

MB10F(LS)

GLASS PASSIVATED SURFACE MOUNT BRIDGE RECTIFIER

REVERSE VOLTAGE – 1000 Volts
FORWARD CURRENT – 1 Ampere

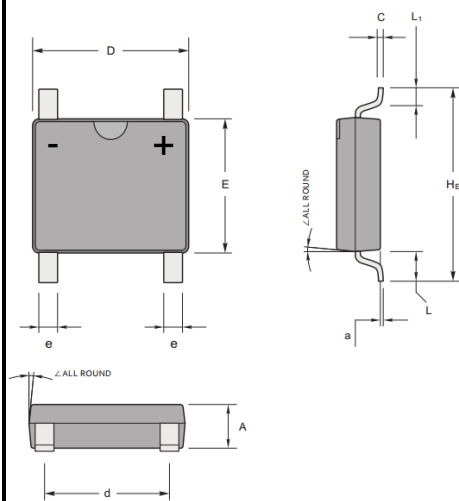
FEATURES

- Glass Passivated Chip Junction
- Reverse Voltage – 1000V
- Forward Current – 1A
- High Surge Current Capability
- Designed for Surface Mount Application
- UL Recognized File #E364304
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. “Green” Device (Note 3)**

MECHANICAL DATA

- Package: MBF
- Package Material: “Green” molding compound
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: 75mg (Approximate)
- Marking Code: MB10F

MBF



MBF		
DIM	MIN	MAX
A	1.20	1.60
C	0.15	0.22
D	4.50	5.00
E	3.60	4.10
HE	6.40	7.00
d	2.30	2.70
e	0.50	0.70
L	1.30	1.70
L1	0.50	1.10
a	-	0.2
∠	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 RMS voltage	V_{RMS}	700	V
Maximum DC blocking voltage	V_{DC}	1000	V
Average rectified output current per device	$I_{(AV)}$	1	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
Peak forward surge current 1.0ms single half sine-wave superimposed on rated load @ $T_A = 25^\circ\text{C}$	I_{FSM}	60	A
I^2t rating for fusing ($t = 8.3\text{ms}$)	I^2t	3.7	A^2S
Operating and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Forward voltage	$I_F = 1\text{A}$ $T_A = 25^\circ\text{C}$	V_F	1.1	V
Leakage current	$V_R = 1000\text{V}$ $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	I_R	5 500	μA
Typical junction capacitance (Note 4)		C_J	13	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNIT
Typical thermal resistance (Note 5)	R_{thJC}	50	$^\circ\text{C/W}$
	R_{thJA}	80	
	R_{thJL}	45	

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. 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 PC board with 2.7 X 3.7mm2 copper pad per pin.

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1 of 4
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RATING AND CHARACTERISTIC CURVES

