

SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIERS

FEATURES

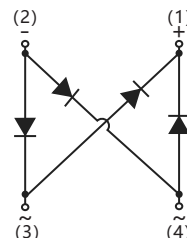
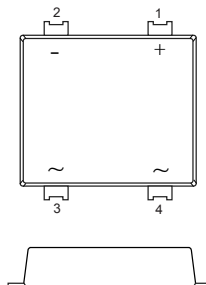
- ◆ Glass Passivated Chip Junction
- ◆ Reverse Voltage - 100 to 1000 V
- ◆ Forward Current - 4.0 A
- ◆ High Surge Current Capability
- ◆ Designed for Surface Mount Application

MECHANICAL DATA

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

UMSB

ROHS
COMPLIANT



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	MSB40B	MSB40D	MSB40G	MSB40J	MSB40K	MSB40M	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	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	1.1						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	5 100						μA
Typical Junction Capacitance (Note1)	C_j	50						pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	60 10 25						$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150						$^{\circ}\text{C}$

Note: 1. Measured at 1MHz 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.

Typical Characteristics

Fig.1 Average Rectified Output Current Derating Curve

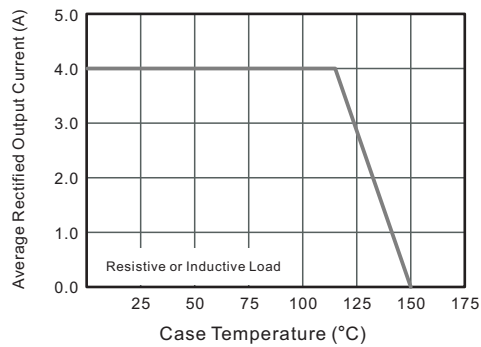


Fig.2 Typical Reverse Characteristics

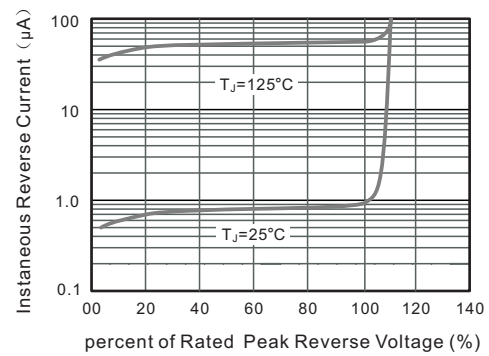


Fig.3 Typical Instantaneous Forward Characteristics

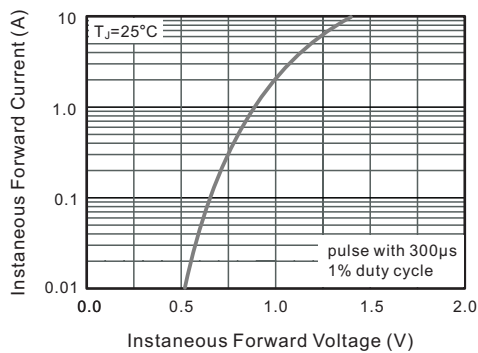


Fig.4 Typical Junction Capacitance

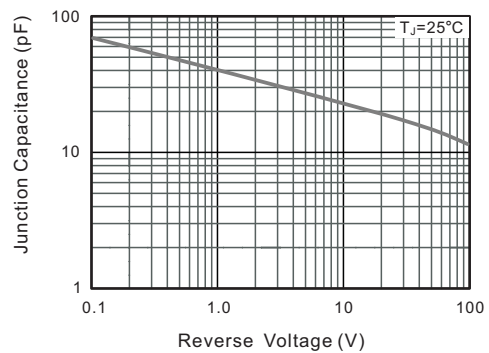


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

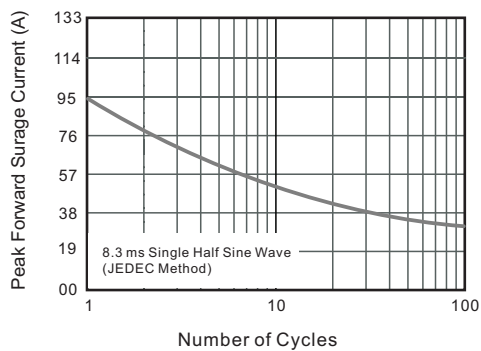
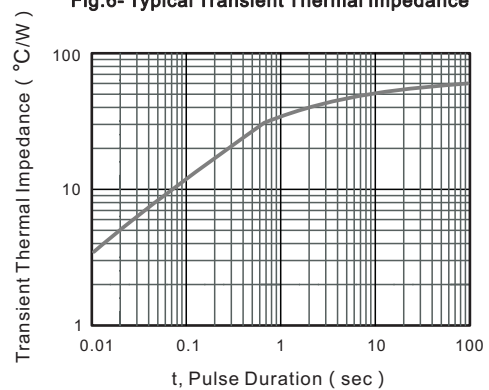


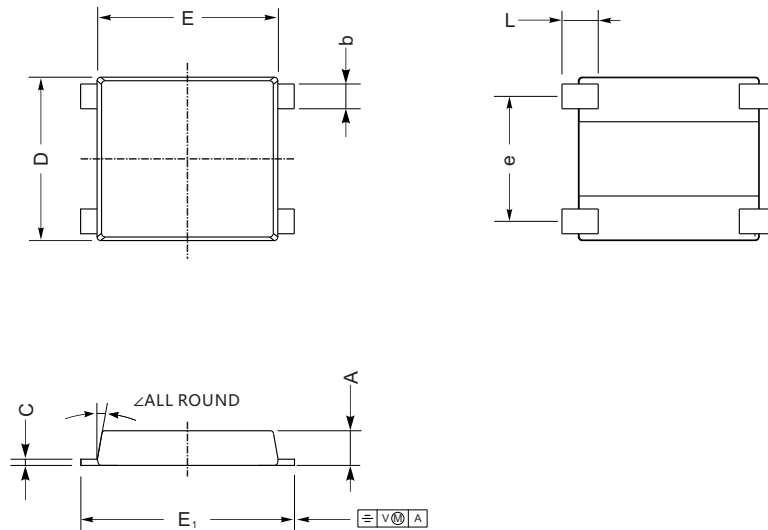
Fig.6- Typical Transient Thermal Impedance



PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

UMSB



UMSB 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	

The recommended mounting pad size

