

ABS10M(LS)

GLASS PASSIVATED SURFACE MOUNT BRIDGE RECTIFIER

REVERSE VOLTAGE – 1000 Volts
FORWARD CURRENT – 1.0 Ampere

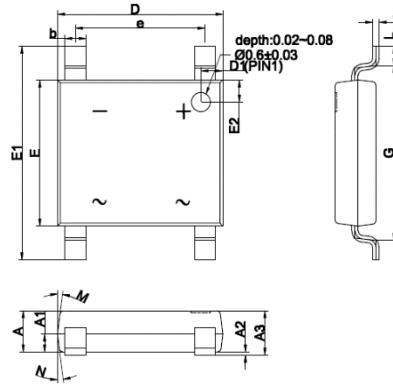
FEATURES

- 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)**

MECHANICAL DATA

- Package Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free"
- UL recognized file # E364304
- Polarity indicator: As marked on the body
- Weight: 98 mg (Approximate)
- Marking Code: ABS10M

ABS



ABS		
DIM	MIN	MAX
A	1.20	1.30
A1	0.43	0.63
A2	0.00	0.10
A3	1.20	1.40
b	0.50	0.80
C	0.10	0.30
D	4.85	5.25
D1	0.45	0.85
e	3.80	4.20
E	4.25	4.65
E1	6.40	6.80
E2	0.45	0.85
G	5.20	5.60
L	0.40	0.80
M	7° TYP.	
N	7° TYP.	
All dimension in millimeter		

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	$I_{(AV)}$	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load @ $T_A=25^\circ\text{C}$	I_{FSM}	30	A
@ $T_A=125^\circ\text{C}$		24	
Peak forward surge current 1ms single half sine-wave superimposed on rated load @ $T_A=25^\circ\text{C}$	I_{FSM}	60	A
@ $T_A=125^\circ\text{C}$		48	
$I^2 t$ rating for fusing ($t = 8.3\text{ms}$)	$I^2 t$	2.39	A^2S
Operating and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	Value	UNIT
Forward voltage	$I_F = 0.5\text{A}$ $T_A = 25^\circ\text{C}$	V_F	0.95	V
Leakage current	$V_R = 1000\text{V}$ $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	I_R	10 100	μA
Typical junction capacitance (Note 4)		C_J	7.8	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	Value	UNIT
Typical thermal resistance (Note 5)	R_{thJC}	5	$^\circ\text{C/W}$
	R_{thJL}	17	
	R_{thJA}	48	

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. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
5. Thermal resistance junction to case, lead and ambient in accordance with JESD-51. Unit mounted on glass-epoxy substrate with 1oz/ft² 20x20 mm copper pad per pin with heatsink.

