



## 1A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

### FEATURES:

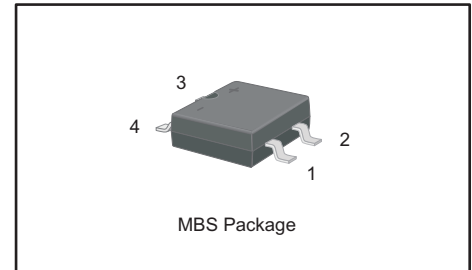
Glass Passivated Chip Junction  
Reverse Voltage - 100 to 1000 V  
Forward Current - 1 A  
High Surge Current Capability  
Designed for Surface Mount Application

### MECHANICAL DATA

- Case: MBS
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 100mg / 0.0035oz

### PINNING

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



### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	MB1S-10	MB2S-10	MB4S-10	MB6S-10	MB8S-10	MB10S-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
Average Rectified Output Current @ Fig.1	$I_O$	1.0						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	35						A
Peak Forward Surge Current 1.0 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	70						A
$I^2t$ Rating for fusing( $3ms \leq t \leq 8.3ms$ )	$I^2t$	5.1						A <sup>2</sup> S
Maximum Forward Voltage at 1.0 A	$V_F$	1.1						V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A = 25^\circ C$ @ $T_A = 125^\circ C$	$I_R$	5 100						$\mu A$
Typical Junction Capacitance ( Note1 )	$C_j$	7						pF
Typical Thermal Resistance ( Note2 )	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	45 15 25						$^\circ C/W$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150						$^\circ C$

Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.  
2. Mounted on glass epoxy PC board 4X1.5" X 1.5" (3.81 X 3.81 cm) copper pad.



