

GLASS PASSIVATED BRIDGE RECTIFIER

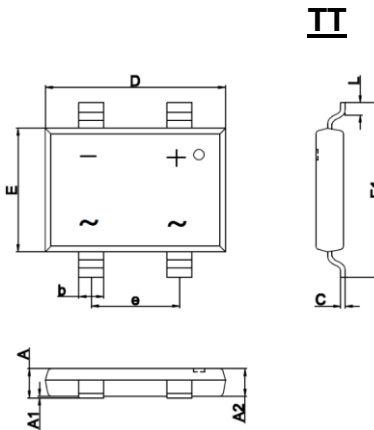
**REVERSE VOLTAGE – 1000 Volts
FORWARD CURRENT – 4.0 Amperes**

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

- Case 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)



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) $I_{(AV)}$	4.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	@ $T_A = 25^\circ\text{C}$	120	A
	@ $T_A = 125^\circ\text{C}$ (Note 4)	96	
Peak forward surge current 1ms single half sine-wave superimposed on rated load	@ $T_A = 25^\circ\text{C}$	240	A
	@ $T_A = 125^\circ\text{C}$ (Note 4)	192	
$I^2 t$ rating for fusing ($t = 8.3\text{ms}$)	$I^2 t$	59.7	A^2S
Operating and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	TYP.	MAX.	UNIT
Forward voltage (Note 4)	$I_F = 2\text{A}$ $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$ (Note 4)	V_F	0.91	1.0	V
			0.80	--	
Leakage current	$V_R = 1000\text{V}$ $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$ (Note 4)	I_R	0.06	5	μA
			19	200	
Typical junction capacitance (Note 5)		C_T	35		pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP.	UNIT
Typical Thermal Resistance (without Heatsink)	R_{thJC}	8	$^\circ\text{C/W}$
	R_{thJL}	10	
	R_{thJA}	60	
Typical thermal resistance (Note 6)	R_{thJC}	3	$^\circ\text{C/W}$
	R_{thJL}	6	
	R_{thJA}	15	

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 15mmx12mmx1.6mm AL Pad attached on 40mmx30mmx24mm Fin heatsink.

REV.3, Nov-2021, KBDA50

RATING AND CHARACTERISTIC CURVES
TT4M(LS)

