

| | |
|---|----------------|
|  | E502650 |
|---|----------------|

Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Terminals: Plated Leads Solderable Per MIL-STD-750, Method 2026
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

Maximum Ratings

- Operating Junction Temperature Range(MB12S~MB14S): -55°C to +125°C
- Operating Junction Temperature Range(MB16S~MB110S): -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance(Note2): 28°C/W Junction to Lead
- Typical Thermal Resistance(Note2): 88°C/W Junction to Ambient

| 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 |

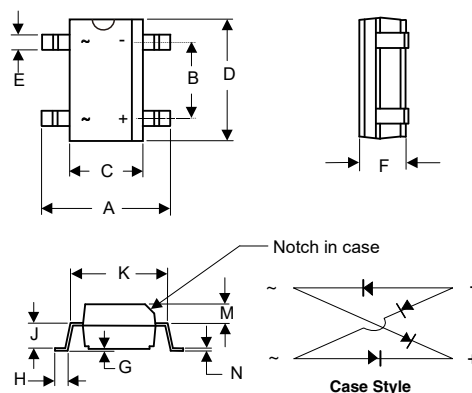
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|-------------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 1A | $T_A = 75^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 30A | 8.3ms, Half Sine |
| Maximum Instantaneous Forward Voltage | V_F | 0.50V 0.70V 0.85V | $I_{FM} = 1A$; $T_A = 25^\circ\text{C}$ |
| | | | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | 0.1mA 10mA | $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$ |

Note: 1. High Temperature Solder Exemption Applied, See EU Directive Annex Notes 7a.
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.

1 Amp Surface Mount Schottky Bridge Rectifier 20 to 100 Volts

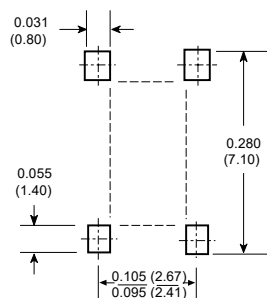
MBS-1



DIMENSIONS

| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.252 | 0.276 | 6.40 | 7.00 | |
| B | 0.095 | 0.106 | 2.41 | 2.70 | |
| C | 0.142 | 0.165 | 3.60 | 4.20 | |
| D | 0.179 | 0.195 | 4.55 | 4.95 | |
| E | 0.019 | 0.031 | 0.50 | 0.80 | |
| F | 0.090 | 0.106 | 2.30 | 2.70 | |
| G | 0.002 | 0.008 | 0.05 | 0.20 | |
| H | 0.027 | 0.043 | 0.70 | 1.10 | |
| J | 0.058 | 0.062 | 1.47 | 1.57 | |
| K | 0.195 | 0.205 | 4.95 | 5.21 | |
| M | 0.039 | 0.049 | 0.99 | 1.24 | |
| N | 0.006 | 0.016 | 0.15 | 0.41 | |

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Forward Current Derating Curve

