



MB1L-10 THRU MB10L-10

Surface Mount Standard Rectifiers

1A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

FEATURES:

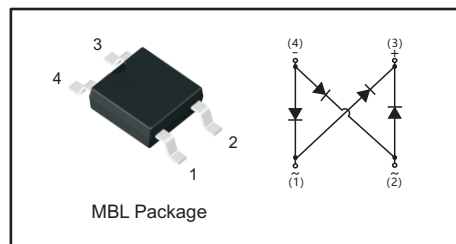
Glass Passivated Chip Junction
Reverse Voltage - 100 to 1000 V
Forward Current - 1 A
High Surge Current Capability
Designed for Surface Mount Application

MECHANICAL DATA

- Case: MBL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 75mg/0.0026oz

PINNING

PIN	DESCRIPTION
1	Input Pin (~)
2	Input Pin (~)
3	Output Anode (+)
4	Output Cathode (-)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave ,60Hz, resistive or inductive load. For capacitive load, derate current by 20%

Parameter	Symbols	MB1L-10	MB2L-10	MB4L-10	MB6L-10	MB8L-10	MB10L-10	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ Fig.1	$I_{F(AV)}$	1.0						A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	35						A
Peak Forward Surge Current,1.0ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	70						A
I^2t Rating for fusing (3ms≤t≤8.3ms)	I^2t	5.0						A ² S
Max Instantaneous Forward Voltage at 1.0 A	V_F	1.1						V
Maximum DC Reverse Current at Rated DC Reverse Voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$	I_R	5 100						μA
Typical Junction Capacitance ⁽¹⁾	C_j	7						pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	45 15 25						°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150						°C

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.



MB1L-10 THRU MB10L-10

Surface Mount Standard Rectifiers

Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Average Rectified Output Current Derating Curve

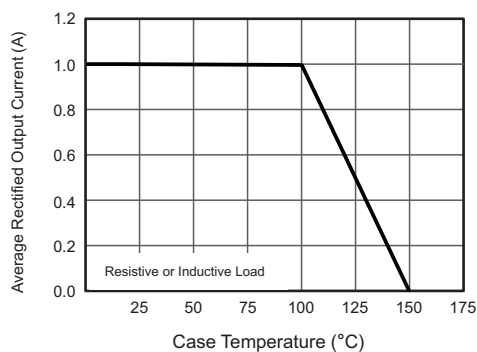


Fig.2 Typical Instantaneous Reverse Characteristics

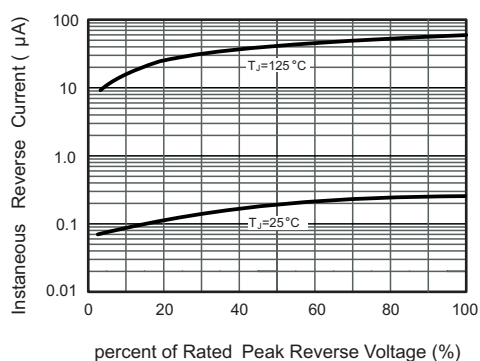


Fig.3 Typical Forward Characteristic

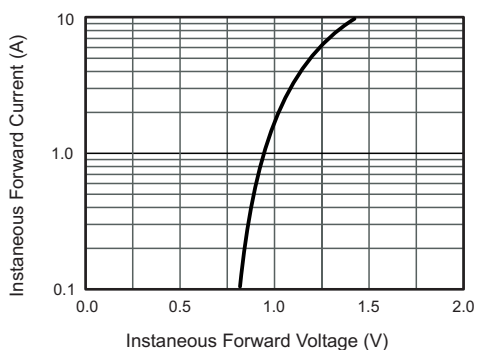
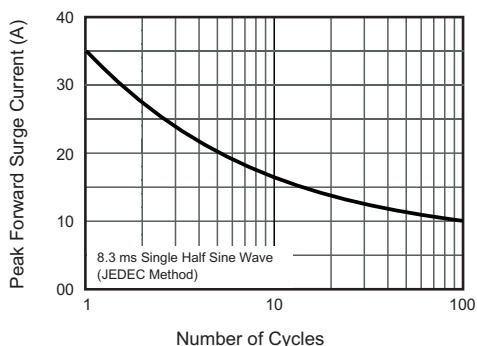


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current





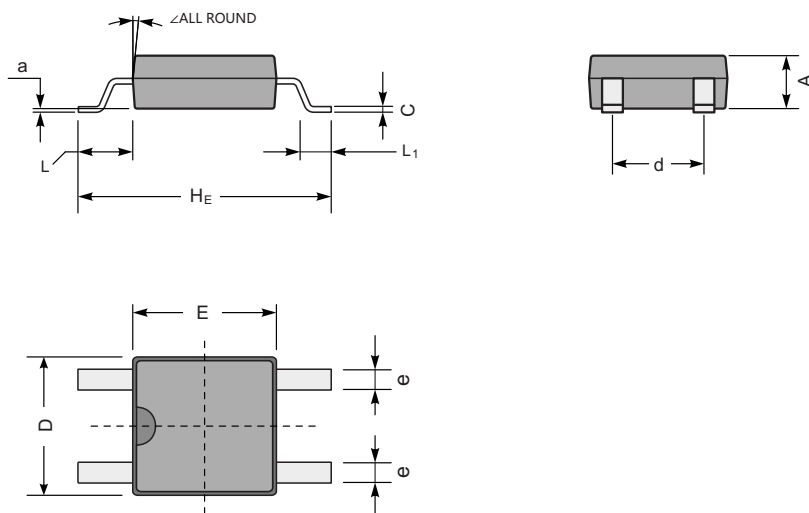
MB1L-10 THRU MB10L-10

Surface Mount Standard Rectifiers

PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

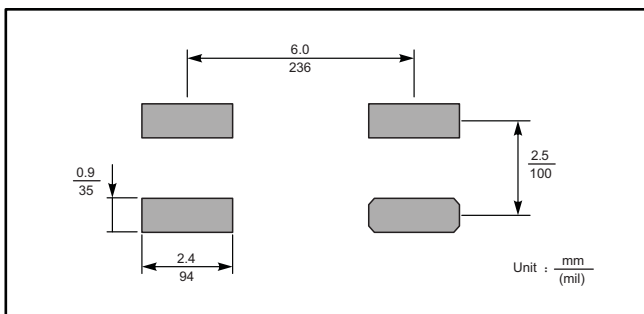
MBL



MBL mechanical data

UNIT		A	C	D	E	H _E	d	e	L	L ₁	a	∠
mm	max	1.6	0.25	3.95	4.1	7.0	2.7	0.8	1.7	1.1	0.2	7°
	min	1.2	0.15	3.45	3.6	6.4	2.3	0.5	1.3	0.5	—	
mil	max	63	9.8	156	161	276	106	31	67	43	8	
	min	47	5.9	136	142	252	91	20	51	20	—	

The recommended mounting pad size



Marking

Type number	Marking code
MB1L-10	10L1
MB2L-10	10L2
MB4L-10	10L4
MB6L-10	10L6
MB8L-10	10L8
MB10L-10	10L10