RATING AND CHARACTERISTIC CURVES

ABS10M

FIG.1- FORWARD CURRENT DERATING CURVE

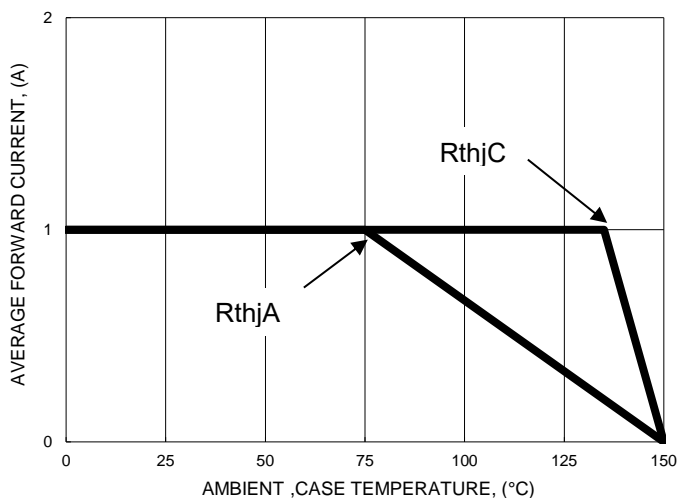


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

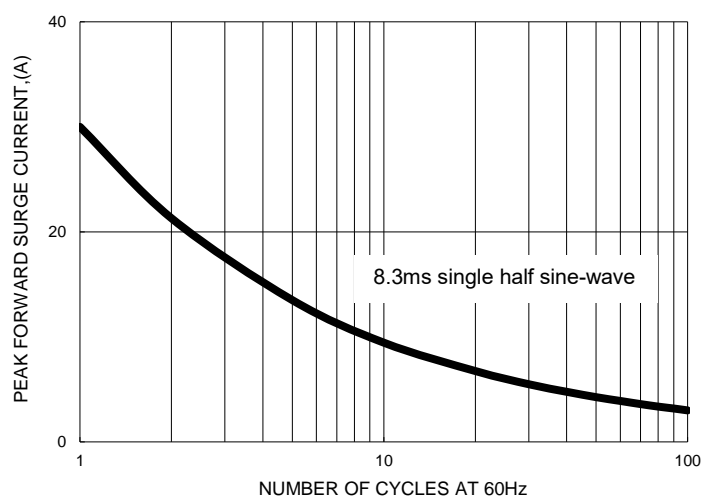


FIG.3- TYPICAL FORWARD CHARACTERISTICS

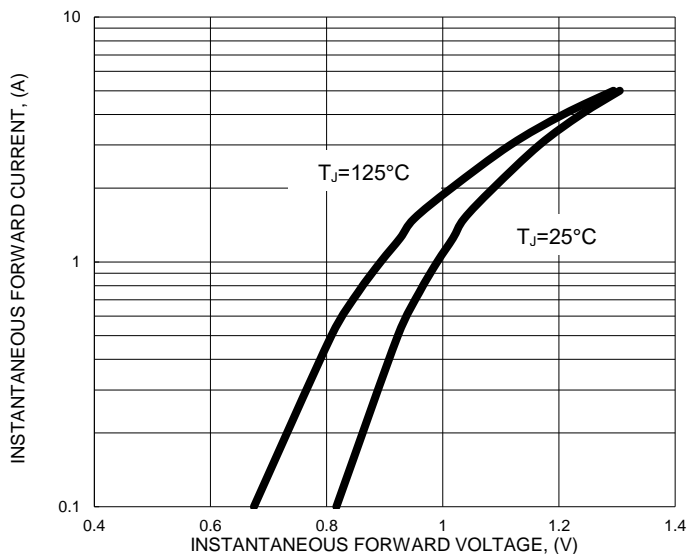


FIG.4- TYPICAL JUNCTION CAPACITANCE

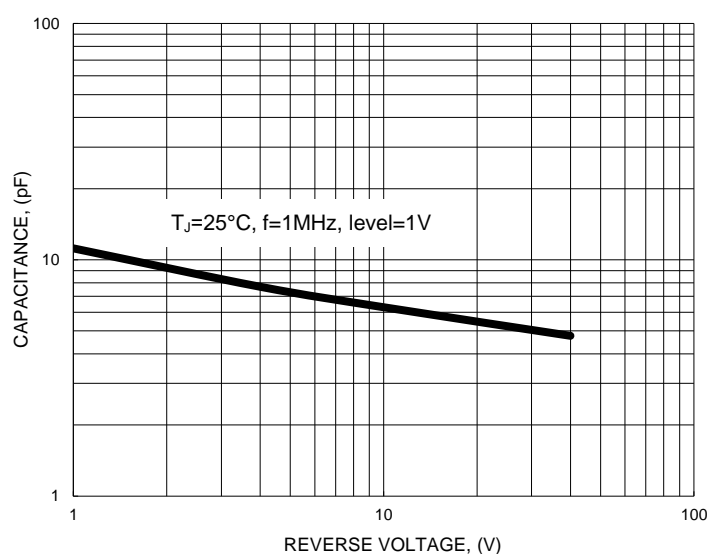
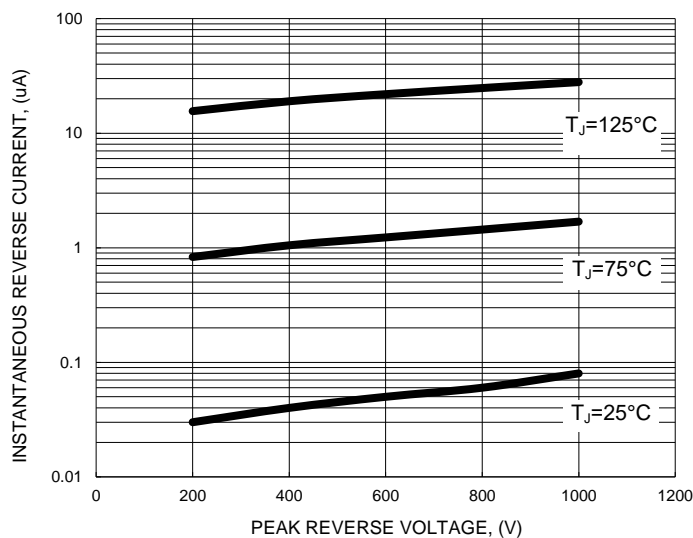


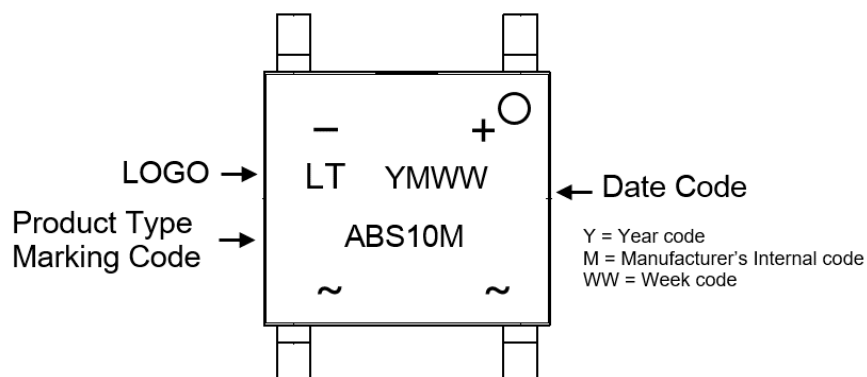
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
ABS10M_HF	SOPA-4(Type WX)	3000	Tape & Reel

Marking Information:



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