

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

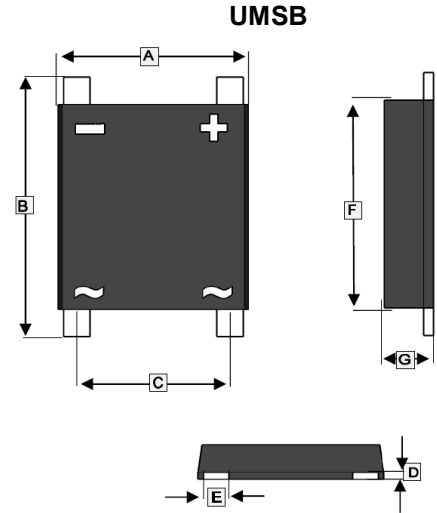
- High surge current capability
- Saves space on printed circuit boards
- Glass passivated structure

## MECHANICAL DATA

- Terminals: Solderable per MIL-STD-750, Method 2026
- Case: UMSB
- Mounting position: Any

## PACKAGE INFORMATION

Package	MPQ	Leader Size
UMSB	3K	13 inch



## MARKING

Part Number	Marking
MSB301S-C ~ MSB310S-C	MB30M

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.2	7.0	E	0.9	1.2
B	8.4	8.9	F	7.1	7.6
C	4.9	5.3	G	1.3	1.5
D	0.15	0.3			

## ORDER INFORMATION

Part Number	Type
MSB301S-C ~ MSB310S-C	Lead (Pb)-free and Halogen-free

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, de-rate current by 20%.)

Parameter	Symbol	Part Number						Unit
		MSB 301S	MSB 302S	MSB 304S	MSB 306S	MSB 308S	MSB 310S	
Maximum Recurrent 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
Maximum Average Forward Current	$I_{F(AV)}$	3						A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	80						A
Maximum instantaneous forward voltage @ $I_F=3A$	$V_F$	1.1						V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A=25^\circ C$	5						$\mu A$
	$T_A=125^\circ C$	100						
Typical junction capacitance <sup>1</sup>	$C_J$	30						pF
Thermal resistance junction to Case <sup>2</sup>	$R_{\theta JC}$	10						°C/W
Operating and Storage Temperature range	$T_J, T_{STG}$	-55~150						°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.

**RATINGS AND CHARACTERISTIC CURVES**

Fig.1 Average Rectified Output Current Derating Curve

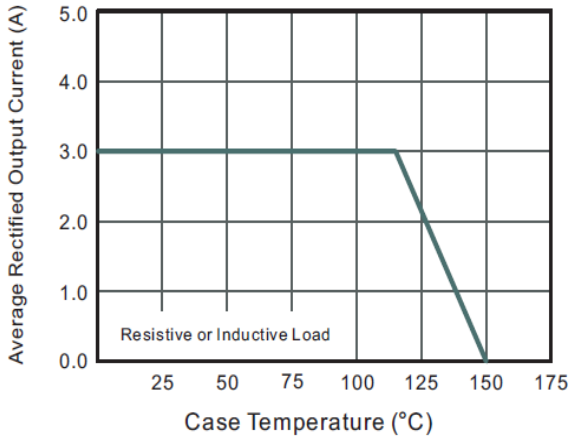


Fig.2 Typical Reverse Characteristics

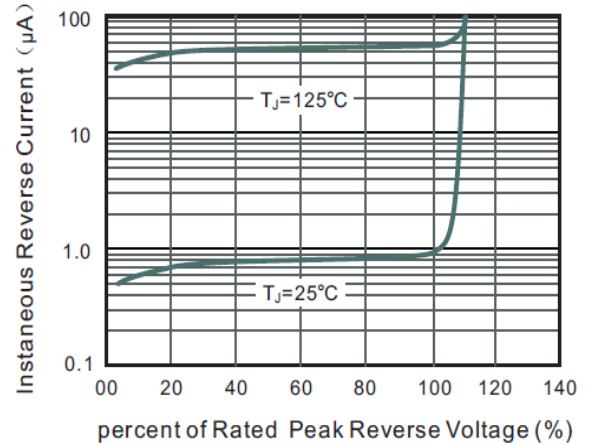


Fig.3 Typical Instantaneous Forward Characteristics

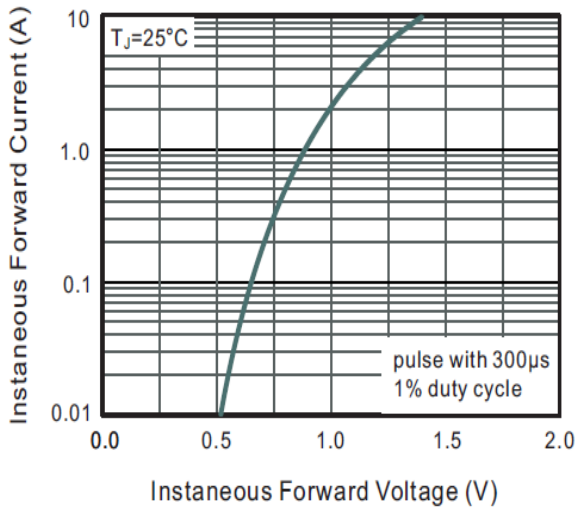


Fig.4 Typical Junction Capacitance

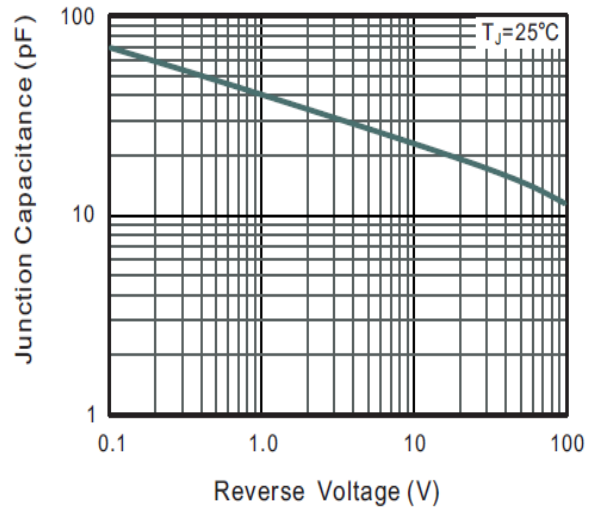


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