Fig.1 Average Rectified Output Current Derating Curve

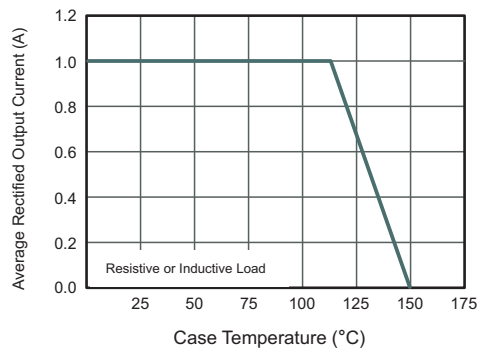


Fig.2 Typical Instantaneous Reverse Characteristics

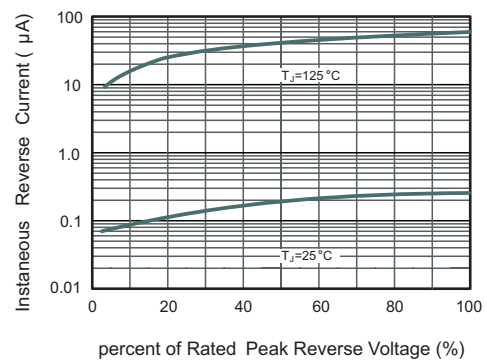


Fig.3 Typical Forward Characteristic

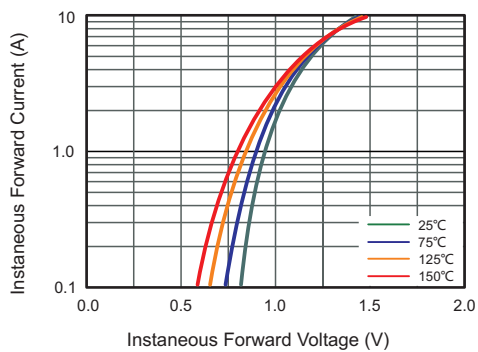


Fig.4 Typical Junction Capacitance

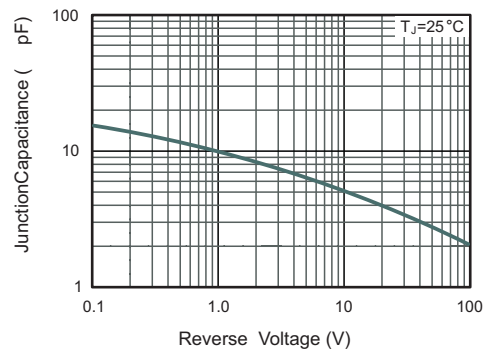
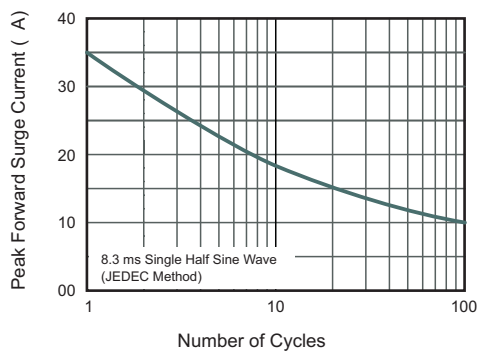


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

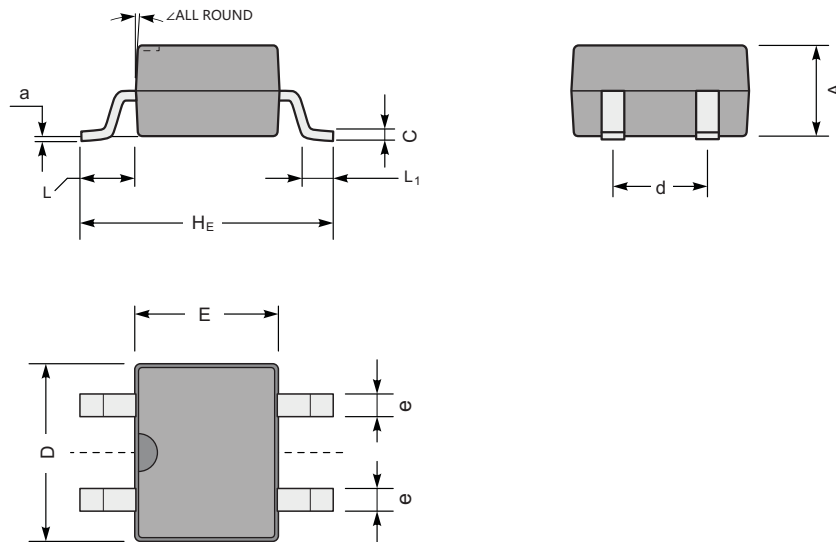




## PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

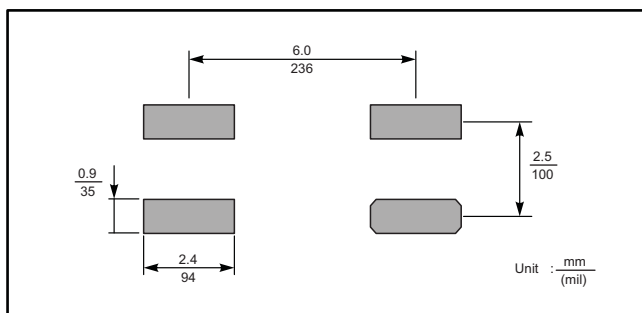
MBS



MBS mechanical data

UNIT		A	C	D	E	HE	d	e	L	L <sub>1</sub>	a	∠
mm	max	2.6	0.22	5.0	4.1	7.0	2.7	0.7	1.7	1.1	0.2	7°
	min	2.2	0.15	4.5	3.6	6.4	2.3	0.5	1.3	0.5	—	
mil	max	102	8.7	197	161	276	106	28	67	43	8	
	min	94	5.9	177	142	252	91	20	51	20	—	

## The recommended mounting pad size



## Marking

Type number	Marking code
MB1S-10	10S1
MB2S-10	10S2
MB4S-10	10S4
MB6S-10	10S6
MB8S-10	10S8
MB10S-10	10S10



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