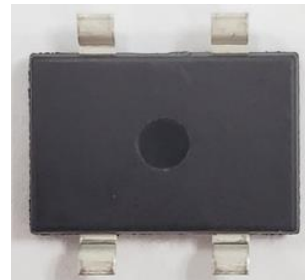


Product Summary

V _{RRM} (V)	I _F (A)	V _F Max (V) @ I _F = 3A	I _r Max (μA)
1000	6	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

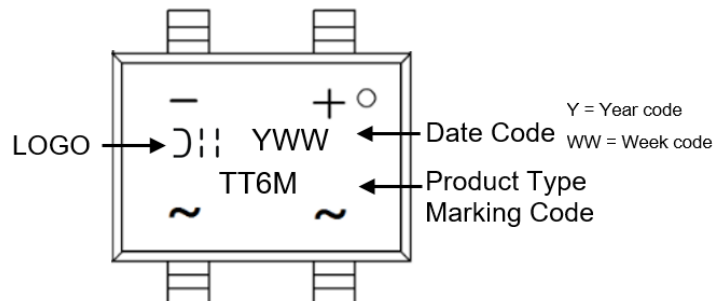
- Glass Passivated Die Construction
- Ideal for Printed Circuit Board
- Reliable Low Cost Construction Utilizing Molded Plastic Technique
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change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

Ordering Information (Note 4)

Part Number	Qualification	Case	Packaging
TT6M	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 (Note 5)	I _{F(AV)}	6.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave @T _A = +25°C @T _A = +125°C	I _{FSM}	150 120	A
Peak Forward Surge Current 1.0ms Single Half Sine-Wave @T _A = +25°C @T _A = +125°C	I _{FSM}	300 240	A
I ² t Rating for Fusing (t = 8.3ms)	I ² t	93.3	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 = 3A T _A = +25°C T _A = +125°C	V _F	0.93 0.82	1.0 —	V
Leakage Current	V _R = 1000V T _A = +25°C T _A = +125°C	I _R	0.07 20	5 500	µA
Typical Junction Capacitance (Note 6)		C _J	46		pF

Thermal Characteristics

Characteristic	Symbol	Typ.	Unit
Typical Thermal Resistance (Without Heatsink)	R _{θJC} R _{θJL} R _{θJA}	8 9 45	°C/W
Typical Thermal Resistance (Note 7)	R _{θJC} R _{θJL} R _{θJA}	2 6 12	°C/W

- Notes:
5. Perform static test after the temperature of oven is steady 20 minutes.
 6. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 7. Thermal resistance junction to case, lead and ambient in accordance with JESD-51.
Unit mounted on 15mmx12mmx1.6mm AL pad attached on 100mmx75mmx27mm AL fin heatsink.

