

Surface Mount Schottky Bridge Rectifier

MB12S THRU MB110S

1Amp 20 to 100 Volts

Features

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

Mechanical Data

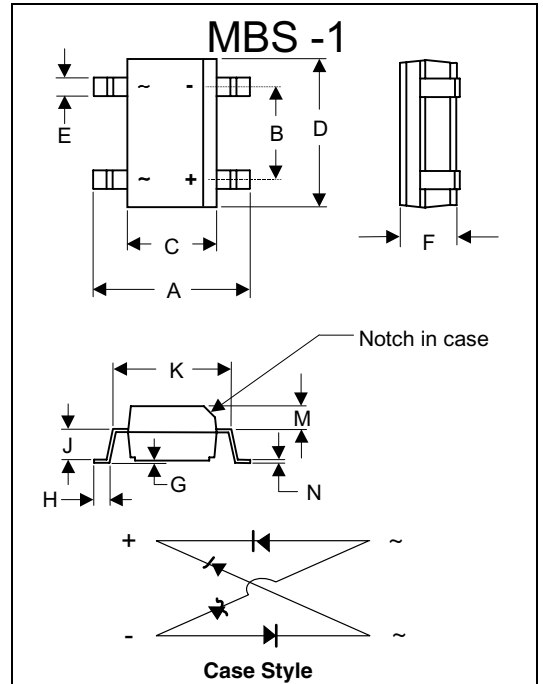
- Lead Free Finish/RoHS Compliant (NOTE 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- Terminals: Plated leads Solderable per MIL-STD-750, Method 2026
- Moisture Sensitivity: Level 1 per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

| 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

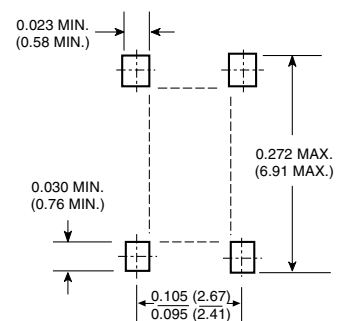
| | | | |
|--|--------------------------|--|---|
| Average Forward Current | $I_{F(AV)}$ | 1A | |
| Peak Forward Surge Current | I_{FSM} | 30A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage 12S-14S MB14S MB16S MB18S-MB110S | V_F | 0.50V 0.70V 0.85V | $I_{FM} = 1A;$ $T_A = 25^\circ C$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 0.5mA 20mA | $T_A = 25^\circ C$ $T_A = 100^\circ C$ |
| Typical Thermal Resistance | R_{thJA} R_{thJL} | $88^\circ C/W^{(2)}$ $28^\circ C/W^{(2)}$ | per leg |
| Operating Junction and Storage Temperature Range | T_J T_{STG} | -55 to +150 °C | |

- Notes:
1. High Temperature Solder Exemption Applied.
 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.



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|------|------|------|
| | INC HES | | MM | | |
| | 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



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Fig.1 Forward Current Derating Curve

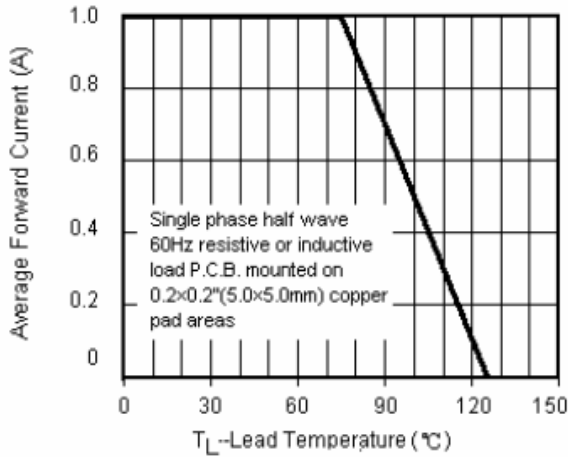


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

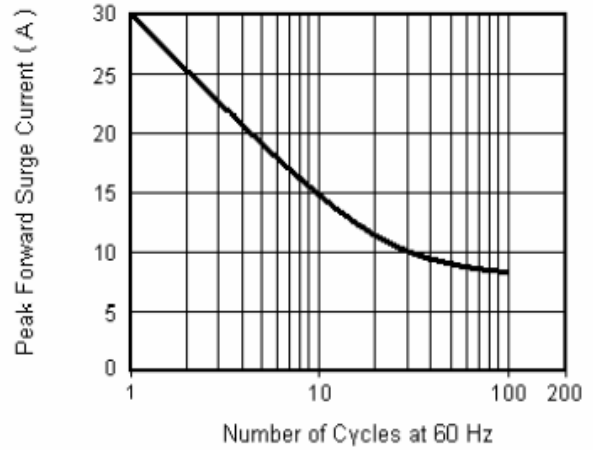


Fig.3 Typical Instantaneous Forward Characteristics

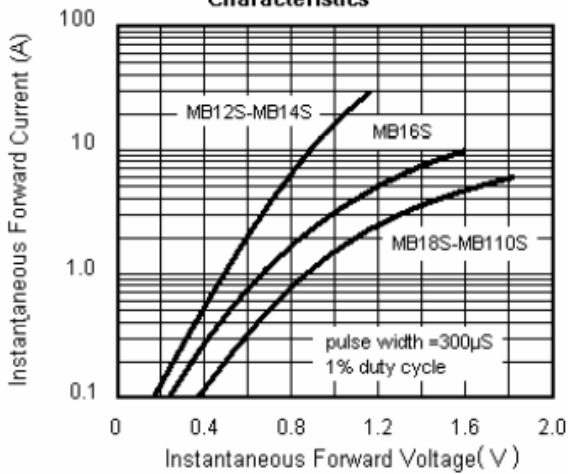


Fig.4 Typical Junction Capacitance