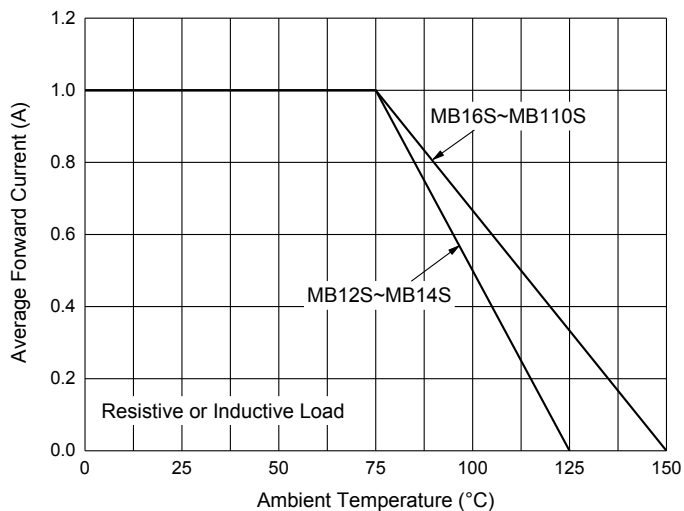


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

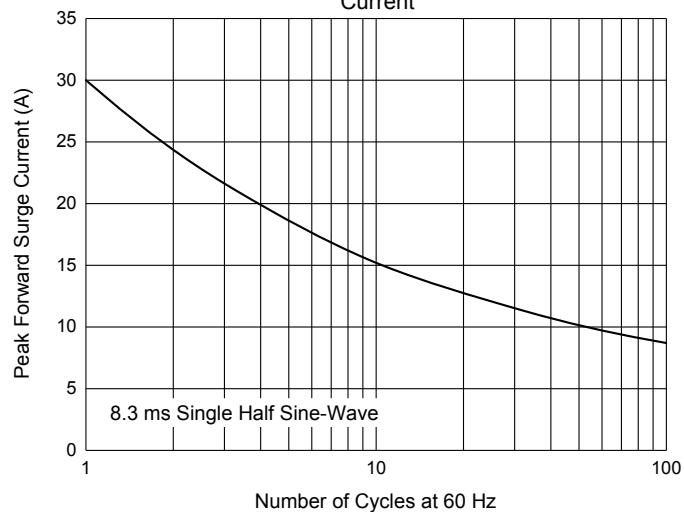


Fig. 3 - Typical Instantaneous Forward Characteristics

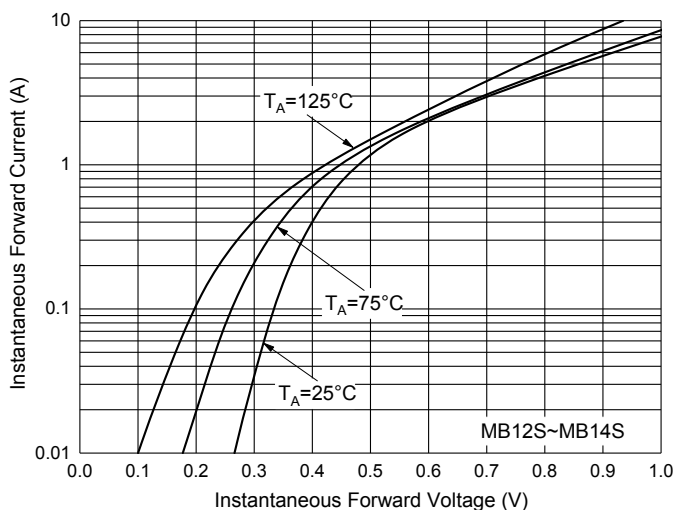


Fig. 4 - Typical Instantaneous Forward Characteristics

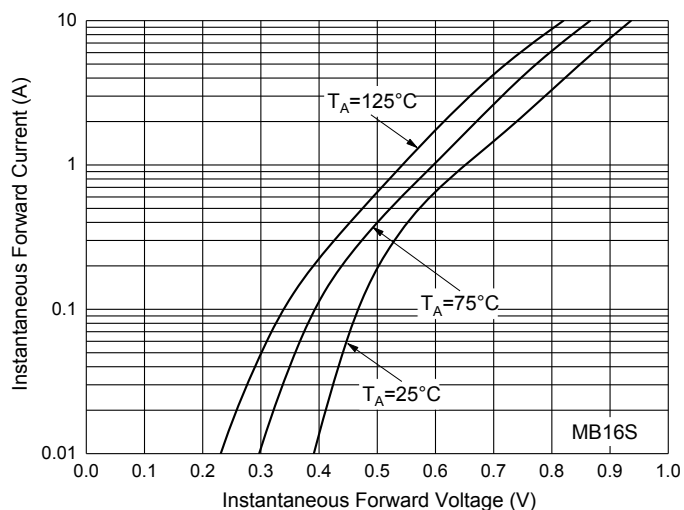


Fig. 5 - Typical Instantaneous Forward Characteristics

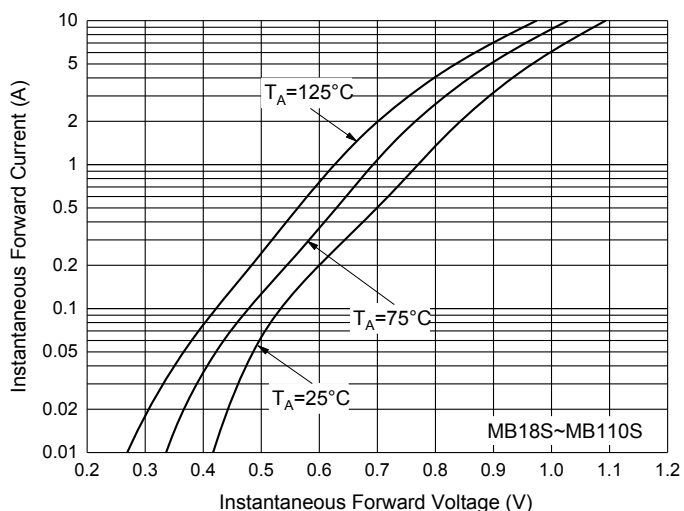
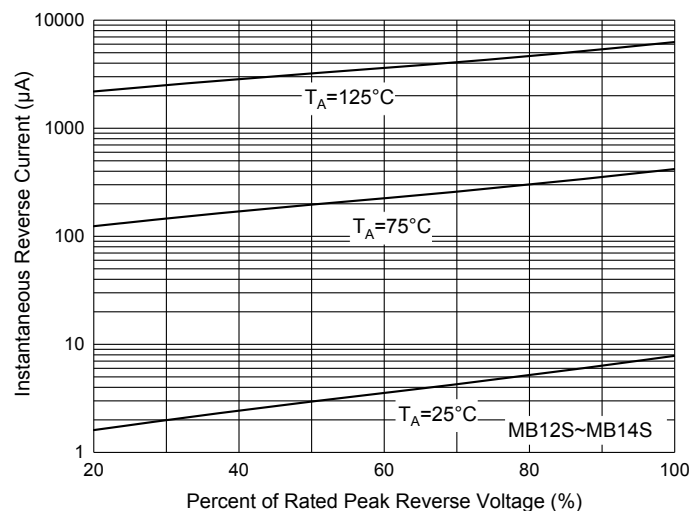


