

## 4A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

### FEATURES:

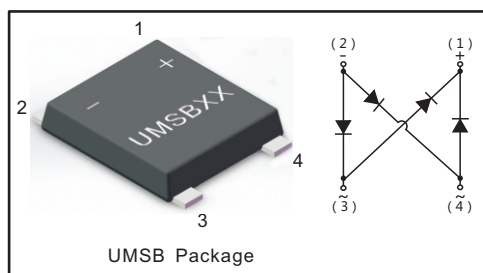
- Glass Passivated Chip Junction
- Reverse Voltage - 100 to 1000 V
- Forward Current - 4.0 A
- Fast reverse recovery time
- Designed for Surface Mount Application

### MECHANICAL DATA

- Case: UMBS
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.234g / 0.00825oz

### PINNING

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



### 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	UMSB40B	UMSB40D	UMSB40G	UMSB40J	UMSB40K	UMSB40M	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 at $T_c = 115\text{ }^\circ\text{C}$	$I_O$	4.0						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	95						A
Maximum Forward Voltage at 4.0 A	$V_F$	1.0	1.4	1.6				V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$	$I_R$	5.0 100						$\mu\text{A}$
Typical Junction Capacitance ( Note1 )	$C_j$	50						pF
Typical Thermal Resistance ( Note2 )	$R_{\theta JA}$	40						$^\circ\text{C/W}$
Maximum Reverse Recovery Time ( Note3 )	$t_{rr}$	50			75			ns
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150						$^\circ\text{C}$

Note: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.

3. Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .



Fig.1 Average Rectified Output Current Derating Curve

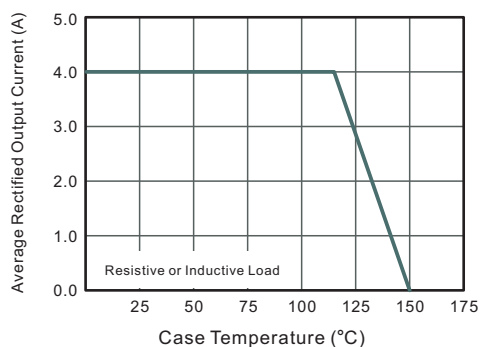


Fig.2 Typical Reverse Characteristics

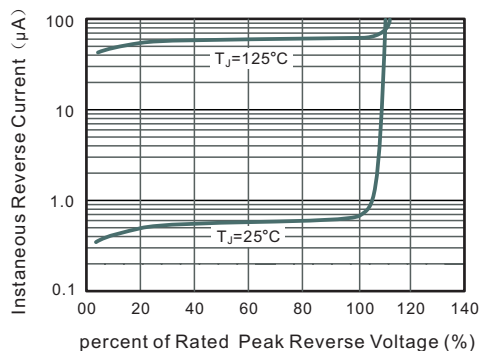


Fig.3 Typical Instantaneous Forward Characteristics

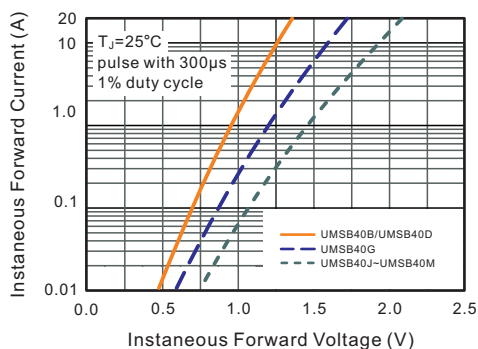


Fig.4 Typical Junction Capacitance

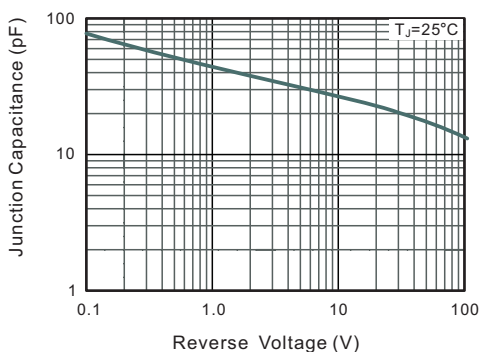
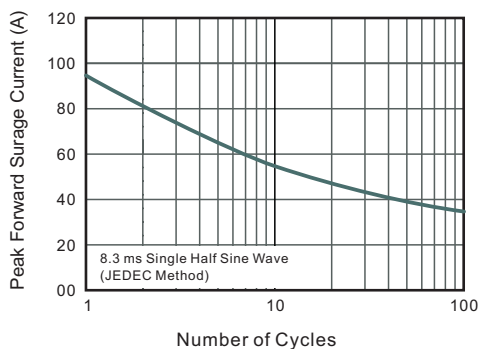


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

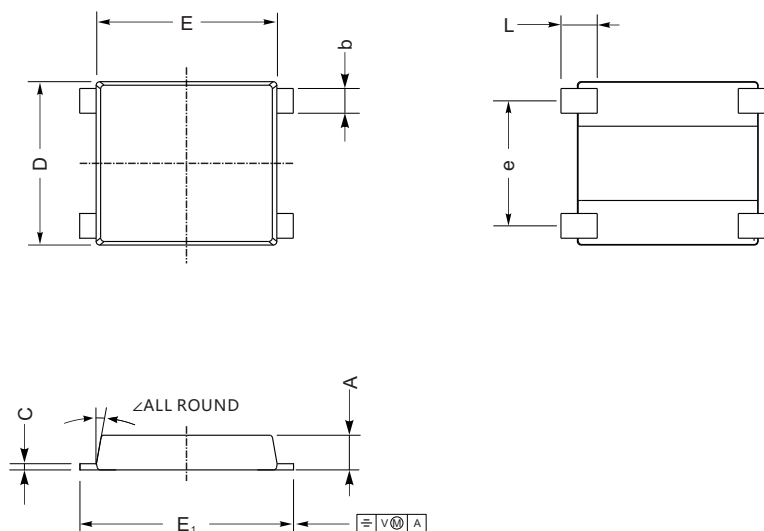




PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

UMSB



M2 mechanical data

UNIT		A	C	D	E	E <sub>1</sub>	L	e	b	∠
mm	max	1.5	0.29	7.0	7.6	8.9	1.6	5.3	1.15	10°
	min	1.3	0.17	6.2	7.1	8.4	1.0	4.9	0.95	
mil	max	59	12	276	299	350	55	209	45	
	min	51	7	244	280	331	31.5	193	37	

Marking

Type number	Marking code
UMSB40B	UMB40B
UMSB40D	UMB40D
UMSB40G	UMB40G
UMSB40J	UMB40J
UMSB40K	UMB40K
UMSB40M	UMB40M