



# MB05S – MB10S SURFACE MOUNT BRIDGE RECTIFIERS

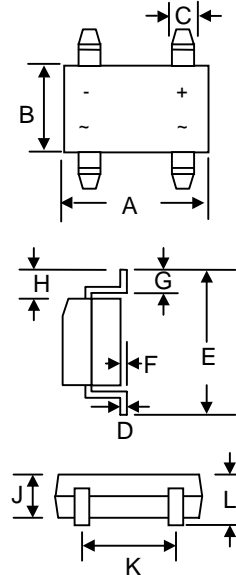
## Features

- 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-O
- UL Recognized File # E476623

## 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



MB-S		
Dim	Min	Max
A	4.50	4.95
B	3.60	4.10
C	0.60	0.80
D	0.15	0.35
E	6.40	7.00
F	—	0.20
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

Rating at 25°C ambient temperature unless otherwise specified.  
Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

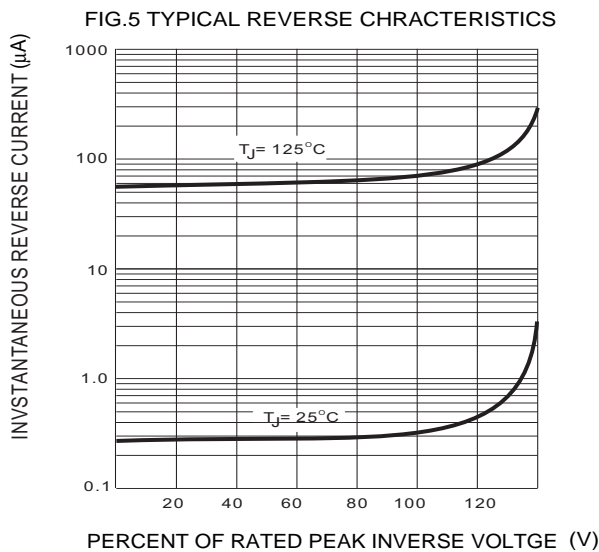
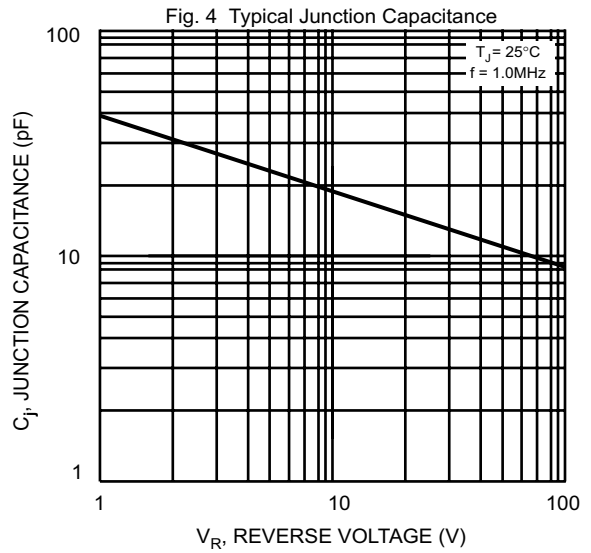
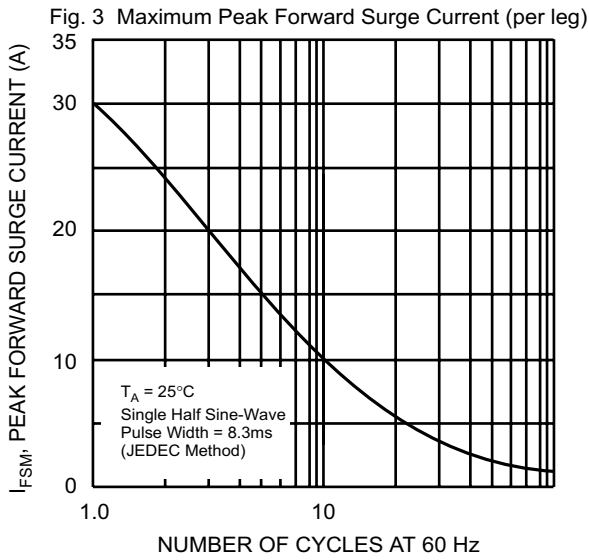
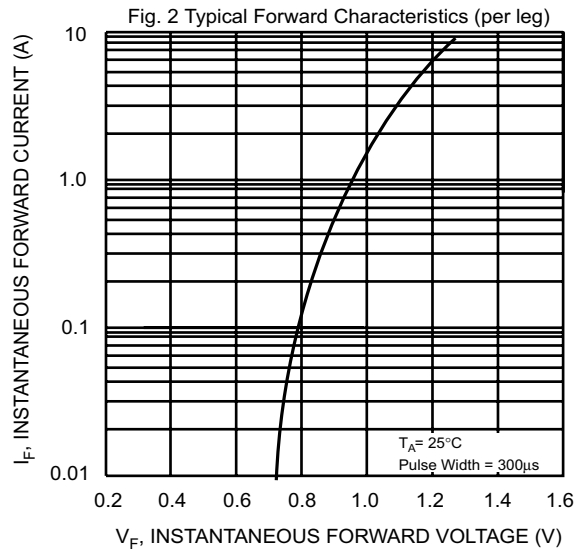
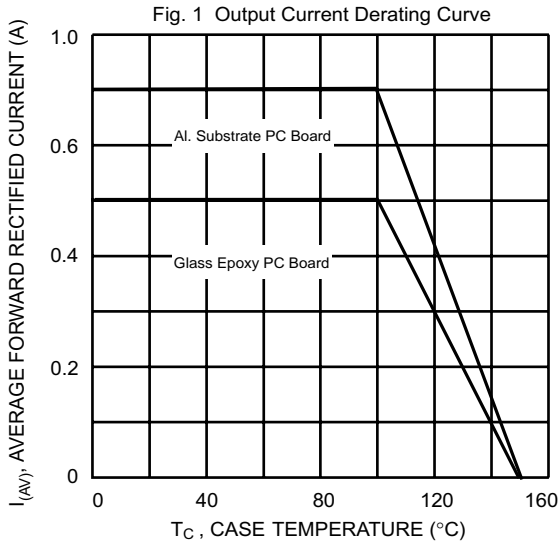
TYPE NUMBER	SYMBOL	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	UNITS
Peak Repetitive Reverse Voltage	$V_{RRM}$								
Working Peak Reverse Voltage	$V_{RWM}$	50	100	200	400	600	800	1000	V
DC Blocking Voltage	$V_{DC}$								
