

GLASS PASSIVATED BRIDGE RECTIFIER

**REVERSE VOLTAGE – 1000 Volts
FORWARD CURRENT – 2.0 Amperes**

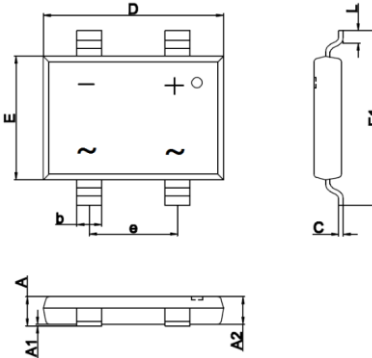
FEATURES

- Ideal for printed circuit board
- Reliable construction utilizing molded plastic technique
- UL recognized file#E364304
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Package Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free".
- Polarity: As marked on the body
- Weight: 0.389 grams (Approximate)
- Marking: TT2M

TT



| TT | | | |
|-------------------------------|-------|-------|-------|
| DIM. | MIN. | TYP. | MAX. |
| A | 1.45 | 1.65 | 1.80 |
| A1 | 0.00 | 0.10 | 0.15 |
| A2 | 1.45 | 1.55 | 1.65 |
| C | 0.15 | 0.25 | 0.35 |
| D | 10.05 | 10.20 | 10.35 |
| E | 6.85 | 7.00 | 7.15 |
| E1 | 9.75 | 9.90 | 10.05 |
| L | 0.45 | 0.70 | 0.95 |
| b | 1.30 | 1.40 | 1.50 |
| e | 4.90 | 5.00 | 5.10 |
| All dimension in millimetres. | | | |

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

| PARAMETER | SYMBOL | VALUE | UNIT |
|---|---|-------------|------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 1000 | V |
| Maximum DC blocking voltage | V_{DC} | 1000 | V |
| Average rectified output current per device | @ $T_A = 25^\circ\text{C}$ (Note 4) $I_{(AV)}$ | 2.0 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load | @ $T_A = 25^\circ\text{C}$ | 75 | A |
| | @ $T_A = 125^\circ\text{C}$ (Note 4) | 60 | |
| Peak forward surge current 1ms single half sine-wave superimposed on rated load | @ $T_A = 25^\circ\text{C}$ | 150 | A |
| | @ $T_A = 125^\circ\text{C}$ (Note 4) | 120 | |
| I^2t rating for fusing (t = 8.3ms) | I^2t | 14.9 | A ² S |
| Operating and storage temperature range | T_J, T_{STG} | -55 to +150 | °C |

STATIC ELECTRICAL CHARACTERISTICS

| PARAMETER | TEST CONDITION | SYMBOL | TYP. | MAX. | UNIT |
|---------------------------------------|--|--------|--------------|-----------|------|
| Forward voltage (Note 4) | $I_F = 1\text{A}$ $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$ (Note 4) | V_F | 0.89 0.76 | 1.1 -- | V |
| Leakage current | $V_R = 1000\text{V}$ $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$ (Note 4) | I_R | 0.10 22 | 5 500 | uA |
| Typical junction capacitance (Note 5) | | C_T | 25 | | pF |

THERMAL CHARACTERISTICS

| PARAMETER | SYMBOL | TYP. | UNIT |
|---|------------|------|------|
| Typical Thermal Resistance (without Heatsink) | R_{thJC} | 30 | °C/W |
| | R_{thJL} | 10 | |
| | R_{thJA} | 50 | |
| Typical thermal resistance (Note 6) | R_{thJC} | 7 | °C/W |
| | R_{thJL} | 25 | |
| | R_{thJA} | 30 | |

Note :

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. Perform static test after the temperature of oven is steady 20 minutes.
5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC
6. Thermal resistance junction to case, lead and ambient in accordance with JESD-51. Unit mounted on glass-epoxy substrate with 1oz/ft² _ 10 x 10 mm copper pad per pin.

