



Micro Commercial Components
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HDBS101G THRU HDBS107G

Features

- High Forward Surge Capability
- Ideal for printed circuit boards
- High Temperature Soldering: 250°C for 10 seconds
- Reliable low cost construction utilizing molded plastic technique

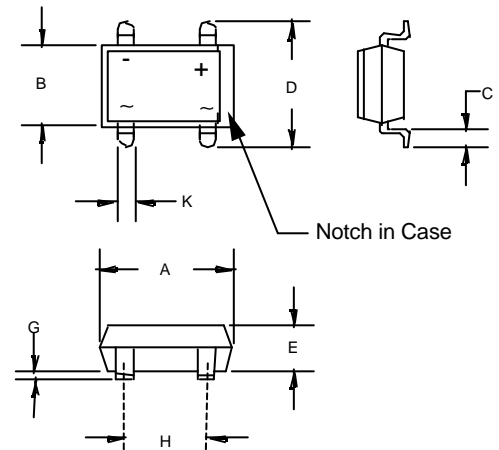
Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- For Capacitive Load, Derate Current by 20%

| MCC Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|--|---------------------|-----------------------------|
| HDBS101G | 50V | 35V | 50V |
| HDBS102G | 100V | 70V | 100V |
| HDBS103G | 200V | 140V | 200V |
| HDBS104G | 400V | 280V | 400V |
| HDBS105G | 600V | 420V | 600V |
| HDBS106G | 800V | 560V | 800V |
| HDBS107G | 1000V | 700V | 1000V |

1.0 AMP. Glass Passivated Bridge High Efficient Rectifier 50 to 1000 Volts

SDB-1



Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|--|---|
| Average Forward Current | $I_{F(AV)}$ | 1.0 A | $T_C = 40^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 50A | 8.3ms, half sine $T_J=150^\circ\text{C}$ |
| Maximum Instantaneous Forward Voltage HDBS101G-103G HDBS104G HDBS105G-107G | V_F | 1.0V 1.3V 1.7V | $I_{FM} = 1.0\text{A};$ $T_C = 25^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5.0 μA 500 μA | $T_C = 25^\circ\text{C}$ $T_C = 125^\circ\text{C}$ |
| Maximum Reverse Recovery Time HDBS101G-104G HDBS105G-107G | T_{rr} | 50ns 75ns | $I_F=0.5\text{A}, I_R=1.0\text{A},$ $I_r=0.25\text{A}$ |

| DIM | INCHES | | MM | | NOTE |
|-----|--------|------|-------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .320 | .335 | 8.13 | 8.50 | |
| B | .245 | .255 | 6.20 | 6.50 | |
| C | .040 | .060 | 1.02 | 1.52 | |
| D | .386 | .404 | 9.80 | 10.3 | |
| E | .120 | .130 | 3.05 | 3.30 | |
| G | .003 | .013 | 0.076 | 0.33 | |
| H | .195 | .205 | 5.00 | 5.20 | |
| K | .040 | .047 | 1.02 | 1.20 | TYP |

Suggested Solder Pad Layout

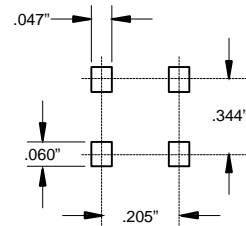


FIG. 1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

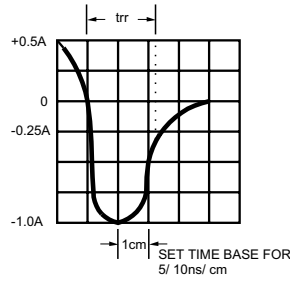
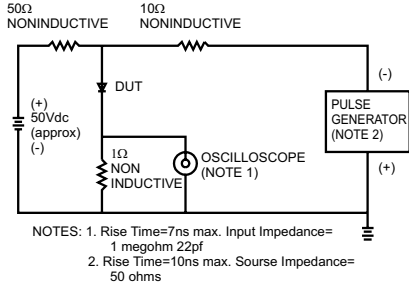


FIG. 2- MAXIMUM FORWARD CURRENT DERATING CURVE

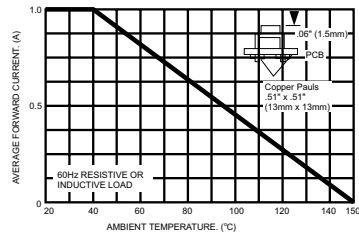


FIG. 3- TYPICAL REVERSE CHARACTERISTICS

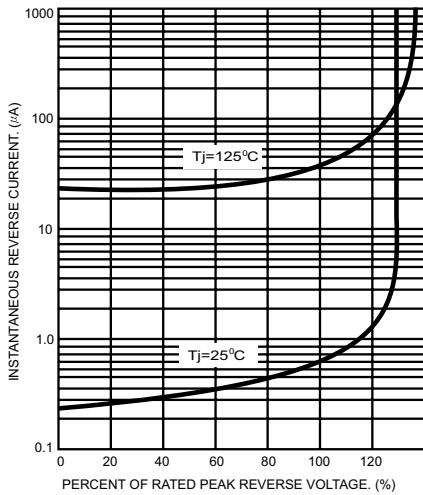


FIG. 4- TYPICAL FORWARD CHARACTERISTICS

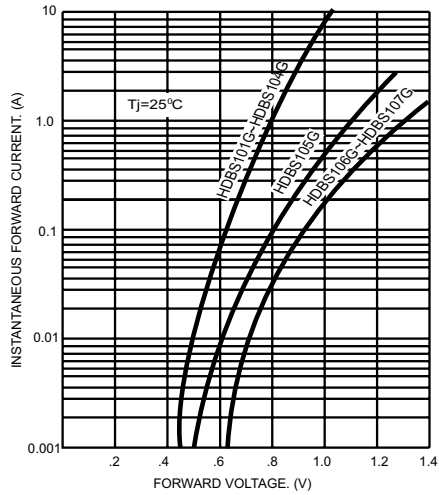


FIG. 5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

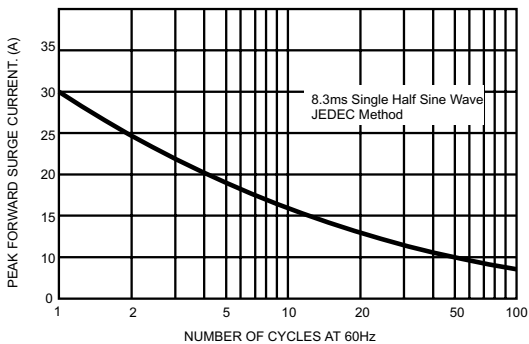


FIG. 6- TYPICAL JUNCTION CAPACITANCE

