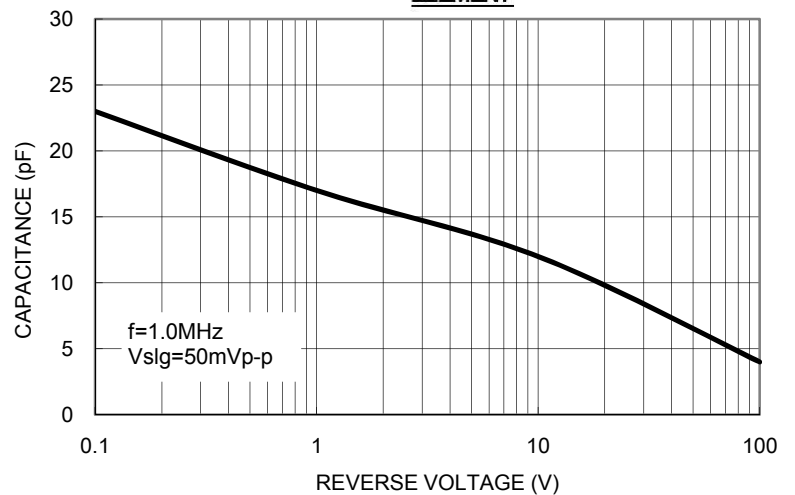


FIG.5 -- TYPICAL JUNCTION CAPACITANCE PER ELEMENT



PACKAGE INFORMATION

| Device | Package | Shipping |
|-------------|---------|----------------|
| MB05S-MB10S | MBS | 3000/Tape&Reel |

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