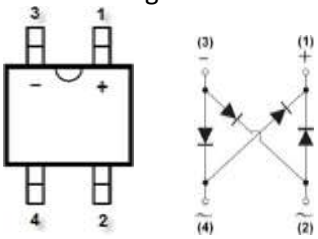
0.8A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

DESCRIPTION:

Package: MBF



The ALPMB10F suitable for AC to DC bridge full wave rectification for SMPS, LED lighting, adapter, battery charger, home appliances, office equipment and telecommunication applications.

FEATURES:

- Glass Passivated Die Construction
- Miniature Package Saves Space on PC Boards
- Reliable Robust Construction
- Ideal for SMT Manufacturing
- Low Forward Voltage Drop
- Lead-Free Finish
- RoHS Compliant
- REACH Compliant
- Halogen Free

APPLICATIONS:

- SMPS
- LED lighting
- Adapter
- Battery Charger
- Home Appliances
- Office Equipment
- Telecommunication applications

TYPICAL DEVICE CHARACTERISTICS

MAXIMUM RATINGS (T_A = 25 °C unless otherwise noted)				
PARAMETER		**SYMBOL**	**ALPMB10F**	**UNIT**
Peak Repetitive Reverse Voltage		V_{RRM}	1000	V
Working Peak Reverse Voltage		V_{RWM}	1000	V
DC Blocking Voltage		V_R	1000	V
RMS Reverse Voltage		$V_{R(RMS)}$	700	V
Average Rectified Output Current (Note 1)	@ T_A = +125°C	I_O	0.5	A
	@T_A = +110°C		0.8	
Non-Repetitive Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	30	A
I^2t Rating for Fusing (1ms < t < 8.3ms)		I^2t	3.74	A^2S

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)			
PARAMETER	**SYMBOL**	**Value**	**UNIT**
Typical Thermal Resistance, Junction to Ambient (Note 2) (Per Element)	$R_{\theta JA}$	63	°C/W
Typical Thermal Resistance, Junction to Lead (Per Element)	$R_{\theta JL}$	39	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)						
PARAMETER	**TEST CONDITIONS**	**SYMBOL**	**MIN**	**TYP**	**MAX**	**UNIT**
Reverse Breakdown Voltage (Note 3)	I_R = 5μA	$V_{(BR)R}$	1,000	-	-	V
Forward Voltage (Per Element)	I_F = 0.8A, T_A = +25°C	V_F	-	0.94	1.1	V
Leakage Current (Note 3) (Per Element)	V_R = 1,000V, T_A = +25°C	I_R	-	0.2	5	μA
	V_R = 1,000V, T_A = +125°C		-	14	500	
Total Capacitance (Per Element)	V_R = 4V, f = 1.0MHz	C_T	-	8	-	pF

NOTES:

1. Device mounted on FR-4 substrate, 1"*1", 2oz, single-sided, PC boards with 0.1"*0.15" copper pad.
2. Device mounted on FR-4 substrate, 1"*1", 2oz, single-sided, PC boards with 0.56"*0.73" copper pad.
3. Short duration pulse test used to minimize self-heating effect.

TYPICAL DEVICE CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

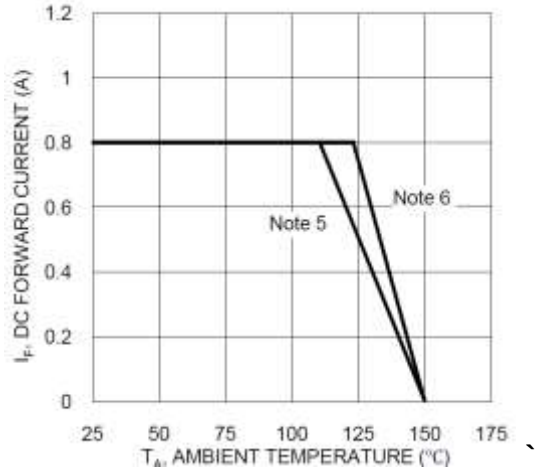


Fig.1 DC Forward Current Derating

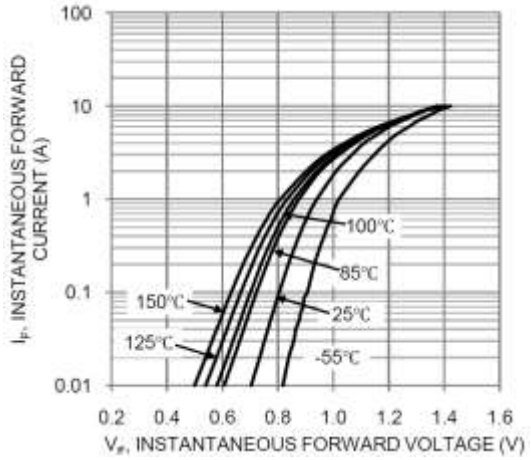


Fig.2 Typical Forward Characterstics (Per Element)

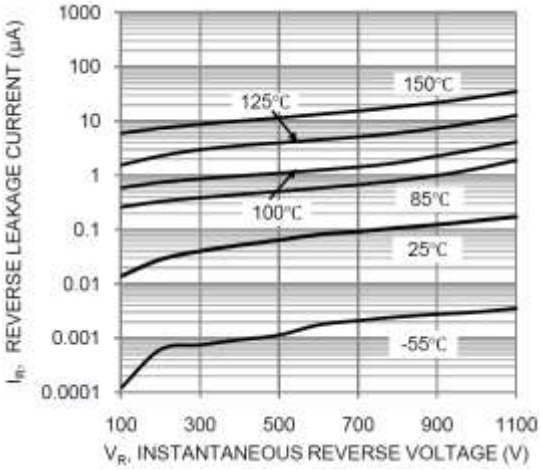


Fig.3 Typical Reverse Characterstics (Per Element)