MB10F

FIG.1- FORWARD CURRENT DERATING CURVE

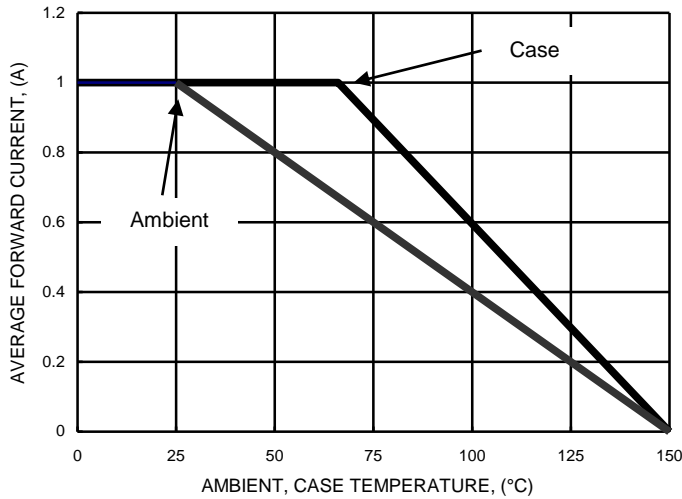


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

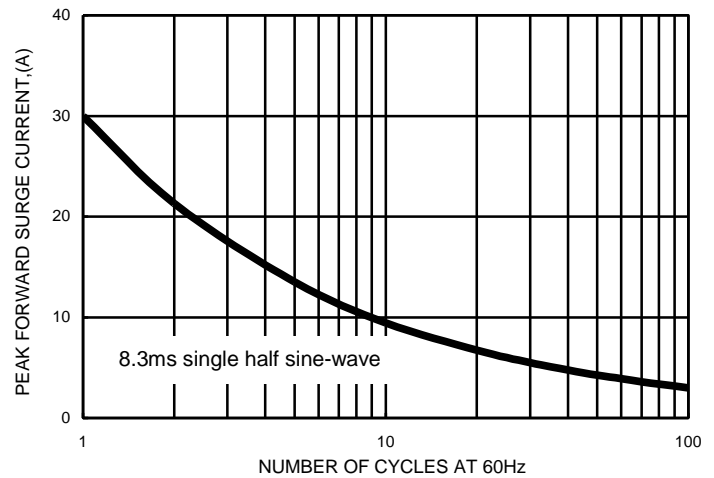


FIG.3- TYPICAL FORWARD CHARACTERISTICS

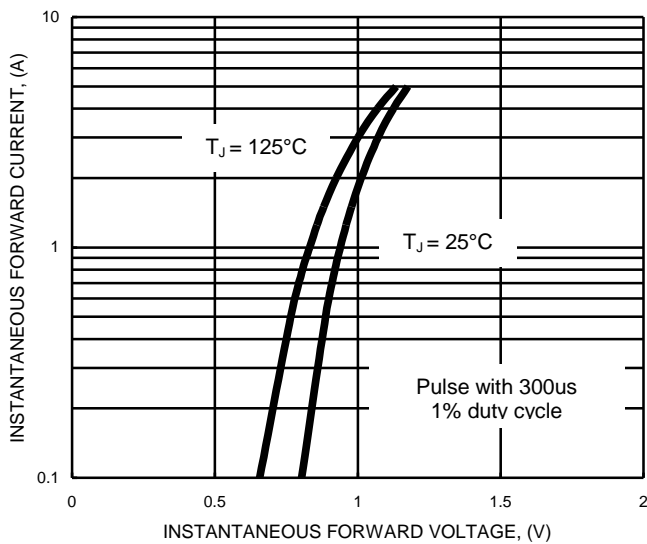


FIG.4- TYPICAL JUNCTION CAPACITANCE

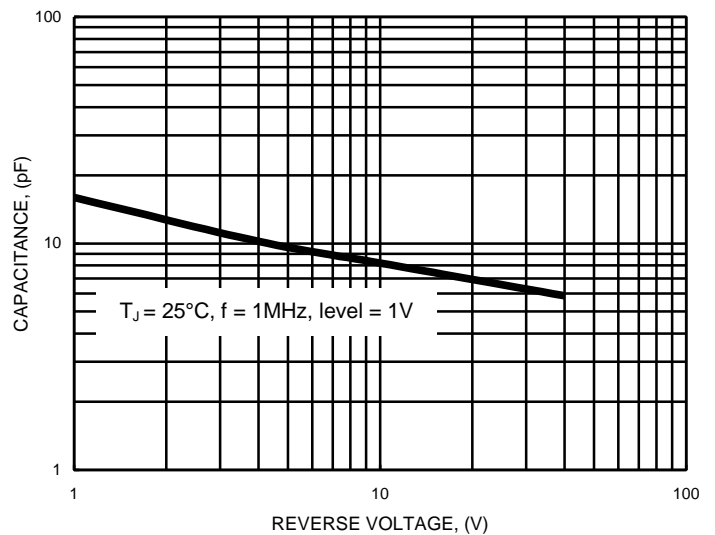
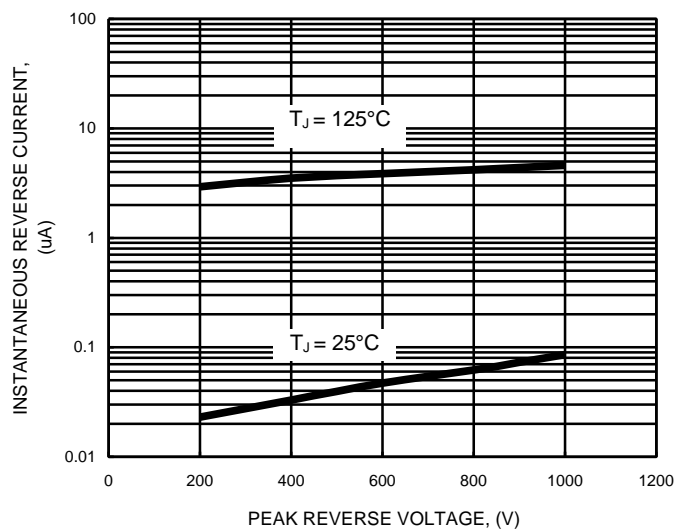


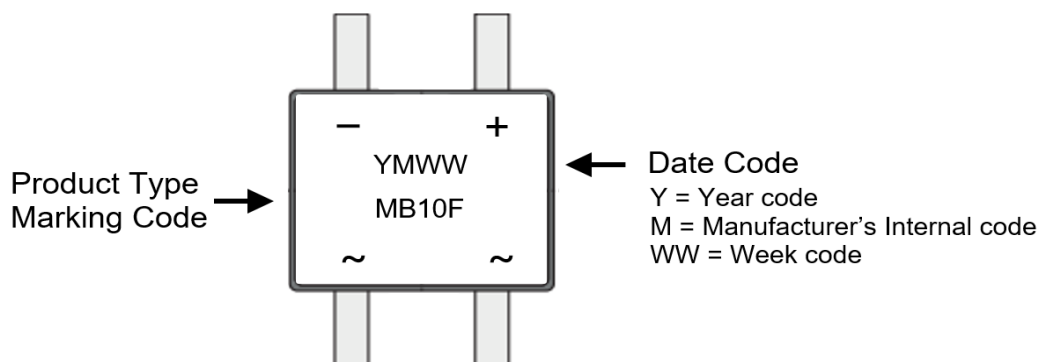
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
MB10F_HF	MBF	5000pcs	Tape & Reel

Marking Information:



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