

### Features

- High Temperature Soldering Guaranteed: 260°C/10 Second
- Saves Space On Printed Circuit Board

### Mechanical Data

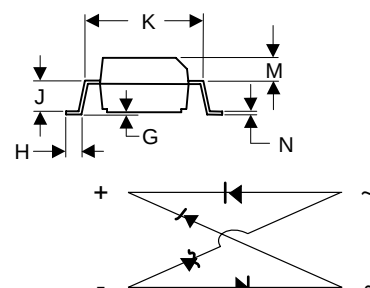
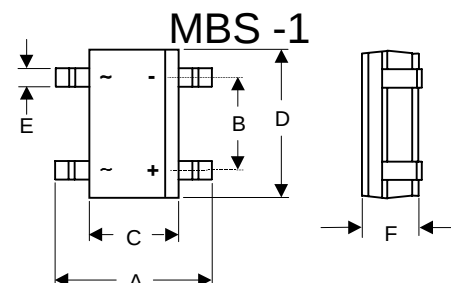
- Lead Free Finish/RoHS Compliant (NOTE 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- Terminals: Plated leads Solderable per MIL-STD-750, Method 2026
- Moisture Sensitivity: Level 1 per J-STD-020C

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|----------------------------------------|---------------------|-----------------------------|
| MB12S           | MB12S          | 20V                                    | 14V                 | 20V                         |
| MB14S           | MB14S          | 40V                                    | 28V                 | 40V                         |
| MB16S           | MB16S          | 60V                                    | 42V                 | 60V                         |
| MB18S           | MB18S          | 80V                                    | 56V                 | 80V                         |
| MB110S          | MB110S         | 100V                                   | 70V                 | 100V                        |

### Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                                               |                          |                                                |                                             |
|-------------------------------------------------------------------------------|--------------------------|------------------------------------------------|---------------------------------------------|
| Average Forward Current                                                       | $I_{F(AV)}$              | 1A                                             |                                             |
| Peak Forward Surge Current                                                    | $I_{FSM}$                | 30A                                            | 8.3ms, half sine                            |
| Maximum Instantaneous Forward Voltage<br>MB12S-MB14S<br>MB16S<br>MB18S-MB110S | $V_F$                    | 0.50V<br>0.70V<br>0.85V                        | $I_{FM} = 1A$ ;<br>$T_A = 25^{\circ}C$      |
| Maximum DC Reverse Current At Rated DC Blocking Voltage                       | $I_R$                    | 0.5mA<br>20mA                                  | $T_A = 25^{\circ}C$<br>$T_A = 100^{\circ}C$ |
| Typical Thermal Resistance                                                    | $R_{thJA}$<br>$R_{thJL}$ | 88°C/W <sup>(2)</sup><br>28°C/W <sup>(2)</sup> | per leg                                     |
| Operating Junction and Storage Temperature Range                              | $T_J$<br>$T_{STG}$       | -55 to +150°C                                  |                                             |

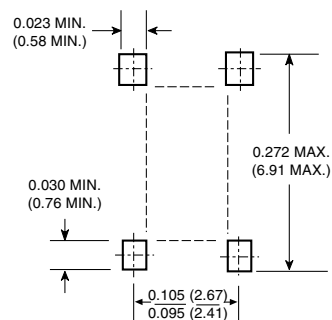
- Notes:
1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7
  2. Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2\*0.2"(5.0\*5.0mm) copper pad areas.



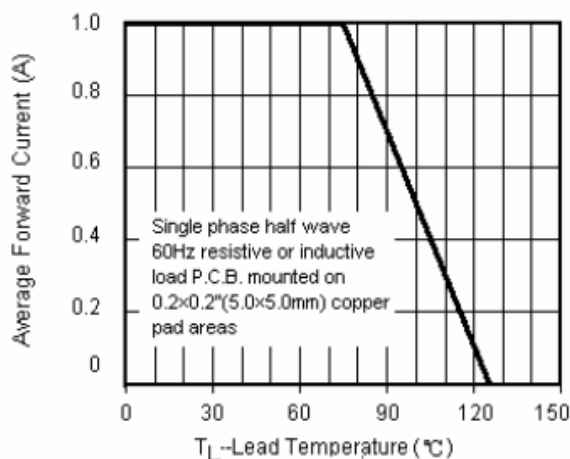
Case Style

| DIMENSIONS |            |      |      |      |      |
|------------|------------|------|------|------|------|
| DIM        | INC<br>HES |      | MM   |      | NOTE |
|            | MIN        | MAX  | MIN  | MAX  |      |
| A          | .252       | .275 | 6.40 | 7.00 |      |
| B          | .095       | .106 | 2.41 | 2.70 |      |
| C          | .150       | .165 | 3.80 | 4.20 |      |
| D          | .179       | .195 | 4.55 | 4.95 |      |
| E          | .019       | .031 | 0.50 | 0.80 |      |
| F          | .090       | .106 | 2.30 | 2.70 |      |
| G          | .004       | .008 | 0.10 | 0.20 |      |
| H          | .027       | .043 | 0.70 | 1.10 |      |
| J          | .058       | .062 | 1.47 | 1.57 |      |
| K          | .195       | .205 | 4.95 | 5.21 |      |
| M          | .039       | .049 | 0.99 | 1.24 |      |
| N          | .006       | .016 | 0.15 | 0.41 |      |

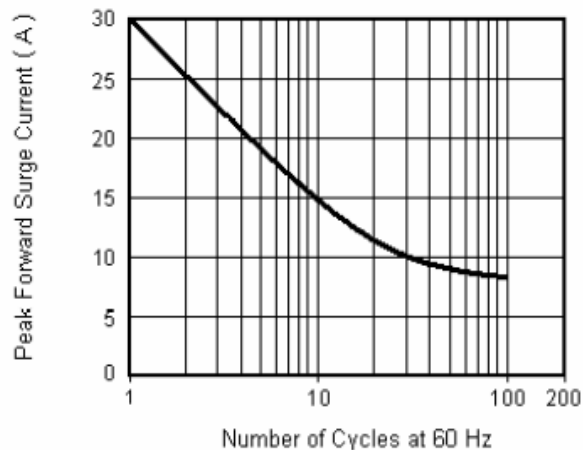
### Mounting Pad Layout



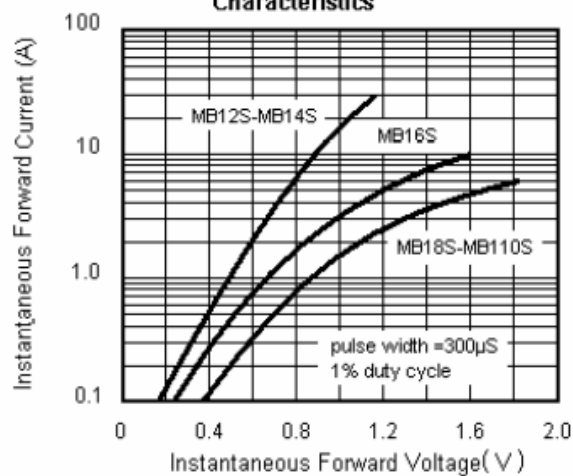
**Fig.1 Forward Current Derating Curve**



**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**

