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TT6JL

6A LOW VF RECOVERY BRIDGE RECTIFIER

Product Summary

V_{RRM} (V)	I_F (A)	V_F Max (V) @ I_F = 3A	I_R Max (μA)
600	6	0.9	5

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-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please contact us or your local Diodes representative.**
  https://www.diodes.com/quality/product-definitions/

Mechanical Data

- Package: TTL
- Package 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 e3
- Polarity Indicator: As Marked on The Body
- Weight: 0.41 grams (Approximate)



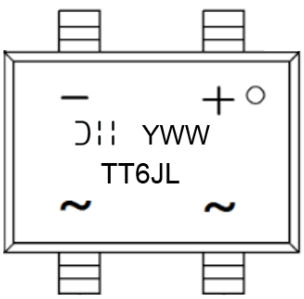


Ordering Information (Note 4)

Part Number	Package	Packing	
		Qty.	Carrier
TT6JL-13	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



TT6JL = Product Type Marking Code
= Manufacturers' Code Marking
YWW = Date Code Marking
Y = Last Digit of Year (ex: 2 = 2022)
WW = Week Code (01 to 53)

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

Characteristic		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	600	V
Maximum DC Blocking Voltage		V_{DC}	600	V
Average Rectified Output Current	@T_A = +25°C	$I_{F(AV)}$	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^2t Rating for Fusing (t = 8.3ms)		I^2t	95	A^2s
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	V_F	0.84	0.9	V
Leakage Current	V_R = 600V	T_A = +25°C	I_R	—	5	µA
Typical Junction Capacitance (Note 5)			C_J	85		pF

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Typical Thermal Resistance (Without Heatsink)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	14 10 45	°C/W
Typical Thermal Resistance (Note 6)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	6 7 10	°C/W

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 90mm x 50mm x 1.6mm AL pad attached on 100mm x 75mm x 27mm AL Fin heatsink.

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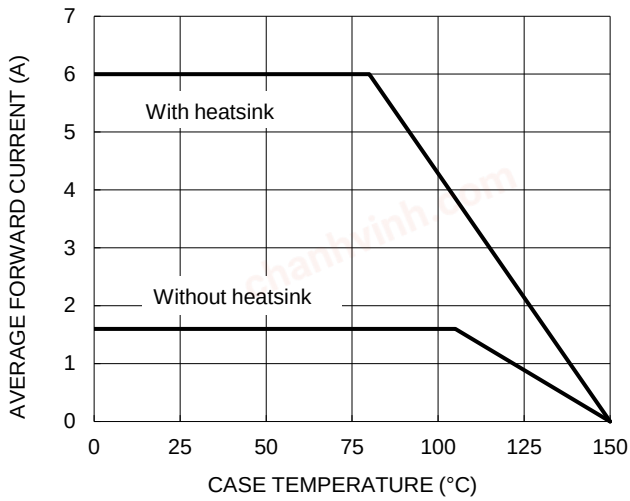


