

SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

Reverse Voltage - 100 to 1000 V

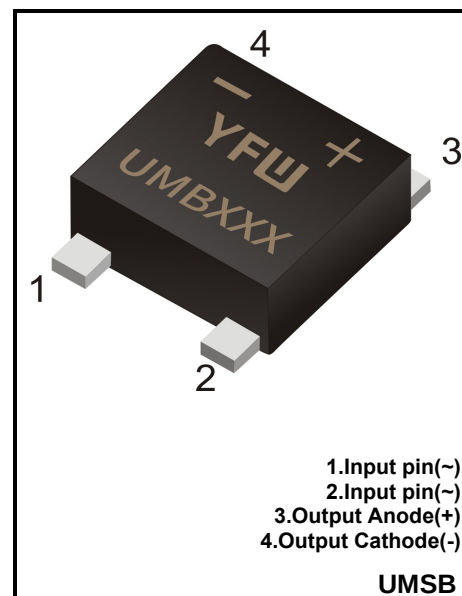
Forward Current – 4.0A

FEATURES

- ◆Fast reverse recovery time
- ◆Designed for Surface Mount Application
- ◆Glass Passivated Chip Junction
- ◆Low power loss, high efficiency
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

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



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 $T_c = 125\text{ }^{\circ}\text{C}$	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
Forward Voltage per element at 4.0A	V_F	1.0		1.4		1.6		V
Maximum DC Reverse Current @ $T_A=25^{\circ}\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^{\circ}\text{C}$	I_R	5.0 100						μA
Typical Junction Capacitance ^(Note1)	C_j	50						pF
Maximum Reverse Recovery Time ^(Note2)	T_{RR}	50			75			nS
Typical Thermal Resistance ^(Note3)	$R_{\theta JA}$	40						$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150						$^{\circ}\text{C}$

(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.

Fig.1 Average Rectified Output Current Derating Curve

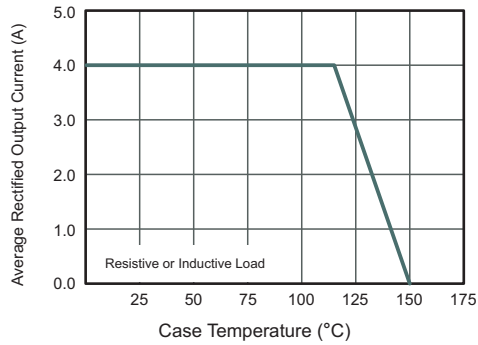


Fig.2 Typical Reverse Characteristics

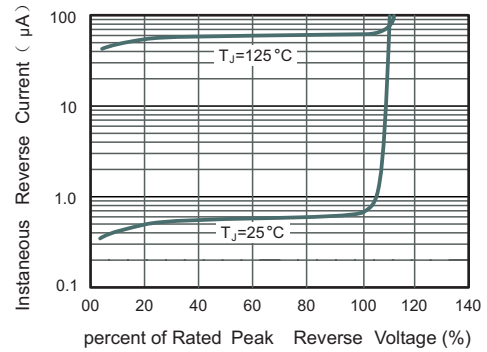


Fig.3 Typical Instantaneous Forward Characteristics

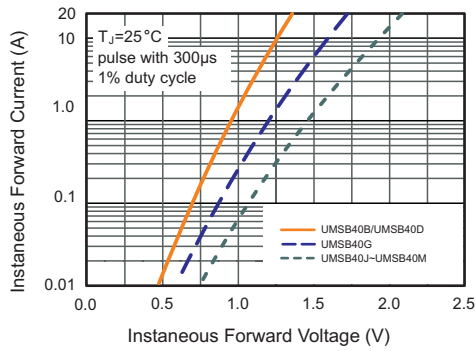


Fig.4 Typical Junction Capacitance

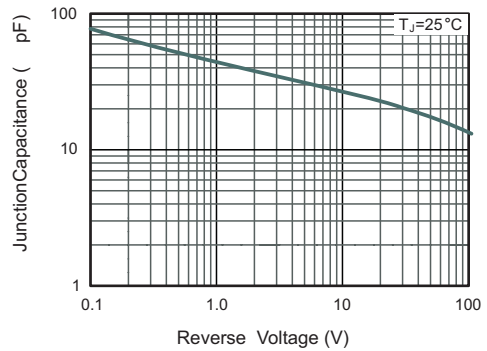
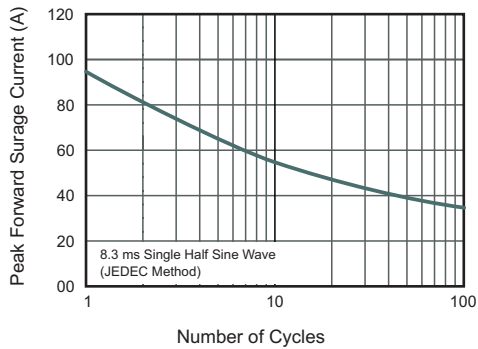
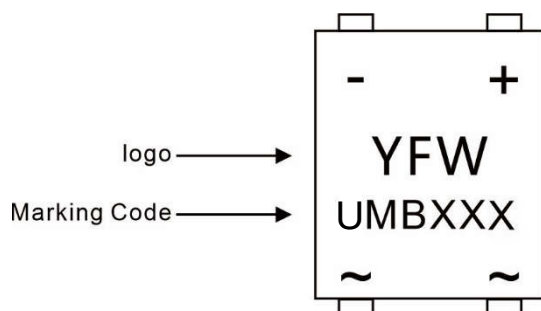


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Marking Diagram



Ordering information

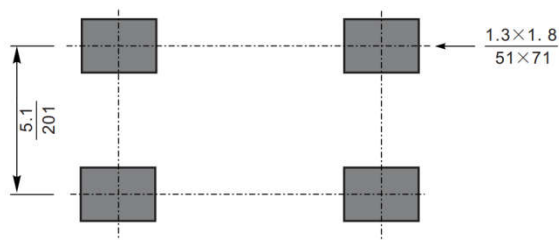
Package	Packing Description	Packing Quantity
UMSB	Tape/Reel, 13" reel	3000PCS/Reel 30000PCS/Carton

Package Dimensions

UMSB

Dim.	Millimeter(mm)		(mil)	
	Min.	Max.	Min.	Max.
A	1.3	1.5	51	59
C	0.17	0.29	7	12
D	6.2	7.0	244	276
E	7.1	7.6	280	299
E ₁	8.4	8.9	331	350
L	1.0	1.6	31.5	55
e	4.9	5.3	193	209
b	0.95	1.15	37	45
∠	10°			

The recommended mounting pad size



Unit: $\frac{\text{mm}}{(\text{mil})}$

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