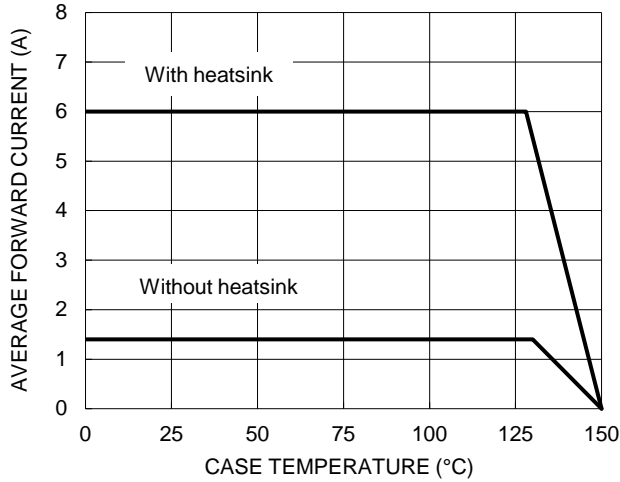


Figure 1. Forward Current Derating Curve

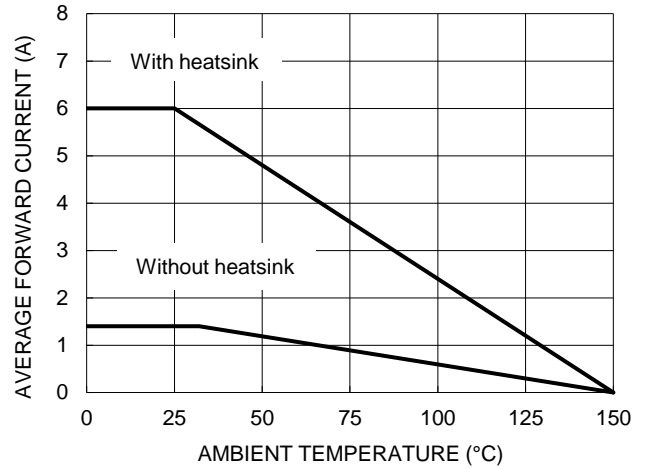


Figure 2. Forward Current Derating Curve

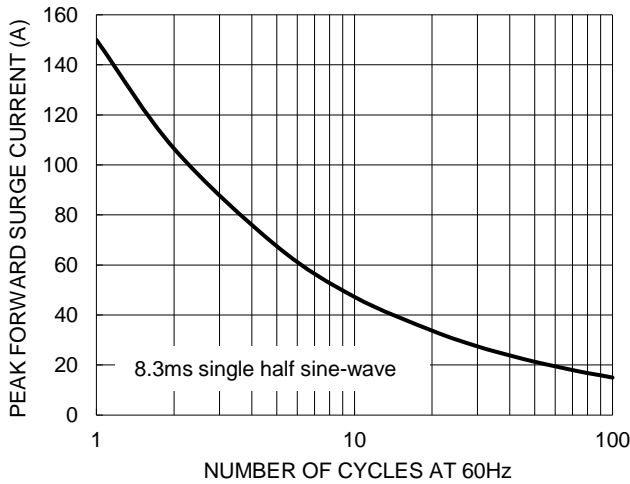


Figure 3. Maximum Non-repetitive Surge Current

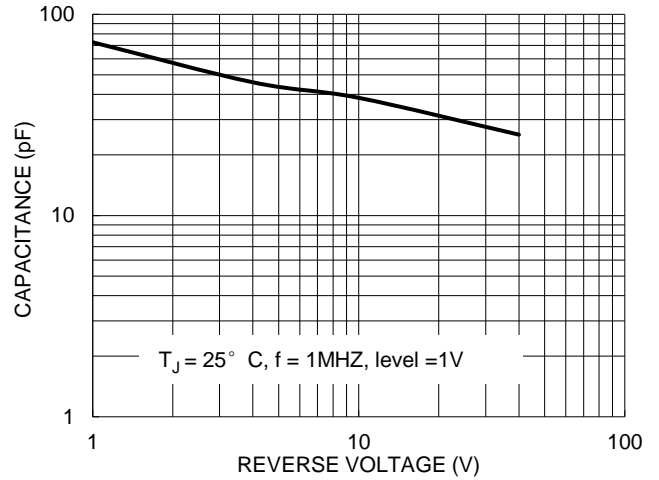


Figure 4. Typical Junction Capacitance

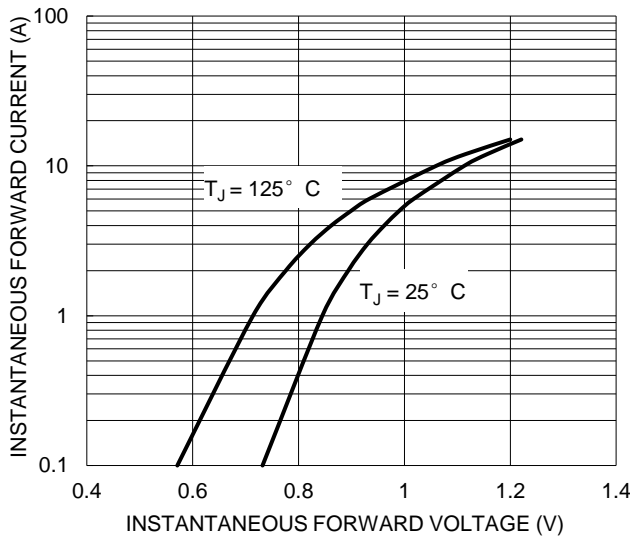


Figure 5. Typical Forward Characteristics

