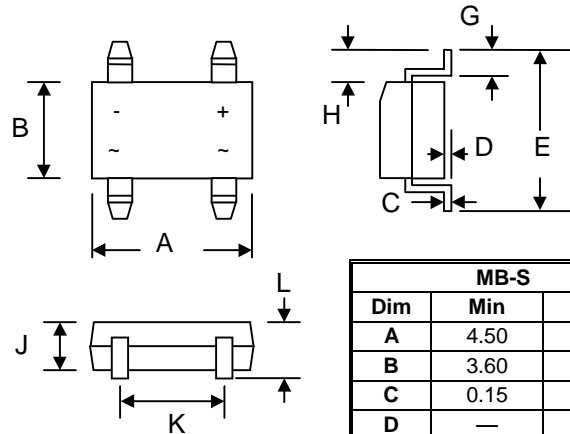


0.5A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

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



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,**

MB-S		
Dim	Min	Max
A	4.50	4.95
B	3.60	4.10
C	0.15	0.35
D	—	0.20
E	6.40	7.00
G	0.50	1.10
H	1.30	1.70
J	2.30	2.70
K	2.30	2.70
L	—	3.00
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

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

Characteristic	Symbo	MB05S	MB1S	MB2S	MB4S	MB6S	MB10S	Unit
Peak Repetitive Reverse Voltage	V _{RRM}							
Working Peak Reverse Voltage	V _{RWM}	50	100	200	400	600	1000	V
DC Blocking Voltage	V _R							
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	700	V
Average Rectified Output Current (Note 1) @T _A = 40°C	I _O	0.5						A
Average Rectified Output Current (Note 2) @T _A = 40°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 ² t Rating for Fusing (t < 8.3ms)	I ² t	5.0						A ² s
Forward Voltage per element @I _F = 0.5A	V _{FM}	1.0						V
Peak Reverse Current @T _A = 25°C	I _{RM}	5.0						μA
At Rated DC Blocking Voltage @T _A = 125°C		500						
Typical Junction Capacitance per leg (Note 3)	C _j	13						pF
Typical Thermal Resistance per leg (Note 1)	R _{θJA} R _{θJL}	70 20						°C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-55 to +150						°C

Note: 1. Mounted on glass epoxy PC board with 1.3mm² solder pad.
2. Mounted on aluminum substrate PC board with 1.3mm² solder pad.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

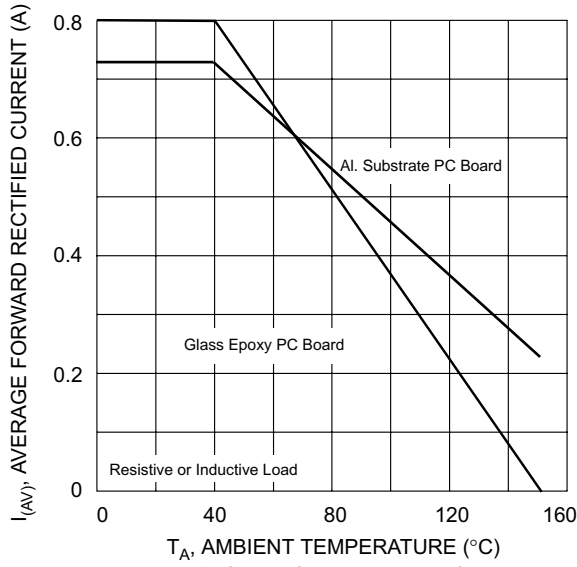


Fig. 1 Output Current Derating Curve

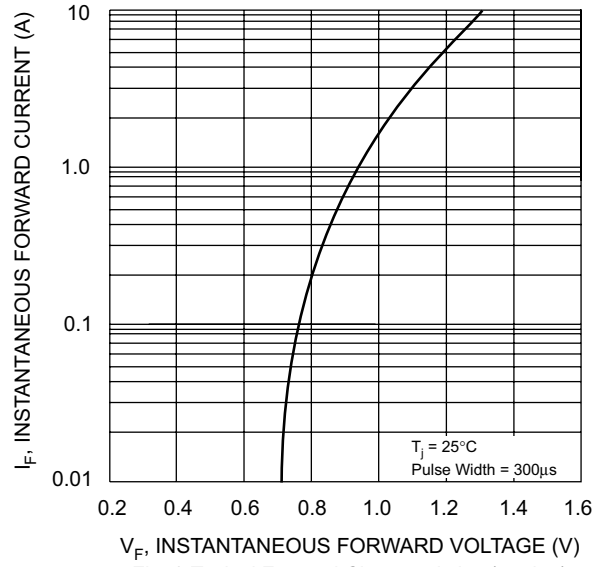


Fig. 2 Typical Forward Characteristics (per leg)

