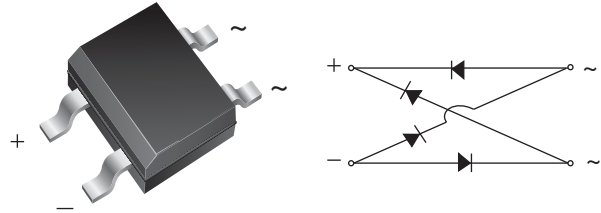


Single-Phase Bridge Rectifier in TO-269AA

Features

- TO-269AA(MBS) package
- Saves space on printed circuit boards
- Ideal for automated placement
- Middle surge current capability
- Low leakage current



Mechanical Data

- **Case:** TO-269AA (plastic package).
RoHS compliant
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Applications

- Battery charger
- Mobile phone adapter
- Lighting ballaster
- Power supply
- Home, office, telecom applications
- Other AC/DC rectification application

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbol	MB2S	MB4S	MB6S	MB8S	MB10S	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	200	400	600	800	1000	V
Maximum average forward output rectified current (fig. 1)	$I_{F(AV)}$	0.5					A
<small>on glass-epoxy PCB ⁽¹⁾ on aluminum substrate ⁽²⁾</small>		0.8					
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30					A
Rating for fusing (t < 8.3 ms)	I^2t	5.0					A ² s
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150					°C

Thermal Characteristics

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbol	MB2S	MB4S	MB6S	MB8S	MB10S	Unit
Typical thermal resistance (junction to ambient)	$R_{\theta JA}^{(1)}$	85					°C/W
Typical thermal resistance (junction to ambient)	$R_{\theta JA}^{(2)}$	70					°C/W
Typical thermal resistance (junction to lead)	$R_{\theta JL}^{(1)}$	20					°C/W

Electrical Characteristics

($T_A = 25\text{ °C}$ unless otherwise specified)

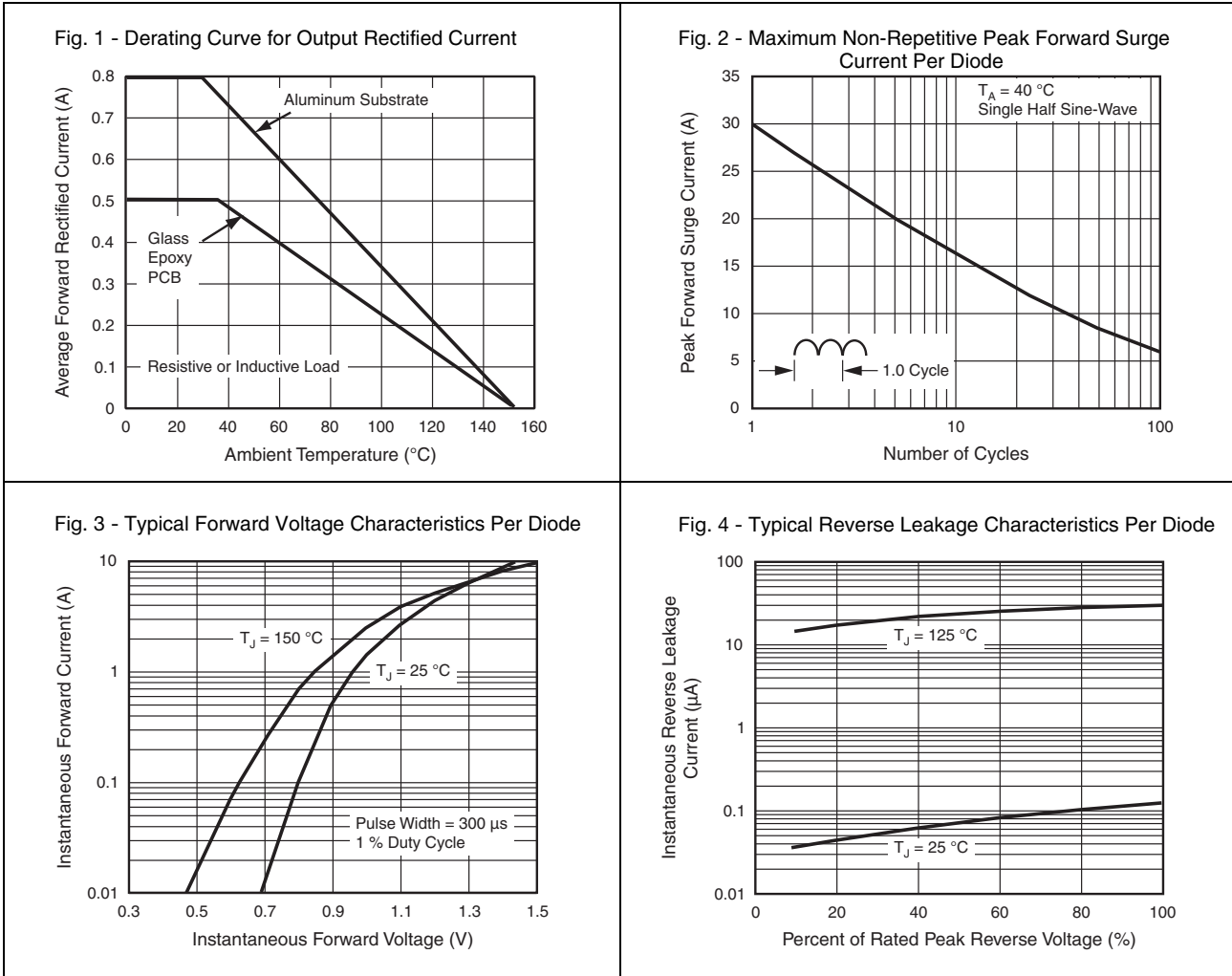
Parameter	Condition	Symbol	MB2S	MB4S	MB6S	MB8S	MB10S	Unit
Maximum instantaneous forward voltage per diode	$I_F = 0.4\text{ A}$	V_F	1.0					V
Maximum DC reverse current at rated DC blocking voltage per diode	$T_A = 25\text{ °C}$	I_R	5.0					μA
	$T_A = 125\text{ °C}$	I_R	100					μA
Typical junction capacitance per diode	4.0 V, 1 MHz	C_J	13					pF