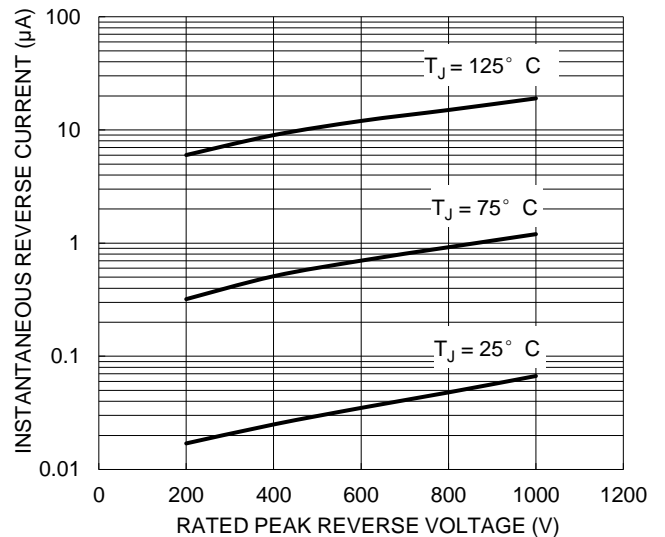
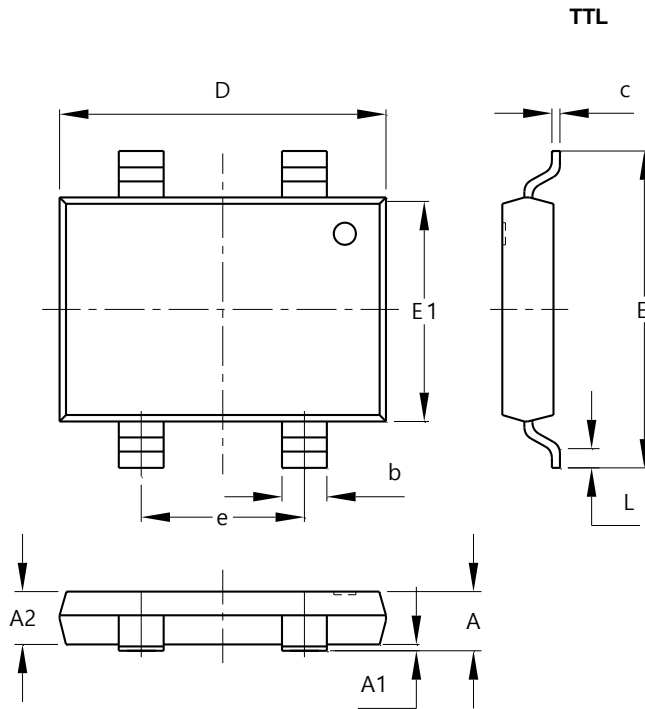


Figure 6. Typical Reverse Characteristics

Package Outline Dimensions

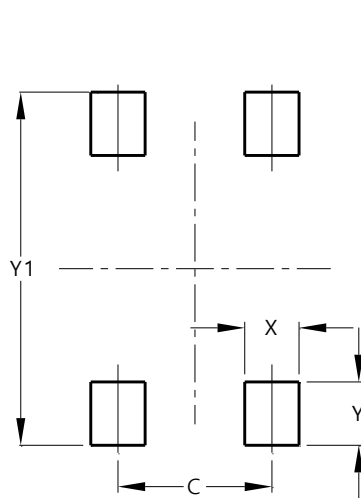
Please see <http://www.diodes.com/package-outlines.html> for the latest version.



TTL			
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.



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