

# Zibo Seno Electronic Engineering Co., Ltd.



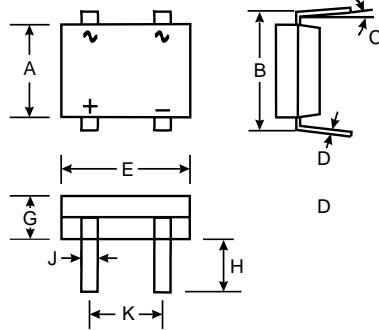
## B05M – B10M



### 0.5A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

#### Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- Designed for Surface Mount Application
- Plastic Material – UL Flammability 94V-0



MB-M		
Dim	Min	Max
A	3.65	4.10
B	4.95	5.21
C	0	10°
D	0.15	0.41
E	4.50	4.95
G	2.30	2.70
H	2.54	
J	0.43	0.74
K	2.41	2.67
All Dimensions in mm		

#### Mechanical Data

- Case: MB-S, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Weight: 0.22 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version,**

#### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	B05M	B1M	B2M	B4M	B6M	B8M	B10M	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	$V_{RWM}$								
DC Blocking Voltage	$V_R$								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @ $T_A = 40^\circ\text{C}$	$I_o$	0.5							A
Average Rectified Output Current (Note 2) @ $T_A = 40^\circ\text{C}$		0.8							
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	5.0							$\text{A}^2\text{s}$
Forward Voltage per element @ $I_F = 0.5\text{A}$	$V_{FM}$	1.0							V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$	$I_{RM}$	5.0							$\mu\text{A}$
At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$		500							
Typical Junction Capacitance per leg (Note 3)	$C_j$	13							pF
Typical Thermal Resistance per leg (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	70 20							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-55 to +150							$^\circ\text{C}$

Note: 1. Mounted on glass epoxy PC board with  $1.3\text{mm}^2$  solder pad.  
2. Mounted on aluminum substrate PC board with  $1.3\text{mm}^2$  solder pad.  
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

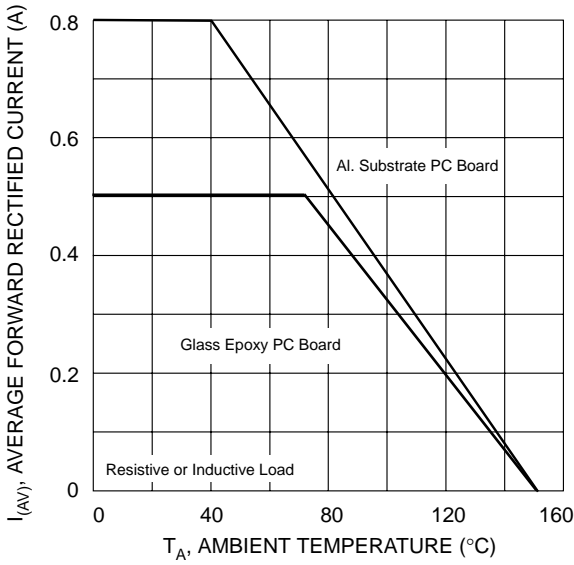


Fig. 1 Output Current Derating Curve

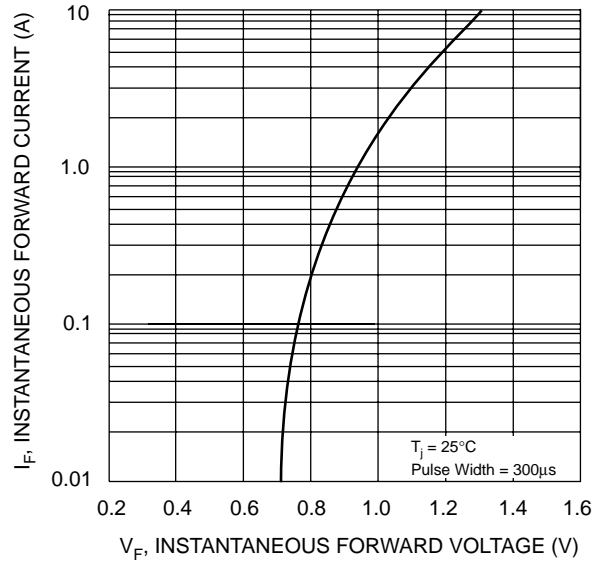


Fig. 2 Typical Forward Characteristics (per leg)

