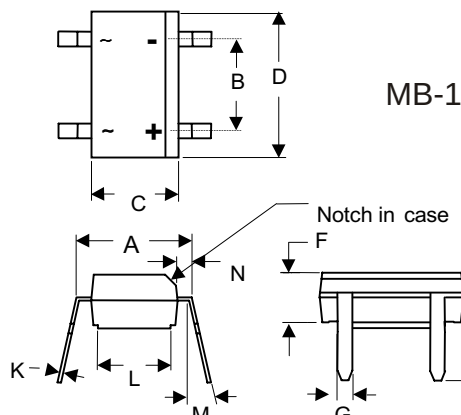


0.5 A Single-Phase Glass Passivated Bridge Rectifiers

Rectifier Reverse Voltage 50 to 1000V

Features

- This series is UL listed under the Recognized Component Index, file number E142814
- Ideal for surface mount application
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Surge overload ratings to 30 amperes
- High temperature soldering guaranteed 265°C/10 seconds at 5 lbs (2.3kg) tension



Mechanical Data

Case: Molded plastic
 Terminals: Plated leads solderable per MIL-STD-202, Method 208
 Polarity: Marked on body
 Mounting Position: Any

DIMENSIONS					
DIM	INC HES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.195	.205	4.95	5.21	
B	.095	.105	2.41	2.67	
C	.144	.161	3.65	4.10	
D	.179	.190	4.55	4.83	
E	.039	.049	0.99	1.24	
F	.090	.106	2.30	2.70	
G	.017	.029	0.43	0.74	
H	.132	.148	3.35	3.75	
K	.006	.016	0.15	0.41	
L	.137	.147	3.48	3.73	
M	10°	15°	10°	15°	
N	.020	.028	0.51	0.71	

Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.
 For Capacitive load derate current by 20%.

Parameter	Symbol	MB05M	MB1M	MB2M	MB4M	MB6M	MB8M	MB10M	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at TA=40°C (*3)	IF(AV)	0.5 0.8*							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	30							A
Rating for fusing (t<8.3ms)	I ² t	10							A ² sec
Typical thermal resistance per element (1)	ReJA	110							°C/W
Typical junction capacitance per element (2)	Cj	25.0							pF
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							°C

Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.
 For Capacitive load derate by 20 %.

Parameter	Symbol	MB05M	MB1M	MB2M	MB4M	MB6M	MB8M	MB10M	Unit
Maximum instantaneous forward voltage drop per leg at 0.5A	VF	1.1							V
Maximum DC reverse current at rated TA =25°C DC blocking voltage per element TA =125°C	IR	10 500							μA

Notes: (1) Thermal resistance from Junction to Ambient on P.C. board mounting.
 (2) Measured at 2.0MHz and applied reverse voltage of 4.0 volts.
 (3) R-load on aluminum substrate TA=25°C.

Rating and Characteristic Curves ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

MB05M thru MB10M

Fig. 1 Derating Curve for Output Rectified Current

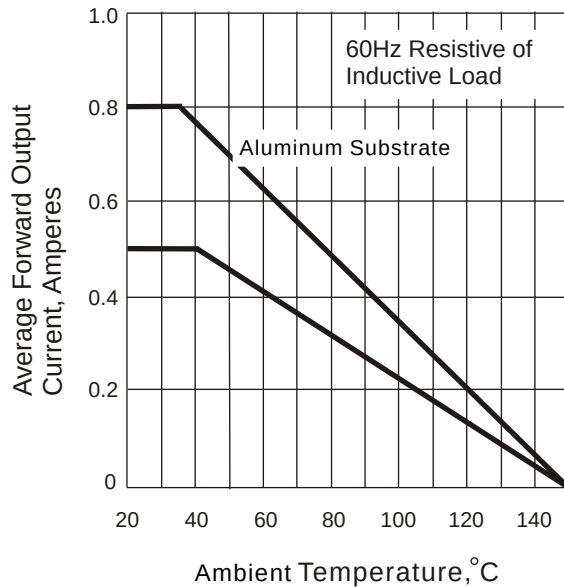


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

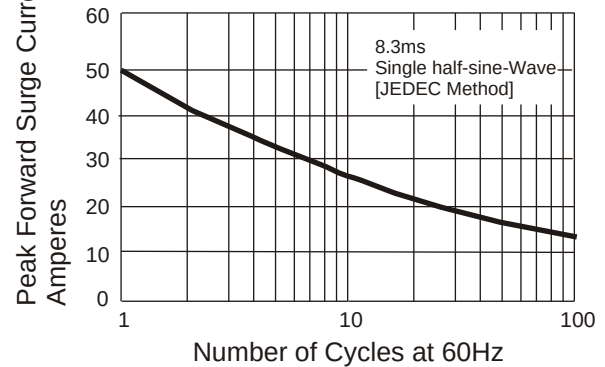


Fig. 3 Typical Instantaneous Forward Characteristics

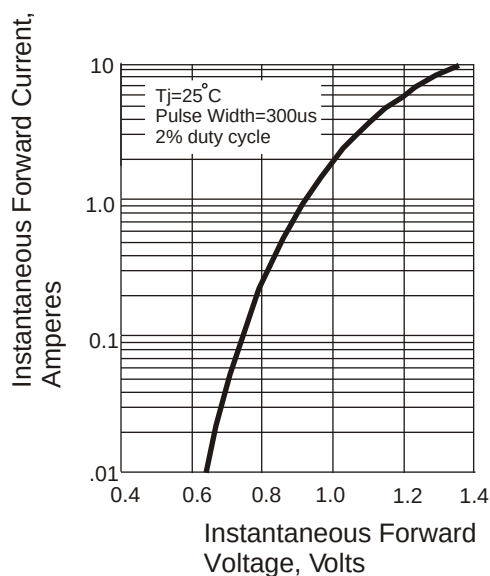


Fig. 4 Typical Revers Characteristics

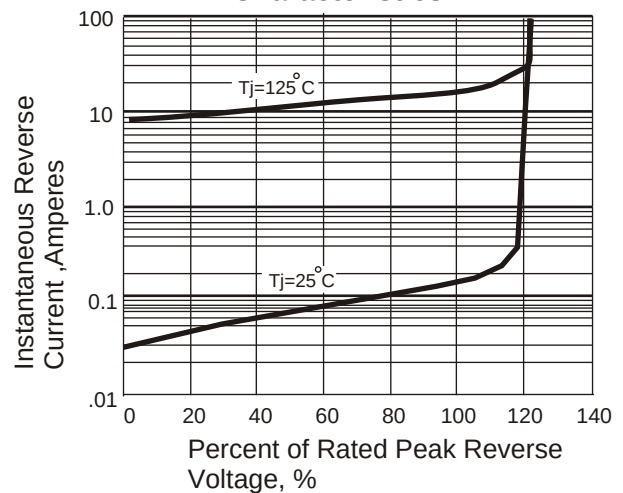


Fig. 5 Typical Junction Capacitance

