

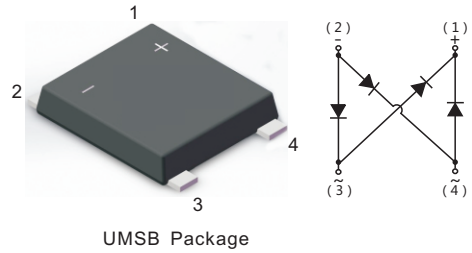


UMSB40B THRU USB40M

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

PINNING

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

Maximum Ratings and Electrical characteristics

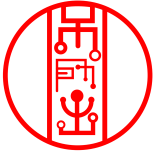
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase half-wave 60 Hz, resistive or inductive load for capacitive load current derate by 20 %.

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 °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 °C at Rated DC Blocking Voltage T _a =125 °C	I _R	5.0 100						μA
Typical Junction Capacitance (Note1)	C _j	50						pF
Typical Thermal Resistance (Note2)	R _{θJA}	40						°C/W
Maximum Reverse Recovery Time (Note3)	t _{rr}	50			75			ns
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150						°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 $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $t_{rr} = 0.25\text{ A}$.



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Fig.1 Average Rectified Output Current Derating Curve

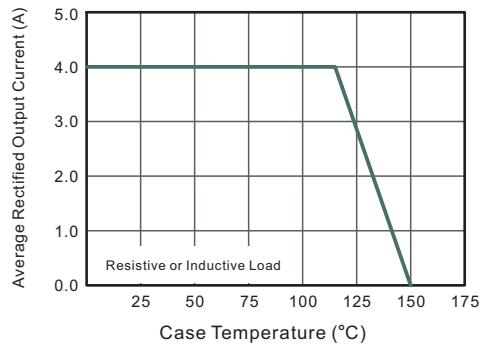


Fig.2 Typical Reverse Characteristics

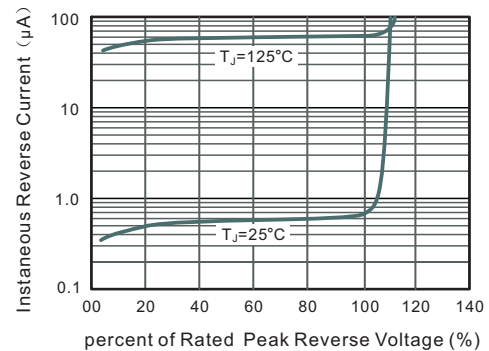


Fig.3 Typical Instantaneous Forward Characteristics

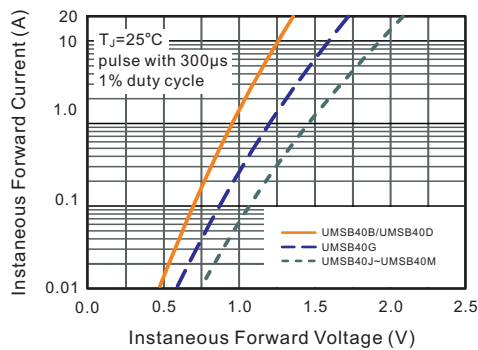


Fig.4 Typical Junction Capacitance

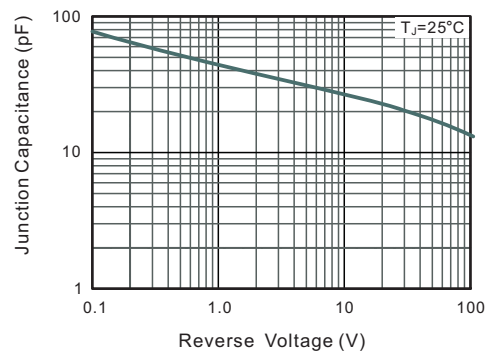
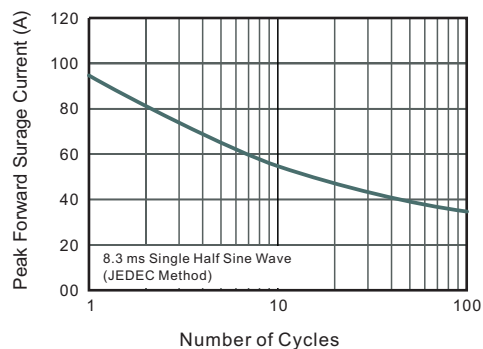


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



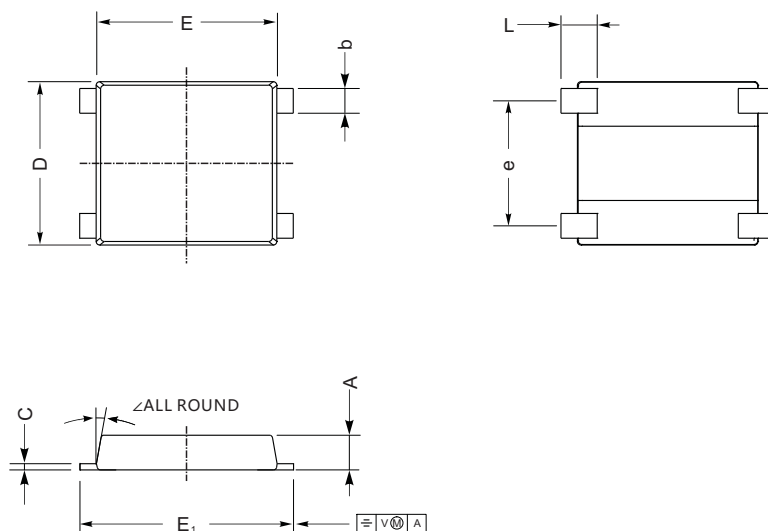


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PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

UMSB



M2 mechanical data

UNIT		A	C	D	E	E ₁	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