REV-2, NOV-2021, KBDA50

RATING AND CHARACTERISTIC CURVES
TT2M(LS)

FIG.1- FORWARD CURRENT DERATING CURVE

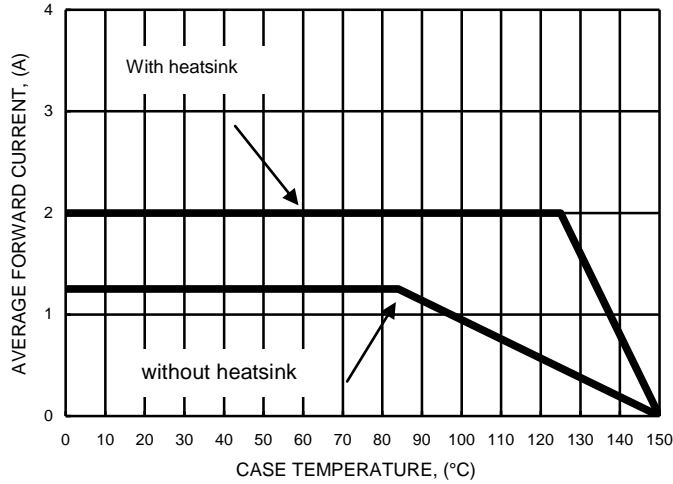


FIG.2- FORWARD CURRENT DERATING CURVE

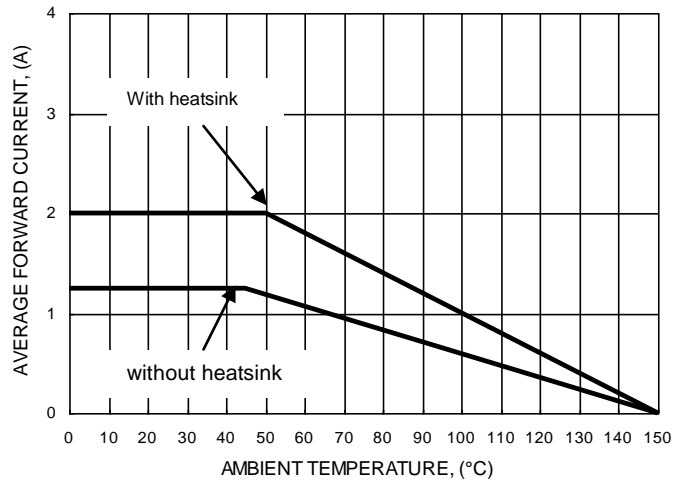


FIG.3- MAXIMUM NON-REPETITIVE SURGE CURRENT

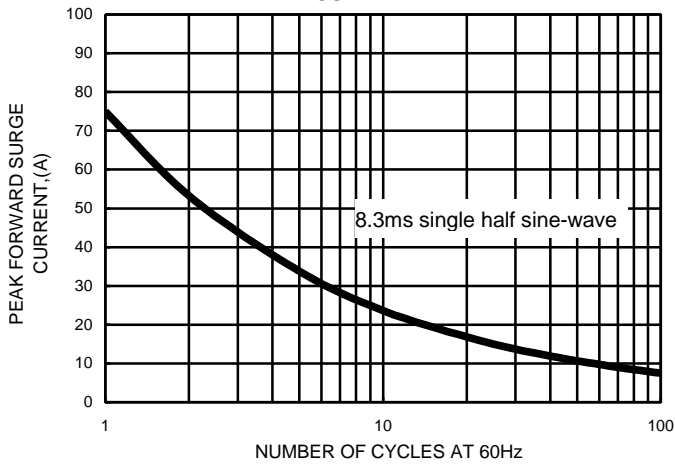


FIG.4- TYPICAL FORWARD CHARACTERISTICS

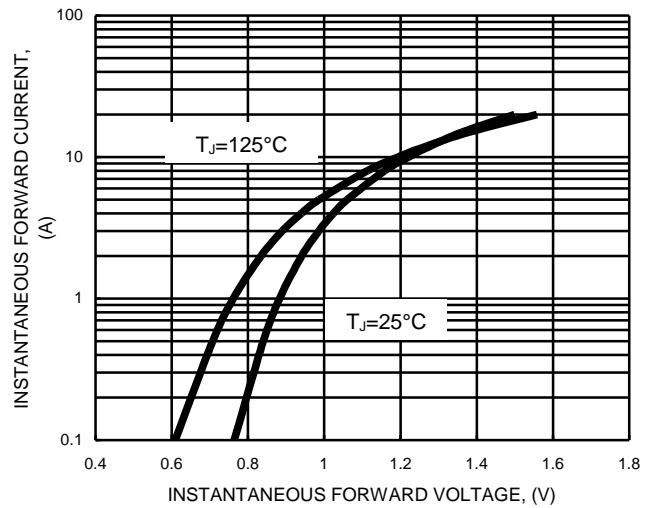


FIG.5- TYPICAL JUNCTION CAPACITANCE

