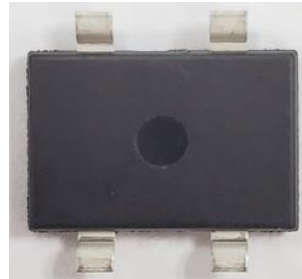


Product Summary

| V _{RRM} (V) | I _F (A) | V _F Max (V) @ I _F = 2A | I _R Max (μA) |
|----------------------|--------------------|---|-------------------------|
| 1000 | 4 | 1.0 | 5 |

Mechanical Data

- Case: TTL
- Case Material: “Green” Molding Compound, UL Flammability Classification 94V-0 (No Br. Sb. Cl.)
- Moisture Sensitivity: Level 1 Per J-STD-020
- Terminals: Finish – Matte Tin Plated Leads, Solderable Per MIL-STD-202, Method 208 Ⓜ3
- Polarity Indicator: As Marked on The Body
- Weight: 0.41 grams (Approximate)



Features

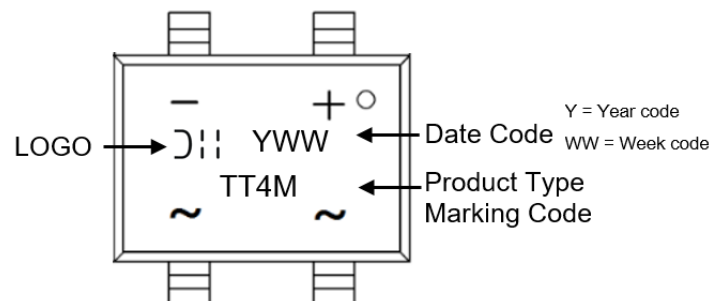
- Glass Passivated Die Construction
- Ideal for Printed Circuit Board
- Reliable Low Cost Construction Utilizing Molded Plastic Technique
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. “Green” Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](mailto:contact@diodes.com) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

Ordering Information (Note 4)

| Part Number | Qualification | Case | Packaging |
|-------------|---------------|------|-----------|
| TT4M | Commercial | TTL | 1500/Reel |

- Notes:
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. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information



Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

| Characteristic | Symbol | Value | Unit |
|--|-----------------------------------|--------------------------|------------------|
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | 1000 | V |
| Maximum DC Blocking Voltage | V _{DC} | 1000 | V |
| Average Rectified Output Current @T _A = +25°C | I _{F(AV)} | 4.0 | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave | I _{FSM} | @T _A = +25°C | 120 |
| | | @T _A = +125°C | 96 |
| Peak Forward Surge Current 1.0ms Single Half Sine-Wave | I _{FSM} | @T _A = +25°C | 240 |
| | | @T _A = +125°C | 192 |
| I ² t Rating for Fusing (t = 8.3ms) | I ² t | 59.7 | A ² s |
| Operating And Storage Temperature Range | T _J , T _{STG} | -55 to +150 | °C |

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

| Characteristic | Test Condition | Symbol | Typ. | Max | Unit |
|---------------------------------------|---|----------------|------|-----|------|
| Forward Voltage | I _F = 2A T _A = +25°C T _A = +125°C | V _F | 0.91 | 1.0 | V |
| | | | 0.80 | — | |
| Leakage Current | V _R = 1000V T _A = +25°C T _A = +125°C | I _R | 0.06 | 5 | μA |
| | | | 19 | 500 | |
| Typical Junction Capacitance (Note 5) | | C _J | 35 | | pF |

Thermal Characteristics

| Characteristic | Symbol | Typ. | Unit |
|---|------------------|------|------|
| Typical Thermal Resistance (Without Heatsink) | R _{θJC} | 8 | °C/W |
| | R _{θJL} | 10 | |
| | R _{θJA} | 60 | |
| Typical Thermal Resistance (Note 6) | R _{θJC} | 3 | °C/W |
| | R _{θJL} | 6 | |
| | R _{θJA} | 15 | |

- Notes: 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 15mmx12mmx1.6mm AL pad attached on 40mmx30mmx24mm fin heatsink.

