



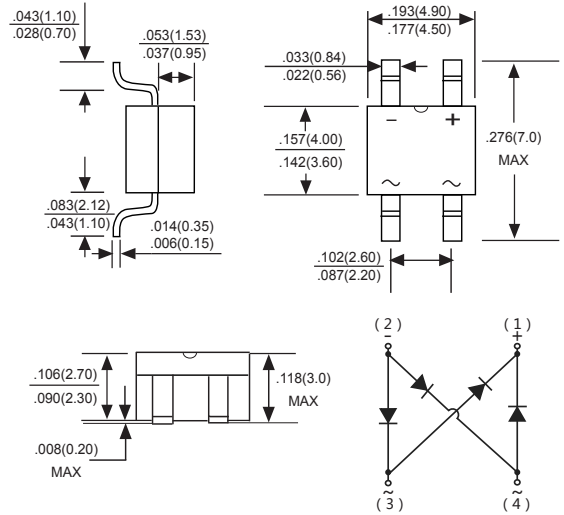
# MB24S THRU MB220S

Voltage Range - 40 to 200 V olts Current - 2.0 Ampere

## Schottky Surface Mount Flat Bridge Rectifier

### Features

- ◆ Ideal for printed circuit board
- ◆ Reliable low cost construction utilizing molded plastic technique
- ◆ High temperature soldering guaranteed: 260°/10 seconds at 5 lbs., (2.3kg) tension
- ◆ Small size, simple installation
- ◆ High surge current capability



Dimensions in inches and (millimeters)

### Mechanical Data

**Case :** JEDEC MBS Molded plastic body  
**Terminals :** Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity :** Polarity symbol marking on body  
**Mounting Position :** Any  
**Weight :** 0.008 ounce, 0.22 grams

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter   | SYMBOLS                            | MDD              | MDD   | MDD   | MDD      | MDD    | UNITS |      |
|---|------------------------------------|------------------|-------|-------|----------|--------|-------|------|
|   |                                    | MB24S            | MB26S | MB28S | MB210S   | MB220S |       |      |
| Marking Code  |                                    |                  |       |       |          |        |       |      |
| Maximum repetitive peak reverse voltage   | $V_{RRM}$                          | 40               | 60    | 80    | 100      | 200    | V     |      |
| Maximum RMS voltage   | $V_{RMS}$                          | 28               | 42    | 56    | 70       | 140    | V     |      |
| Maximum DC blocking voltage   | $V_{DC}$                           | 40               | 60    | 80    | 100      | 200    | V     |      |
| Maximum average forward rectified current   | $I_{F(AV)}$                        | 2.0              |       |       |          |        |       | A    |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)   | $I_{FSM}$                          | 50               |       | 40    |          |        |       | A    |
| Maximum instantaneous forward voltage at 2A   | $V_F$                              | 0.55             | 0.70  | 0.85  |          |        |       | V    |
| Maximum DC reverse current<br>$T_A=25^\circ C$<br>at rated DC blocking voltage<br>$T_A=100^\circ C$ | $I_R$                              | 0.5<br>10        |       |       | 0.3<br>5 |        |       | mA   |
| Typical junction capacitance at 4.0V, 1.0MHz  | $C_j$                              | 220              | 80    |       |          |        |       | pF   |
| Typical thermal resistance (Note1)  | $R_{\theta JA}$<br>$R_{\theta JL}$ | 75<br>20         |       |       |          |        |       | °C/W |
| Operating temperature range   | $T_J$                              | - 5 5 to + 1 2 5 |       |       |          |        |       | °C   |
| storage temperature range   | $T_{STG}$                          | -55 to +150      |       |       |          |        |       | °C   |

Note: 1. Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2×0.2"(5.0×5.0mm) copper pad areas.



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## Ratings And Characteristic Curves