Notes

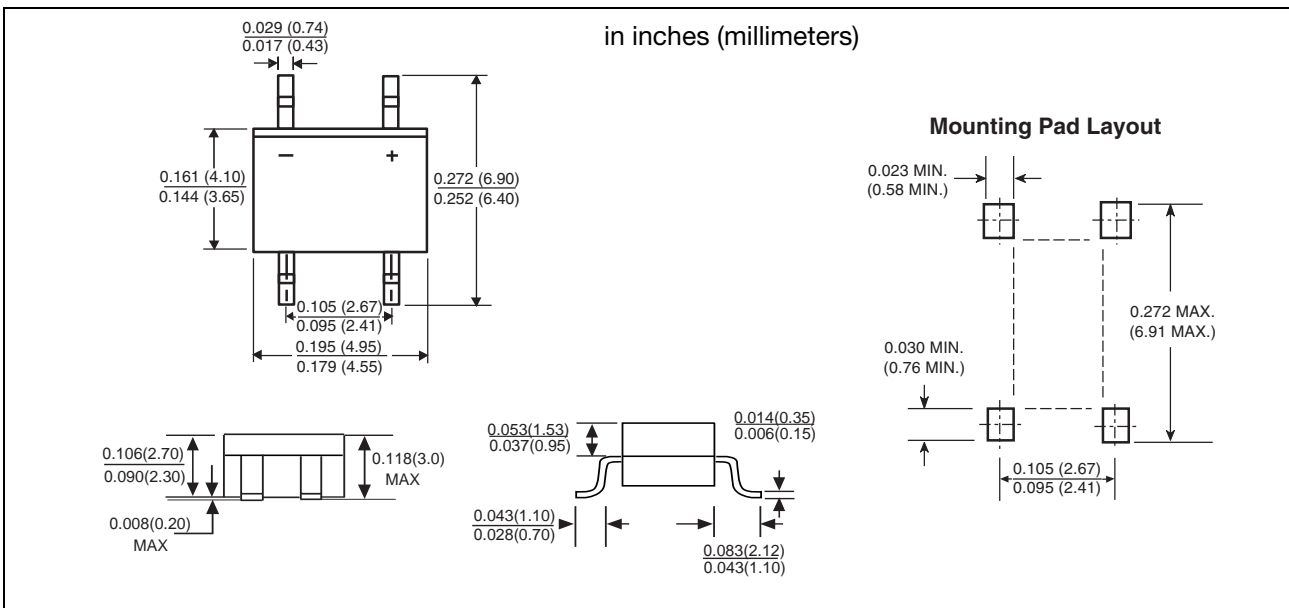
⁽¹⁾ On glass epoxy PCB mounted on 0.05" x 0.05" (1.3 mm x 1.3 mm) pads

⁽²⁾ On aluminum substrate PCB with an area of 0.8" x 0.8" (20 mm x 20 mm) mounted on 0.05" x 0.05" (1.3 mm x 1.3 mm) solder pad