Figure 1. Forward Current Derating Curve

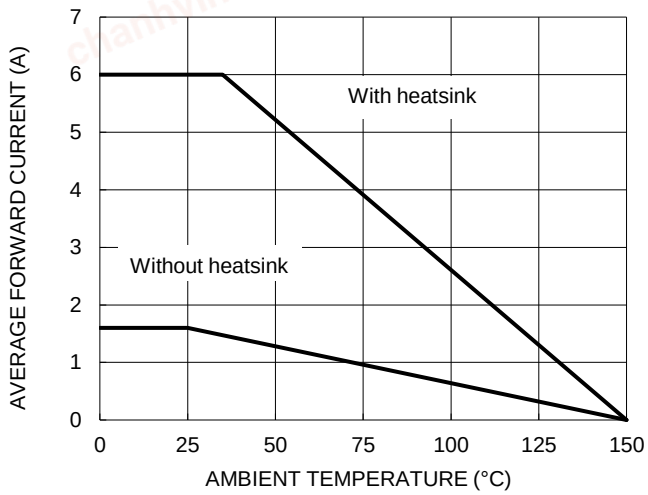


Figure 2. Forward Current Derating Curve

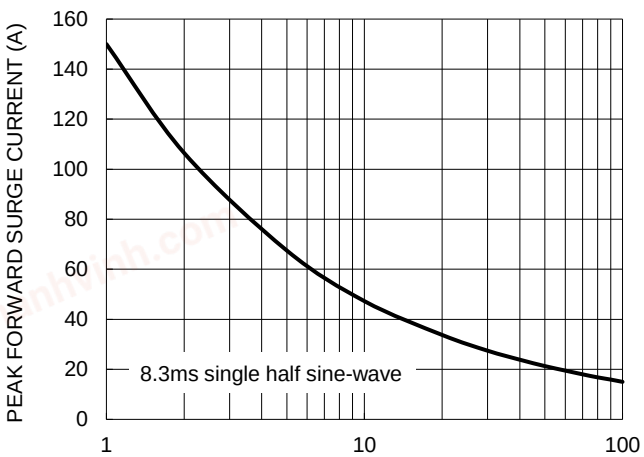


Figure 3. Maximum Non-Repetitive Surge Current

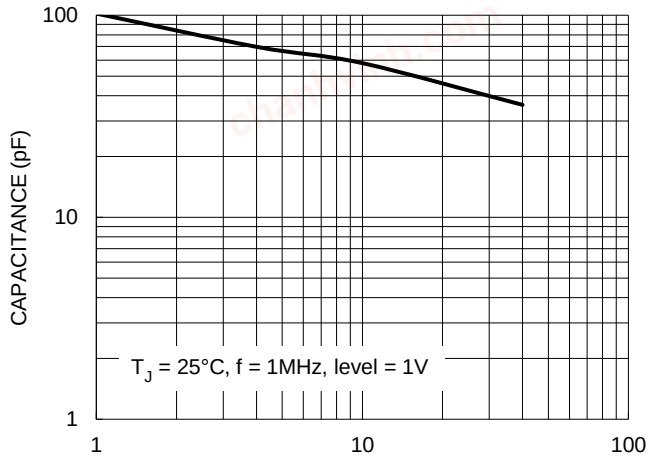


Figure 4. Typical Junction Capacitance

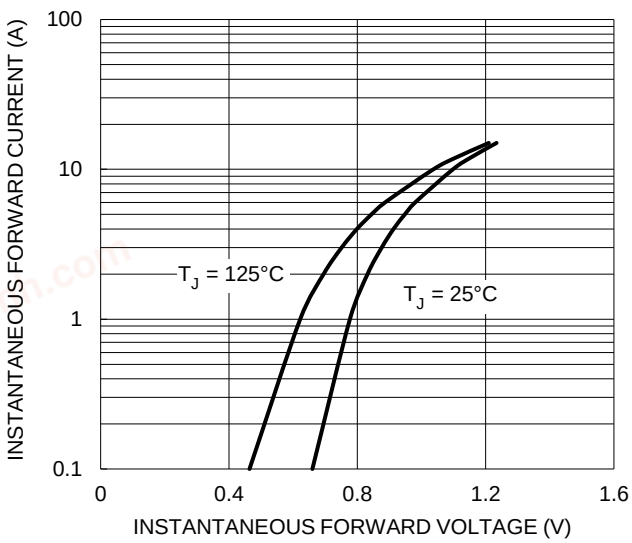


Figure 5. Typical Forward Characteristics

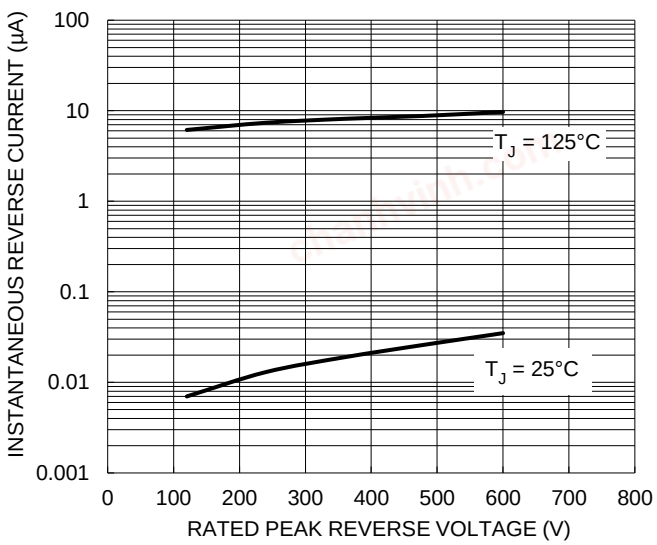


Figure 6.Typical Reverse Characteristics

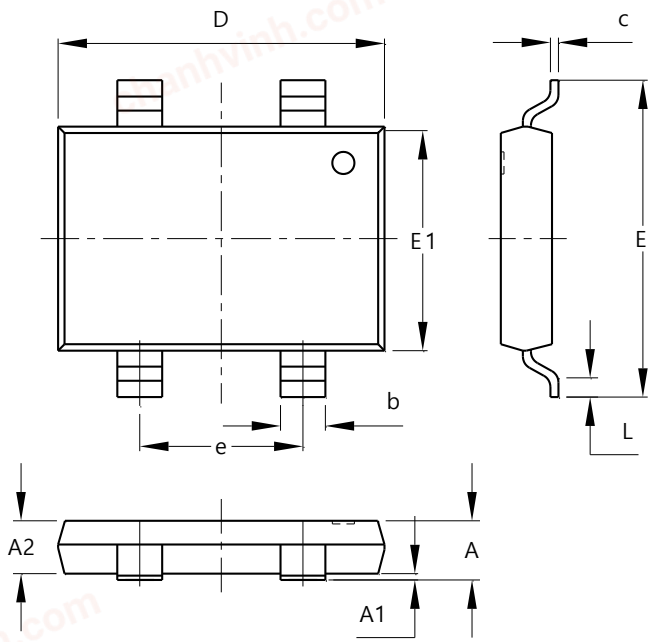
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Package Outline Dimensions

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

TTL

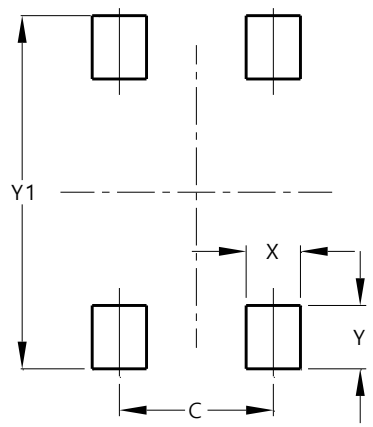


TTL			
Dim	**Min**	**Max**	**TYP**
A	1.45	1.80	1.65
A1	0.00	0.15	0.10
A2	1.45	1.65	1.55
b	1.30	1.50	1.40
c	0.15	0.35	0.25
D	10.05	10.35	10.20
E	9.75	10.05	9.90
E1	6.85	7.15	7.00
e	4.90	5.10	5.00
L	0.45	0.95	0.70
All Dimensions in mm			

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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