Fig.1 Forward Current Derating Curve

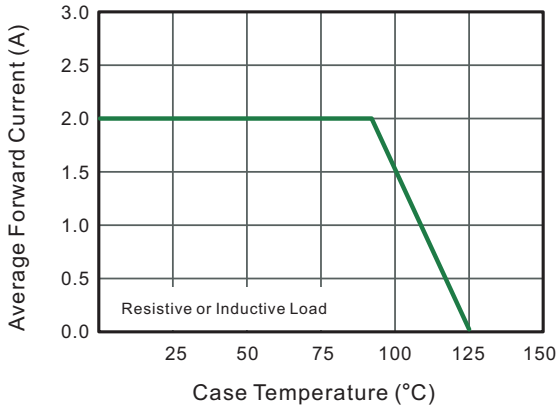


Fig.2 Typical Reverse Characteristics

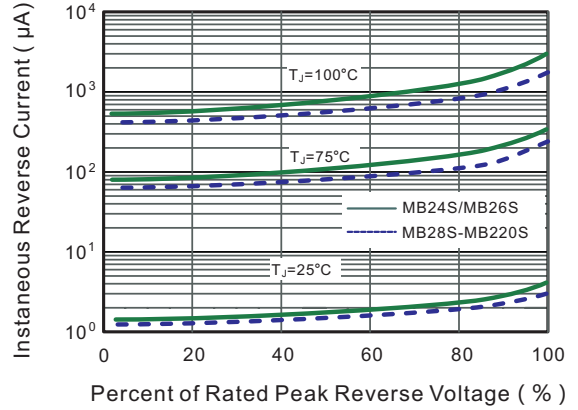


Fig.3 Typical Forward Characteristic

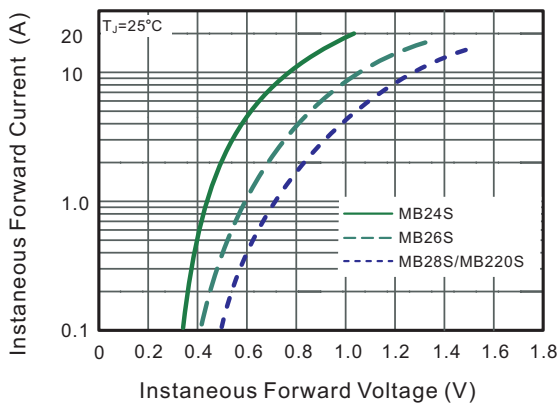


Fig.4 Typical Junction Capacitance

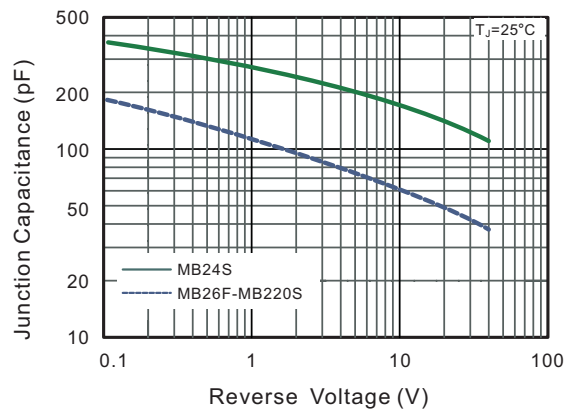


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

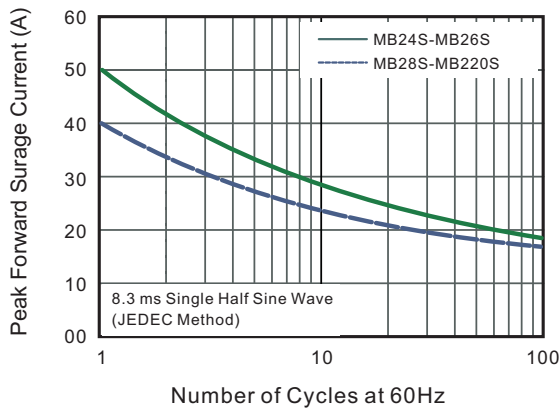
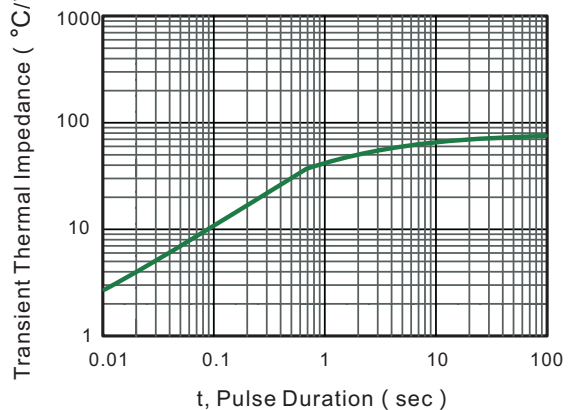
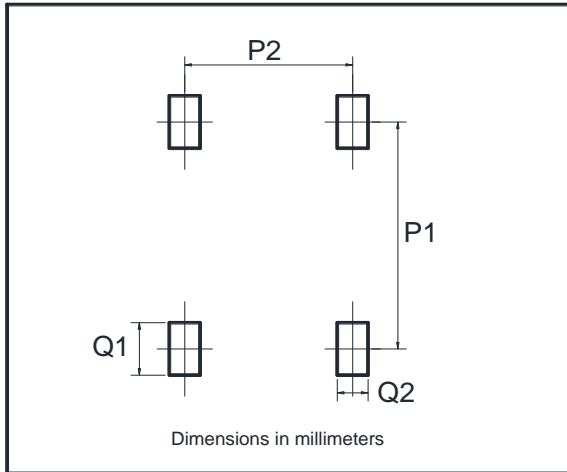


Fig.6- Typical Transient Thermal Impedance



The curve above is for reference only.

## Suggested Pad Layout



| Dim | Min  |
|-----|------|
| P1  | 6.00 |
| P2  | 2.40 |
| Q1  | 1.84 |
| Q2  | 1.20 |

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