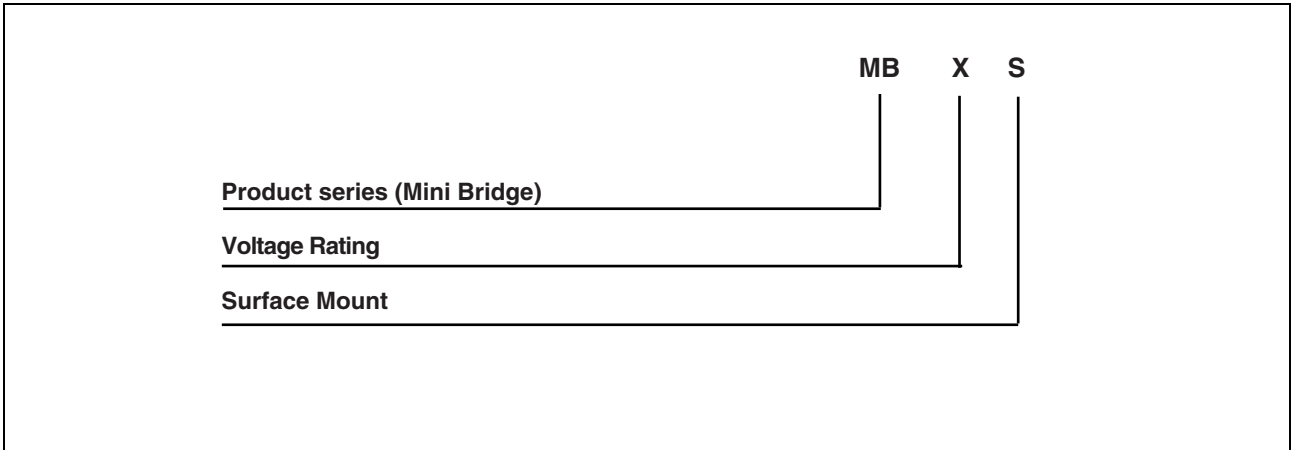
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



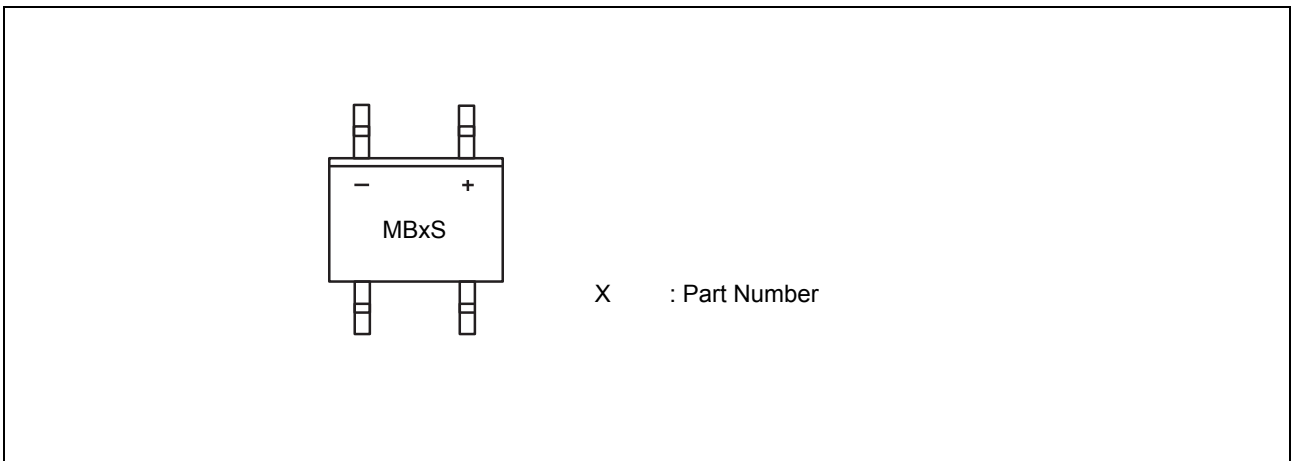
Package Dimensions



Part number system



Marking



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
MBXS	TO-269AA	Tape and reel	3000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
15-March-2012	1.0	Initial release
23-Sep.-2017	2.0	Update

CAUTION / WARNING

Information in this document is believed to be accurate and reliable. However, CREATEK does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information.

Users should independently evaluate the suitability of and test each product selected for their own applications, and CREATEK assumes no liability whatsoever relating to the choice, selection or use of the CREATEK products and services described herein.

CREATEK reserves the right to change or update, without notice, any information contained in this publication; to change, without notice, the design, construction, processing, or specification of any product; and to discontinue or limit production or distribution of any product.

Information in this document supersedes and replaces all information previously supplied.

Products are not designed, authorized or warranted to be suitable for use in medical, military, aircraft, space or life support equipment, nor in applications where failure or malfunction of an CREATEK product can reasonably be expected to result in personal injury, death or severe property or environmental damage. CREATEK accepts no liability for inclusion and/or use of CREATEK products in such equipment or applications and therefore such inclusion and/or use is at the customer's own risk.

This document as well as the item(s) described herein may be subject to export control regulations. Export might require a prior authorization from national authorities.

Resale of CREATEK products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by CREATEK for the CREATEK product or service described herein and shall not create or extend in any manner whatsoever, any liability of CREATEK.

CREATEK expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. CREATEK only obligations are those in the CREATEK Standard Terms and Conditions of Sale and in no case will CREATEK be liable for any incidental, indirect, or consequential damages arising from the sale, resale, use, or misuse of its products.

Specifications are subject to change without notice

© Copyright 2009, CREATEK Microelectronics

 CREATEK® is a registered trademark of CREATEK Microelectronics

All rights reserved