



# 12M10

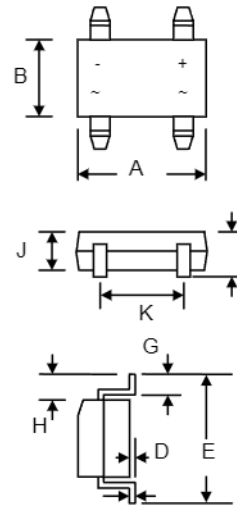
## SURFACE MOUNT BRIDGE RECTIFIERS

### 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

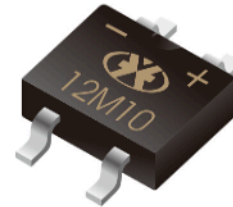
### Mechanical Data

- Case: MBF(GW), Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Weight: 0.134 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version,**



MBF(GW)

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	1.20	1.60
K	2.30	2.70
L	—	1.80
All Dimensions in mm		



### 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	Symbo	12M10	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	VRRM VRWM VR	1000	V
RMS Reverse Voltage	VR(RMS)	700	V
Average Rectified Output Current (Note 1) @ $T_A = 40^\circ\text{C}$	$I_o$	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	35	A
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	5.083	$\text{A}^2\text{s}$
Forward Voltage per element @ $I_F = 1.0\text{A}$	V	1.05	V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	IRM	5.0 500	$\mu\text{A}$
Typical Junction Capacitance per leg	Cj	25	pF
Typical Thermal Resistance per leg (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	60 16	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-55 to +150	$^\circ\text{C}$

Note: 1. Mounted on aluminum substrate PC board with  $1.3\text{mm}^2$  solder pad.  
2. 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. 1 Output Current Derating Curve

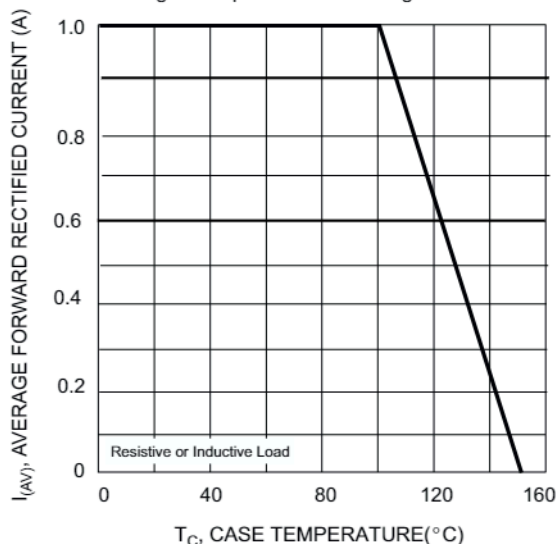


Fig. 2 Typical Forward Characteristics (per leg)

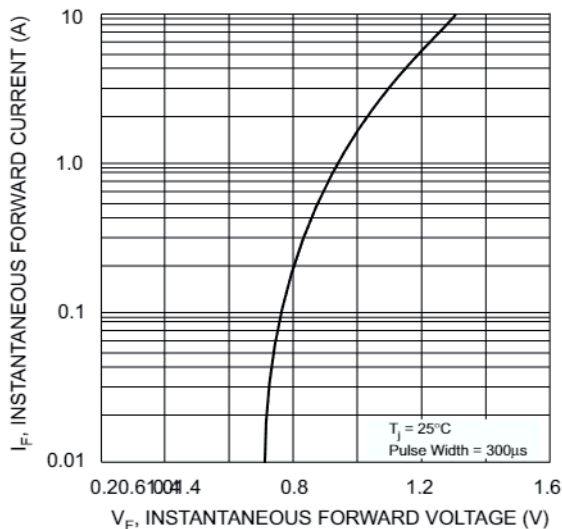


Fig. 3 Maximum Peak Forward Surge Current (per leg)

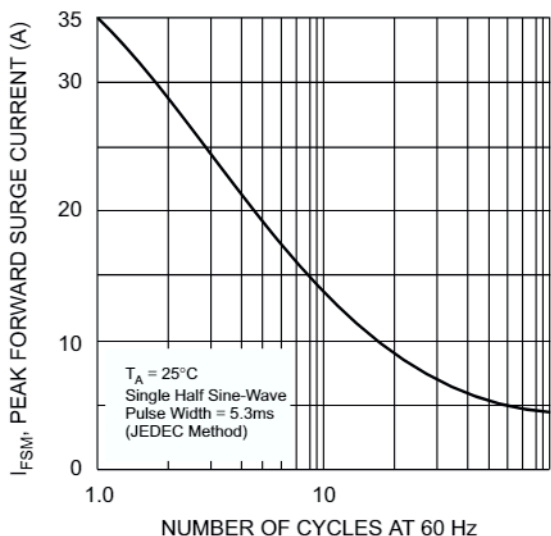


Fig. 4 Typical Junction Capacitance

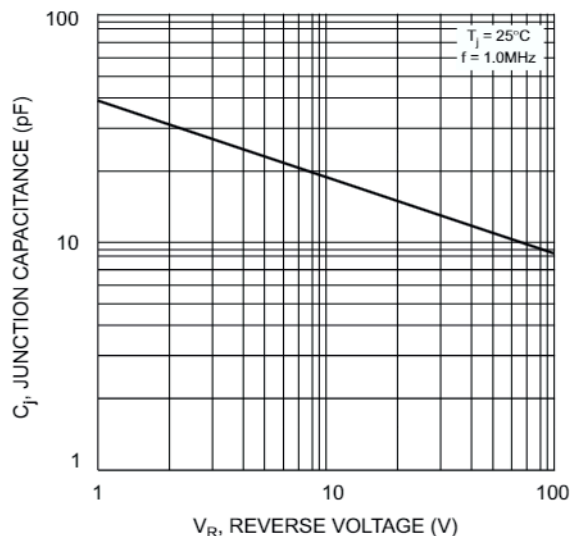


Fig. 5 Typical Reverse Characteristics (per element)