RMS Reverse Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1)@T <sub>c</sub> =100°C (Note 2)@T <sub>c</sub> =100°C	$I_{F(AV)}$	0.5 0.8							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
I <sup>2</sup> t Rating for Fusing (t < 8.3ms)	I <sup>2</sup> t	3.735							A <sup>2</sup> s
Forward Voltage per element @I <sub>F</sub> =0.5A @I <sub>F</sub> =0.8A	$V_{FM}$	0.95 1.0							V
Peak Reverse Current @T <sub>A</sub> =25°C At Rated DC Blocking Voltage @T <sub>A</sub> =125°C	$I_R$	5.0 200							uA
Typical Junction Capacitance per leg (Note 3)	$C_J$	13							pF
Typical Thermal Resistance per leg	$R_{\theta JA}$	60							°C/W
	$R_{\theta JL}$	16							
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55to+150							°C

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

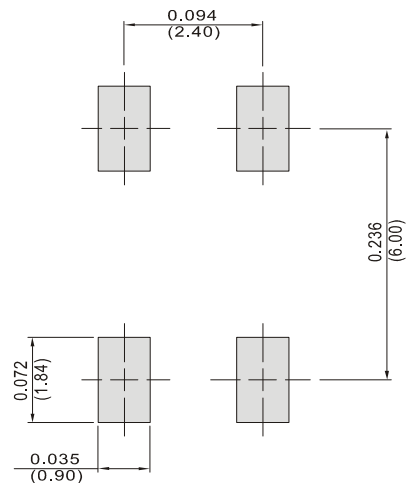


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## Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)



**FIG.6 MOUNTING PAD LAYOUT**



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