Low Profile Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifier

MB1S - MB8S

VOLTAGE - 50 TO 1000 VOLTS CURRENT - 0.5 AMPERES

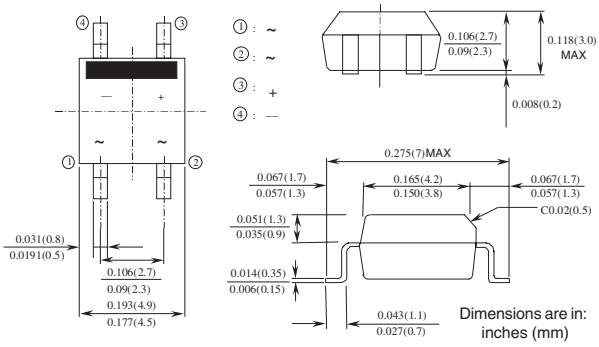
FEATURES

- Low profile space
- Ideal for automated placement
- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering:
  260℃/10 seconds at terminals
- Component in accordance to
  RoHS 2002/95/1 and WEEE 2002/96/EC

SOIC-4
Polarity symbols molded
or marking on body

MECHANICAL DATA

- Case: MBF Molded plastic
  over glass passivated chip
- Terminals: Solder plated, solderable per
  J-STD-002B and JESD22-B102D
- Polarit : Polarit symbols marked on



0.5 Ampere Glass Passivated Bridge Rectifiers

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
I_O	Average Rectified Current @ T_A = 50°C	0.5	A
$i_{f(surge)}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	35	A
P_D	Total Device Dissipation Derate above 25°C	1.4 11	W mW/°C
R_{JA}	Thermal Resistance, Junction to Ambient,** per leg	85	°C/W
R_{JL}	Thermal Resistance, Junction to Lead,** per leg	20	°C/W
T_{stg}	Storage Temperature Range	-55 to +150	°C
T_J	Operating Junction Temperature	-55 to +150	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

**Device mounted on PCB with 0.5-0.5" (13x13 mm) lead length.

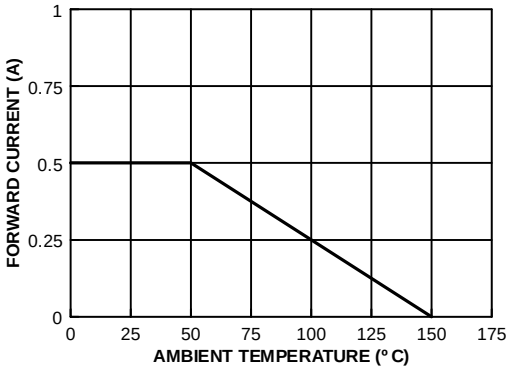
Electrical Characteristics

T_A = 25°C unless otherwise noted

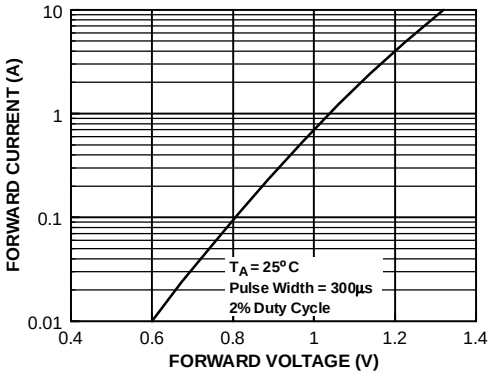
Parameter	Device					Units
	1S	2S	4S	6S	8S	
Peak Repetitive Reverse Voltage	100	200	400	600	800	V
Maximum RMS Bridge Input Voltage	70	140	280	420	560	V
DC Reverse Voltage (Rated V_R)	100	200	400	600	800	V
Maximum Reverse Leakage, per leg @ rated V_R T_A = 25°C T_A = 125°C			5.0 0.5			 A mA
Maximum Forward Voltage Drop, per bridge @ 0.5 A			1.0			V
I^2t rating for fusing t < 8.3 ms			5.0			A^2t
Typical Junction Capacitance, per leg V_R = 4.0 V, f = 1.0 MHz			13			pF

Typical Characteristics

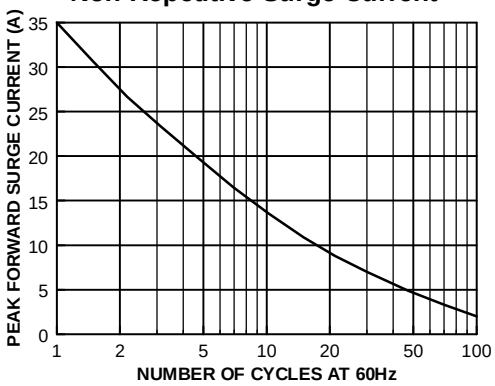
Forward Current Derating Curve



Forward Characteristics



Non-Repetitive Surge Current



Reverse Characteristics