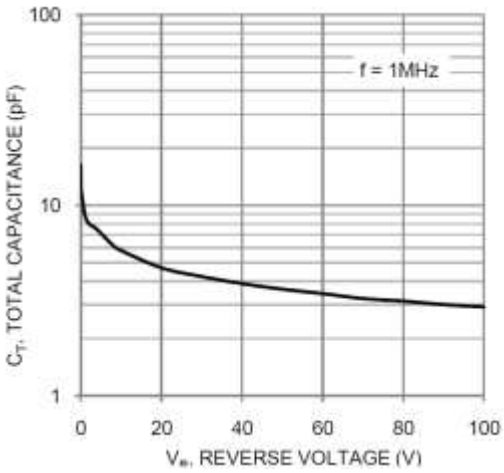


Fig.4 Typical Total Capacitance

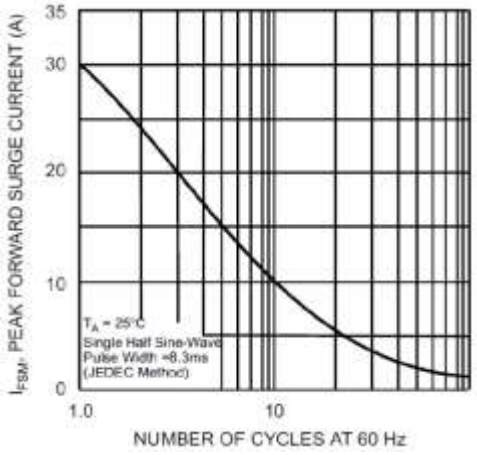


Fig.5 Maximum Peak Forward Surge Current (Per Leg)

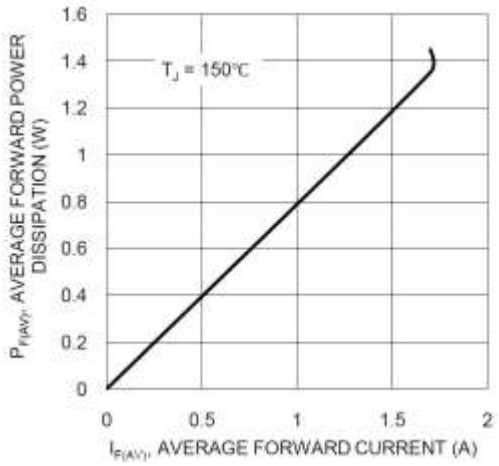
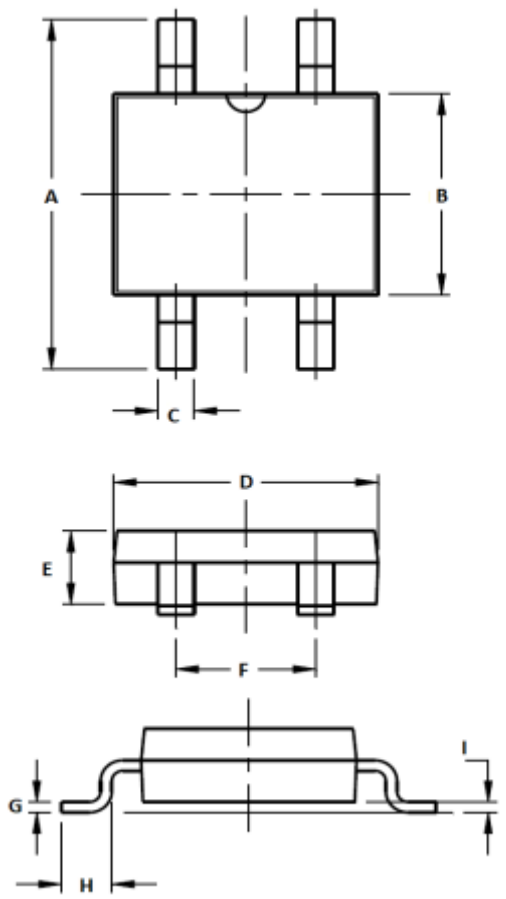


Fig.6 Forward Power Dissipation

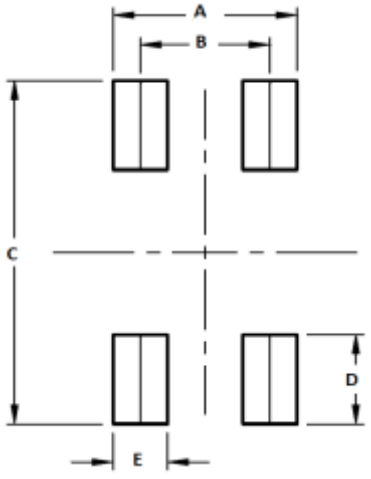
PACKAGE INFORMATION

MBF



OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.40	7.00	0.2519	0.2755
B	3.60	4.10	0.1417	0.1614
C	0.50	0.80	0.0196	0.0314
D	4.50	4.95	0.1771	0.1948
E	1.20	1.60	0.0472	0.0629
F	2.30	2.70	0.0905	0.1062
G	0.15	0.35	0.0059	0.0137
H	0.70	1.10	0.0275	0.0433
I	-	0.20	-	0.0078

NOTES
- Controlling dimension: millimeters.
- Dimensioning and tolerances per ANSI Y14.5M, 1985.
- Dimensions are exclusive of mold flash and metal burrs.



PAD LAYOUT DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.55	-	0.1397	-
B	2.50	-	0.0984	-
C	7.20	-	0.2834	-
D	1.875	-	0.0738	-
E	1.050	-	0.0413	-

CUSTOMER NOTE:

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2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

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