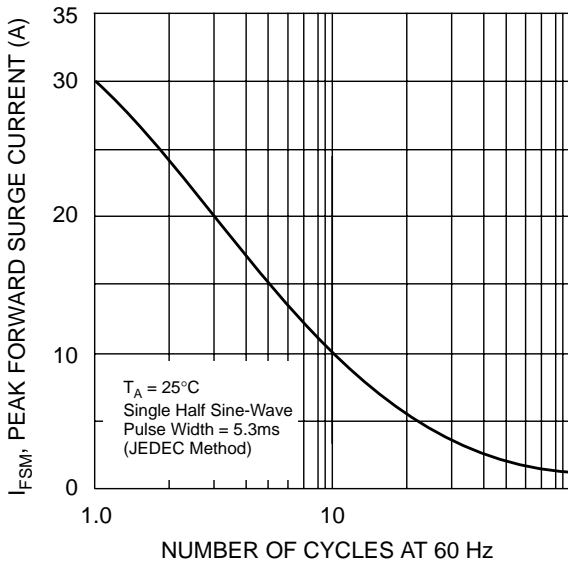


Fig. 3 Maximum Peak Forward Surge Current (per leg)

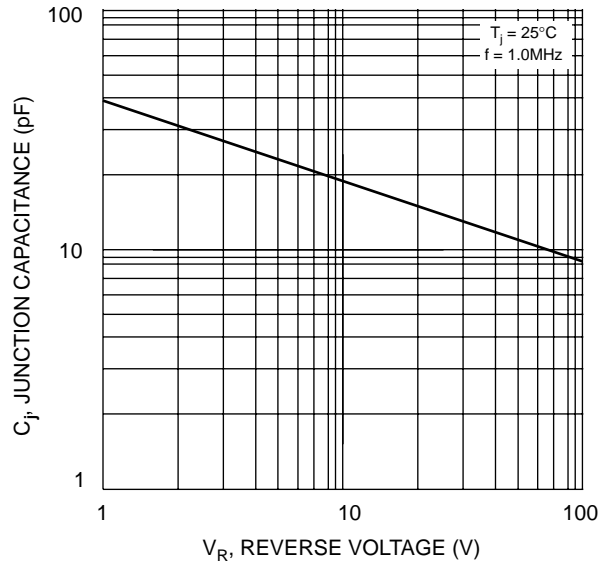


Fig. 4 Typical Junction Capacitance

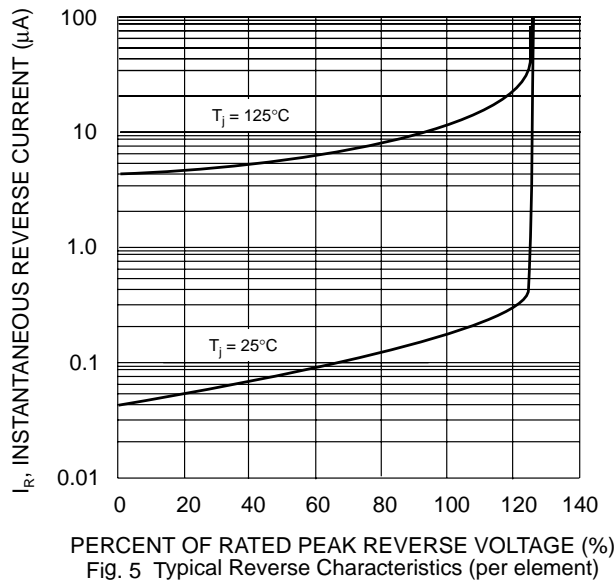


Fig. 5 Typical Reverse Characteristics (per element)