FIG.1- FORWARD CURRENT DERATING CURVE

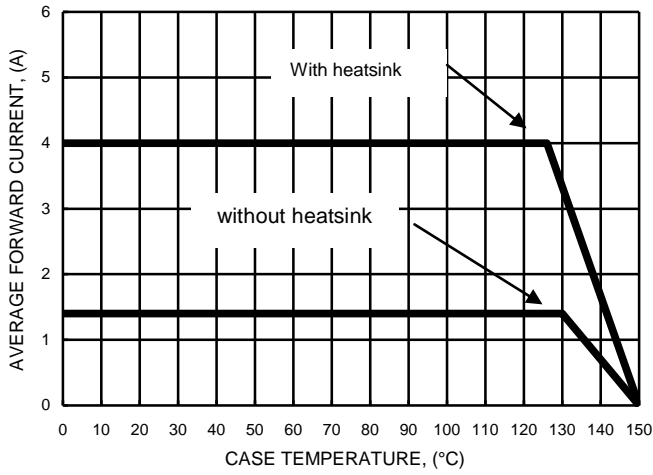


FIG.2- FORWARD CURRENT DERATING CURVE

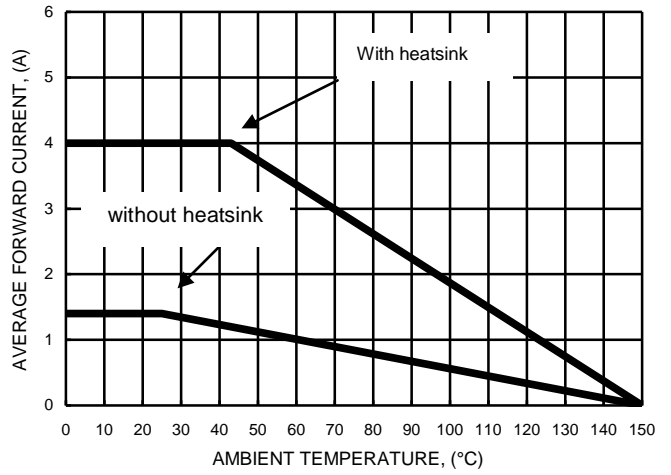


FIG.3- MAXIMUM NON-REPETITIVE SURGE CURRENT

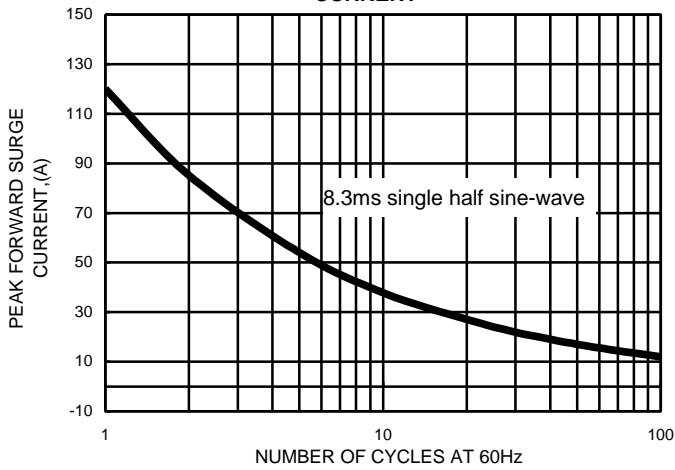


FIG.4- TYPICAL FORWARD CHARACTERISTICS

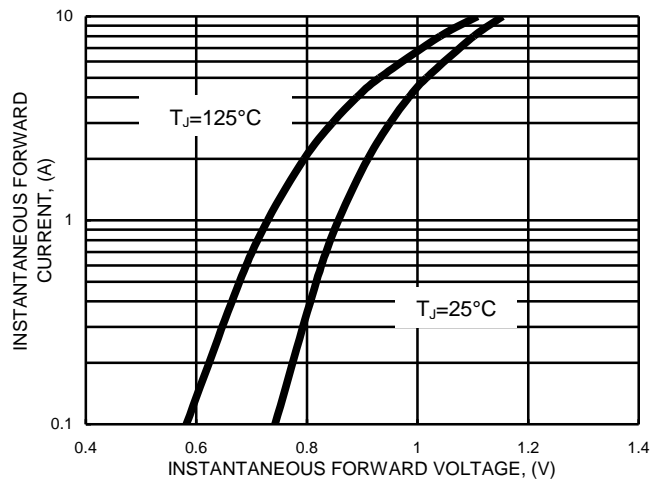


FIG.5- TYPICAL JUNCTION CAPACITANCE

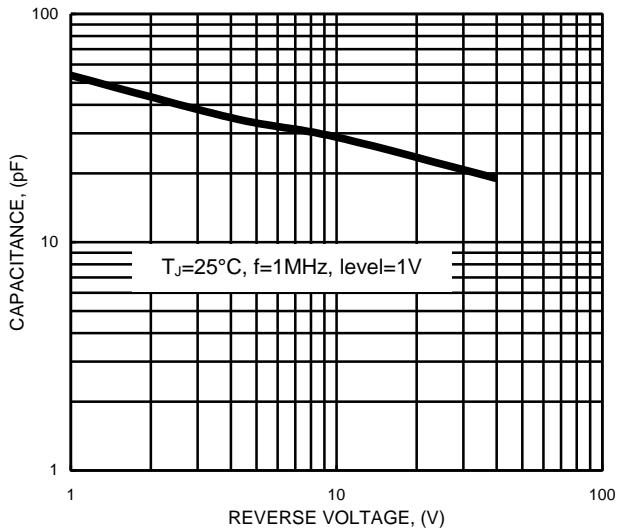
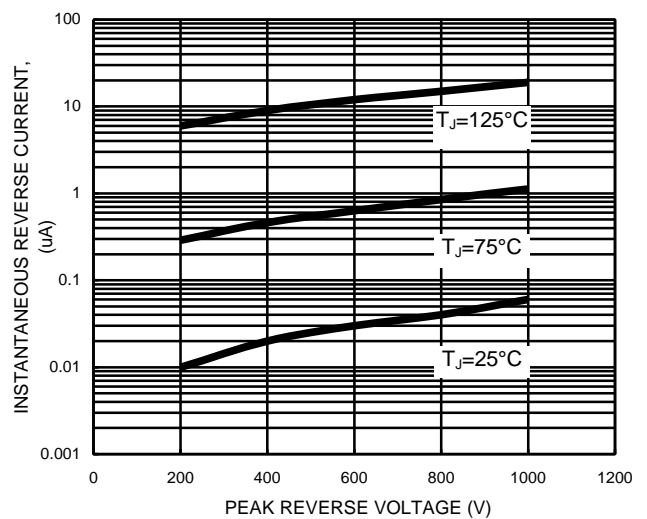


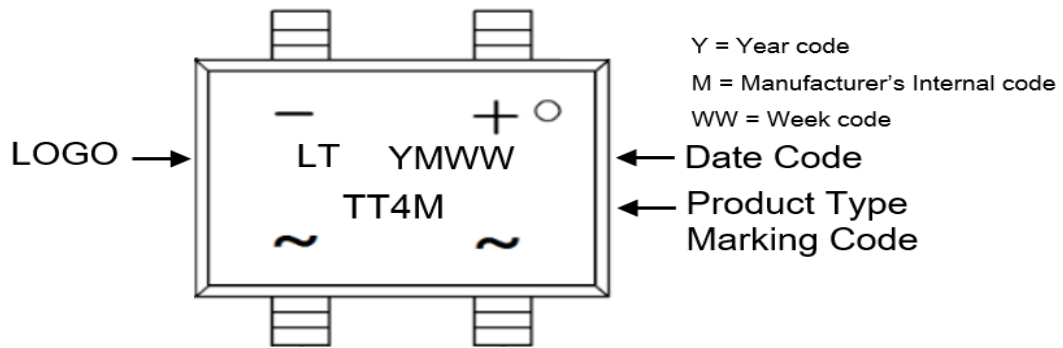
FIG.6- TYPICAL REVERSE CHARACTERISTICS



Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
TT4M_HF	TT	1500	Tape & Reel

Marking Information:



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