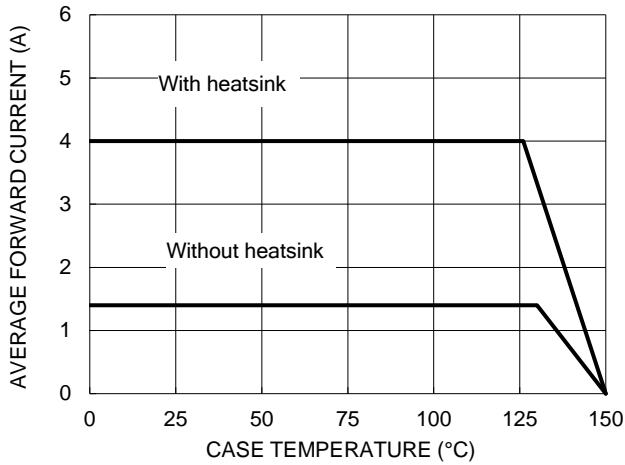


Figure 1. Forward Current Derating Curve

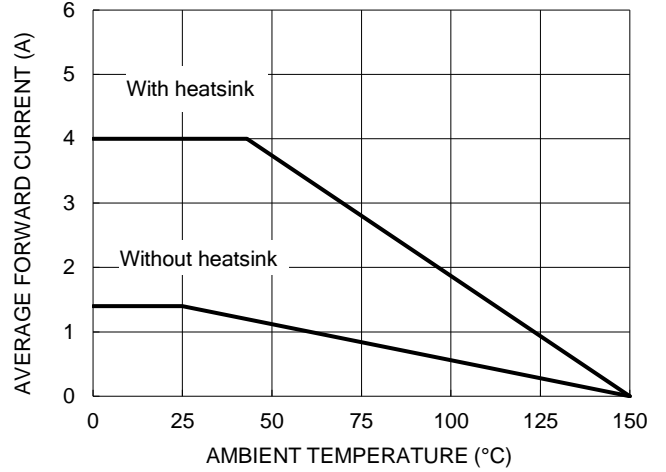


Figure 2. Forward Current Derating Curve

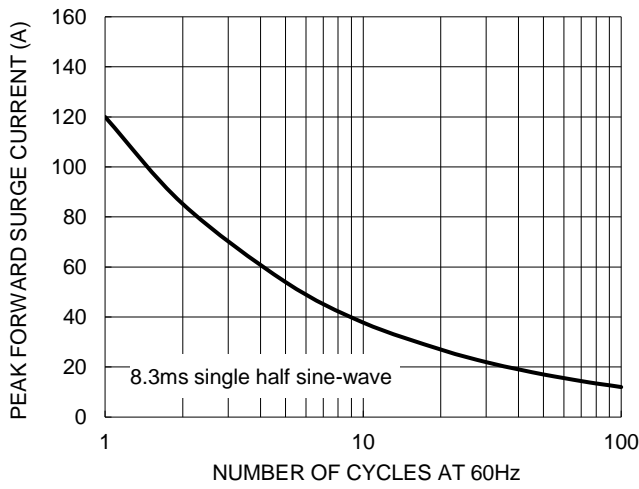


Figure 3. Maximum Non-repetitive Surge Current

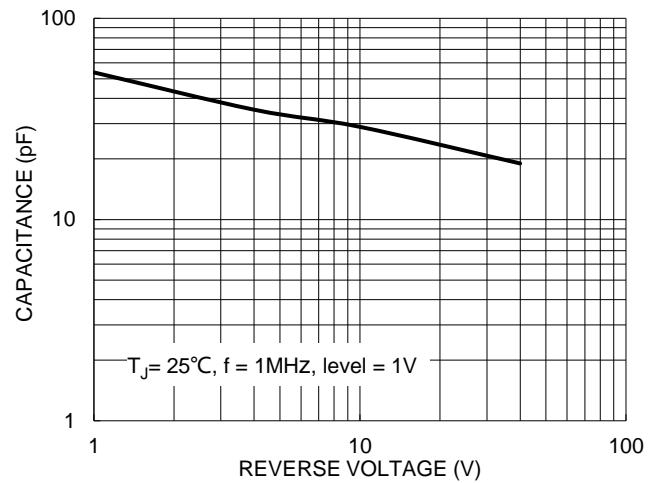


Figure 4. Typical Junction Capacitance

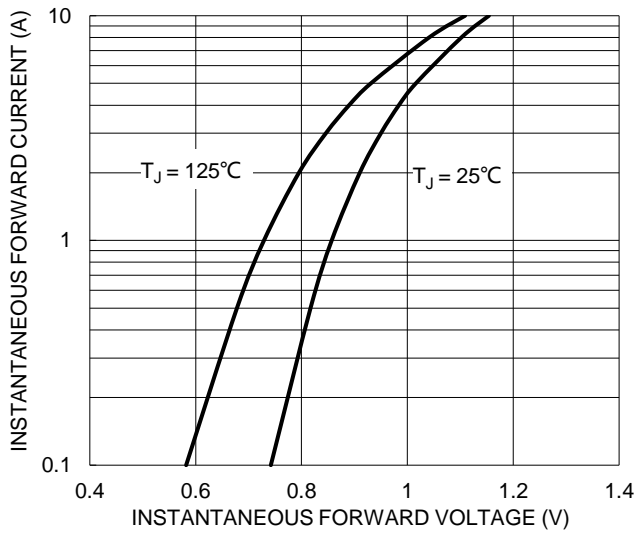


Figure 5. Typical Forward Characteristics

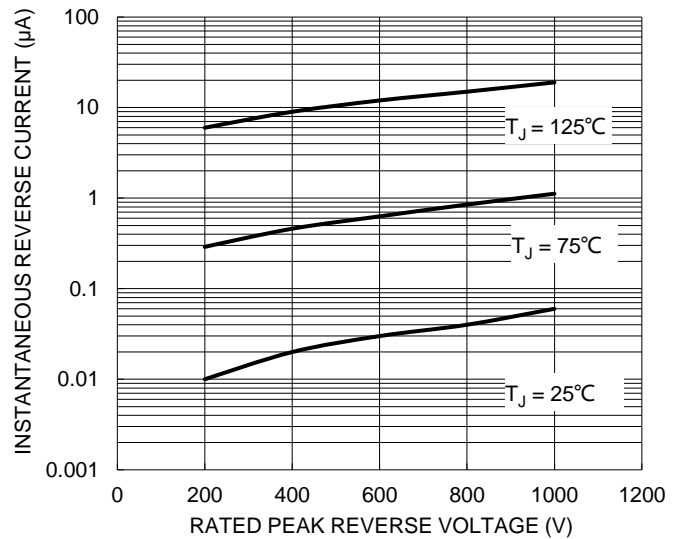
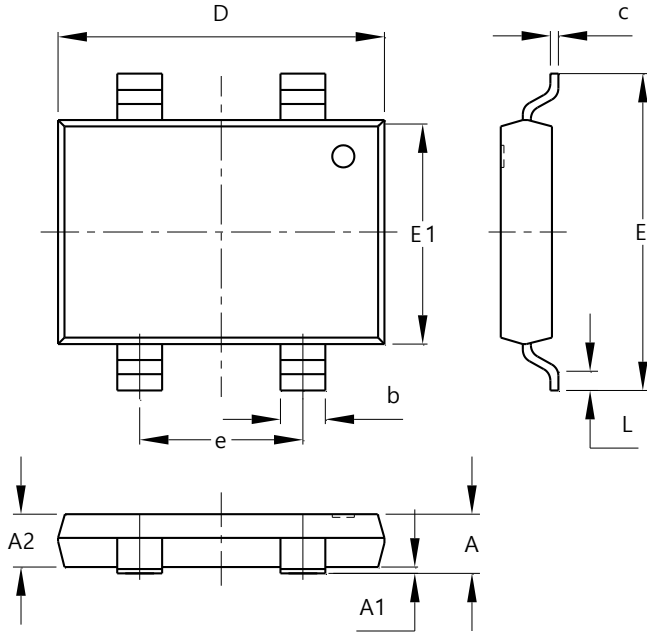


Figure 6. Typical Reverse Characteristics

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

TTL

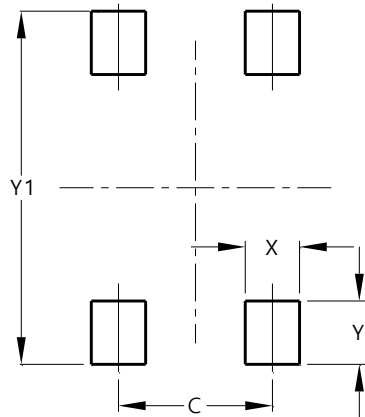


| TTL | | | |
|----------------------|-------|-------|-------|
| Dim | Min | Max | TYP |
| A | 1.45 | 1.80 | 1.65 |
| A1 | 0.00 | 0.15 | 0.10 |
| A2 | 1.45 | 1.65 | 1.55 |
| b | 1.30 | 1.50 | 1.40 |
| c | 0.15 | 0.35 | 0.25 |
| D | 10.05 | 10.35 | 10.20 |
| E | 9.75 | 10.05 | 9.90 |
| E1 | 6.85 | 7.15 | 7.00 |
| e | 4.90 | 5.10 | 5.00 |
| L | 0.45 | 0.95 | 0.70 |
| All Dimensions in mm | | | |

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

TTL



| Dimensions | Value (in mm) |
|------------|---------------|
| C | 5.00 |
| X | 1.80 |
| Y | 2.10 |
| Y1 | 11.70 |

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