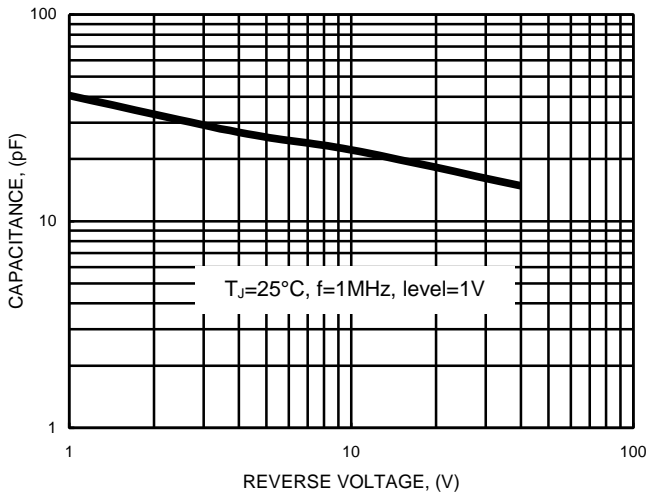
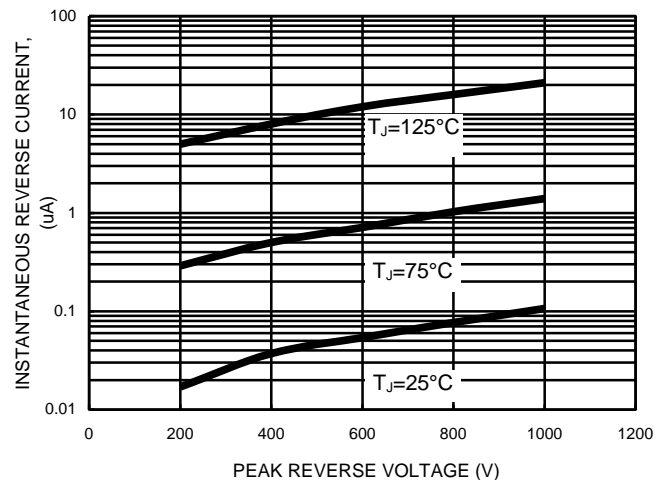


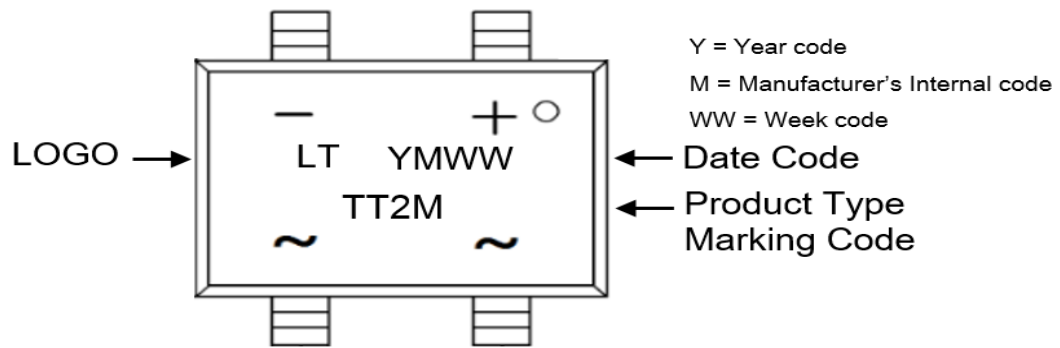
FIG.6- TYPICAL REVERSE CHARACTERISTICS



Ordering Information :

| Part Number | Package | Packing | |
|-------------|---------|---------|-------------|
| | | Qty. | Carrier |
| TT2M_HF | TT | 1500 | Tape & Reel |

Marking Information:



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