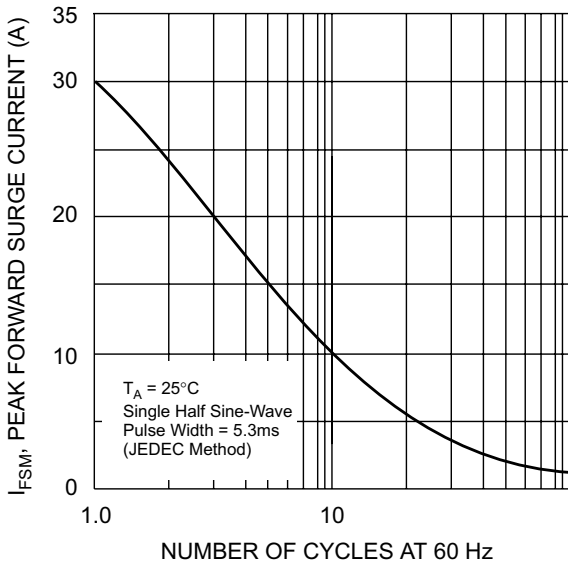


Fig. 3 Maximum Peak Forward Surge Current (per leg)

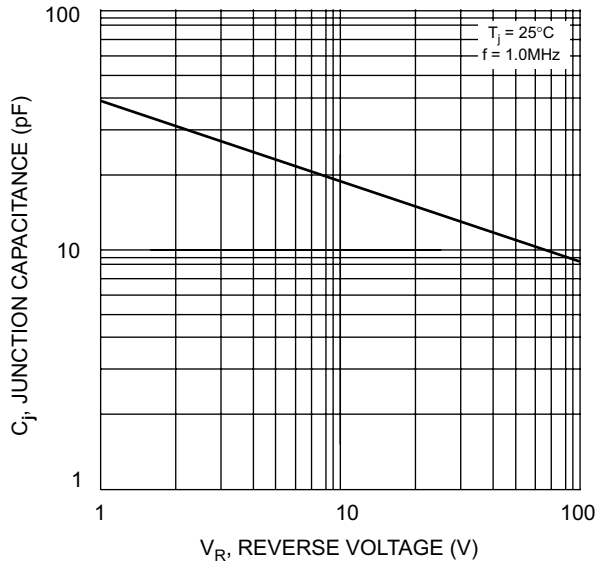


Fig. 4 Typical Junction Capacitance

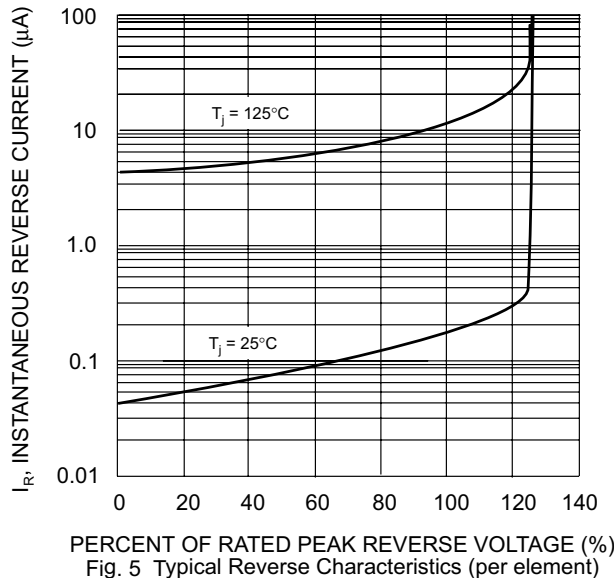


Fig. 5 Typical Reverse Characteristics (per element)