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Reverse Leakage Characteristics

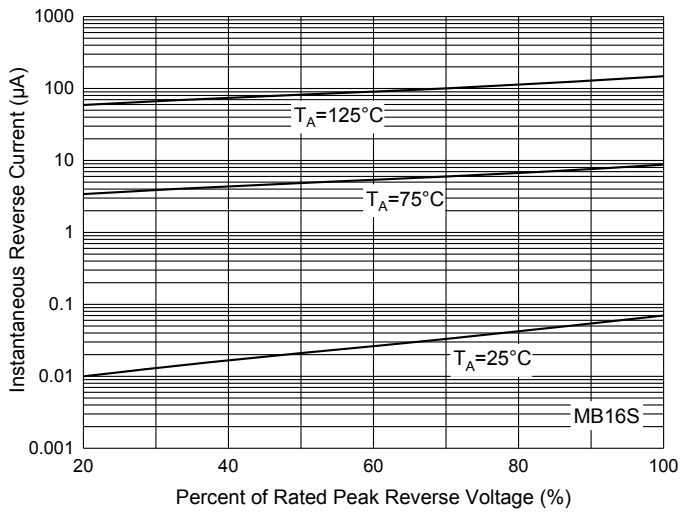
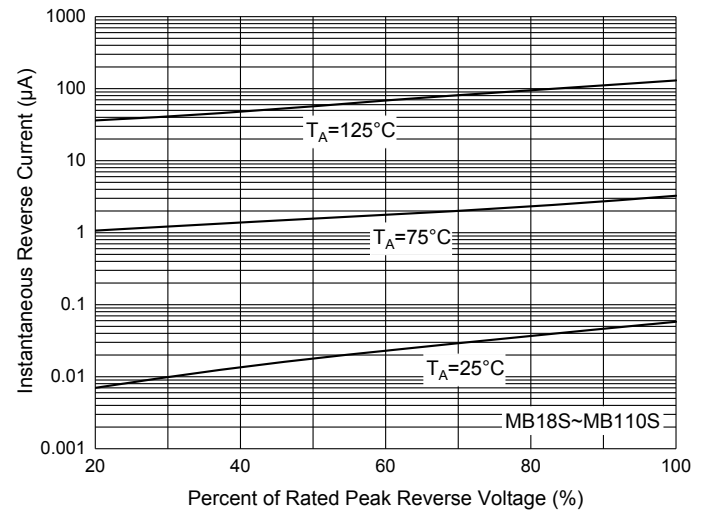


Fig. 8 - Typical Reverse Leakage Characteristics



Ordering Information

| Device | Packing |
|------------------|----------------------|
| (Part Number)-TP | Tape&Reel:3Kpcs/Reel |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
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