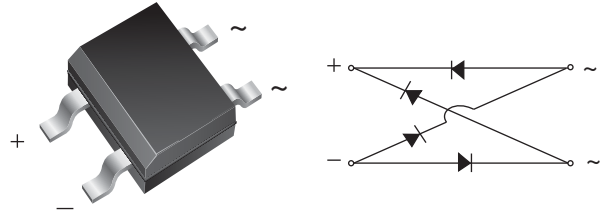


Single-Phase Bridge Rectifier in TO-269AA

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)

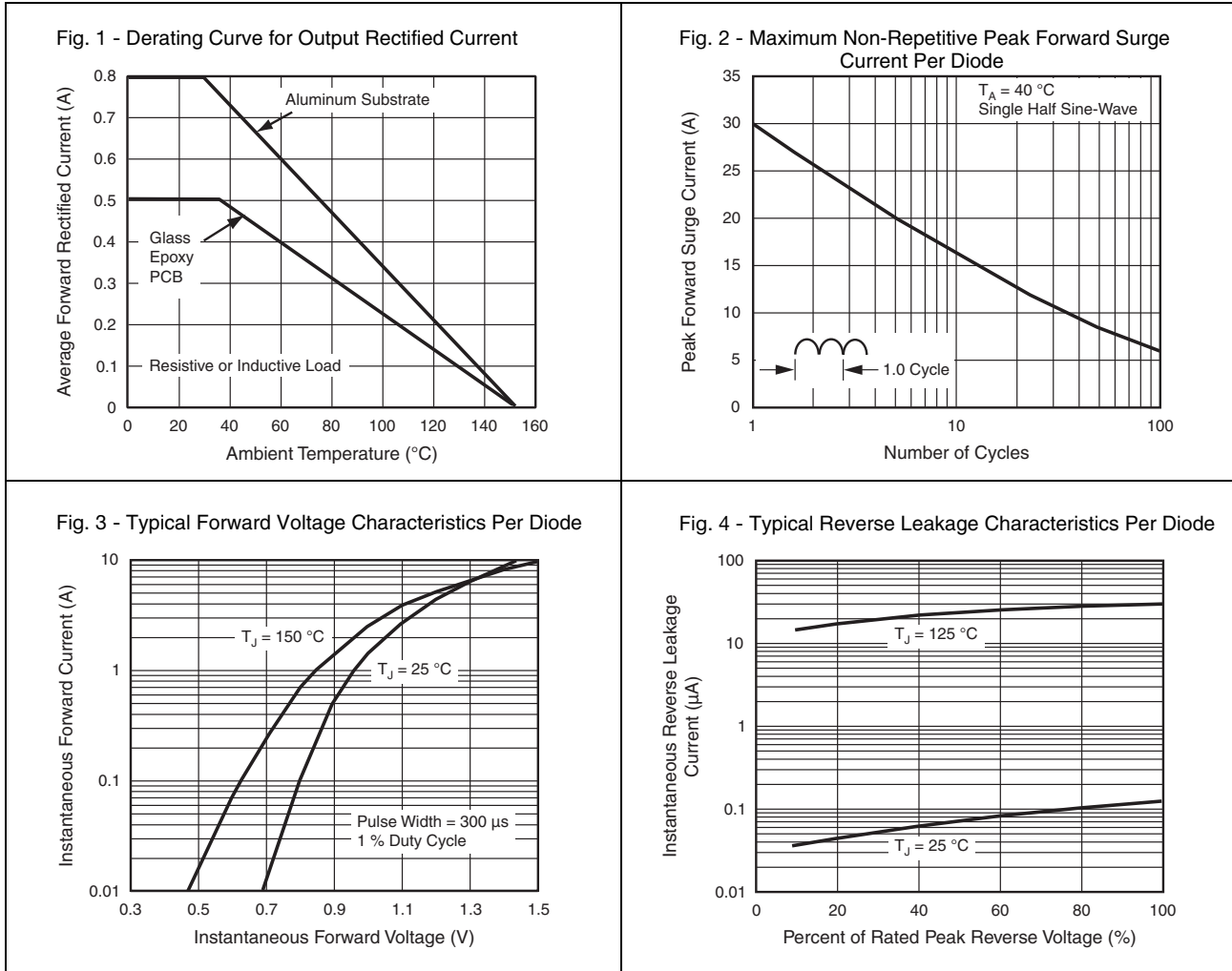
Parameter	Condition	Symbol	MB2S	MB4S	MB6S	MB8S	MB10S	Unit
Maximum instantaneous forward voltage per diode	$I_F = 0.4\text{ A}$	V_F	1.0					V
Maximum DC reverse current at rated DC blocking voltage per diode	$T_A = 25\text{ °C}$	I_R	5.0					μA
	$T_A = 125\text{ °C}$	I_R	100					μA
Typical junction capacitance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

Notes

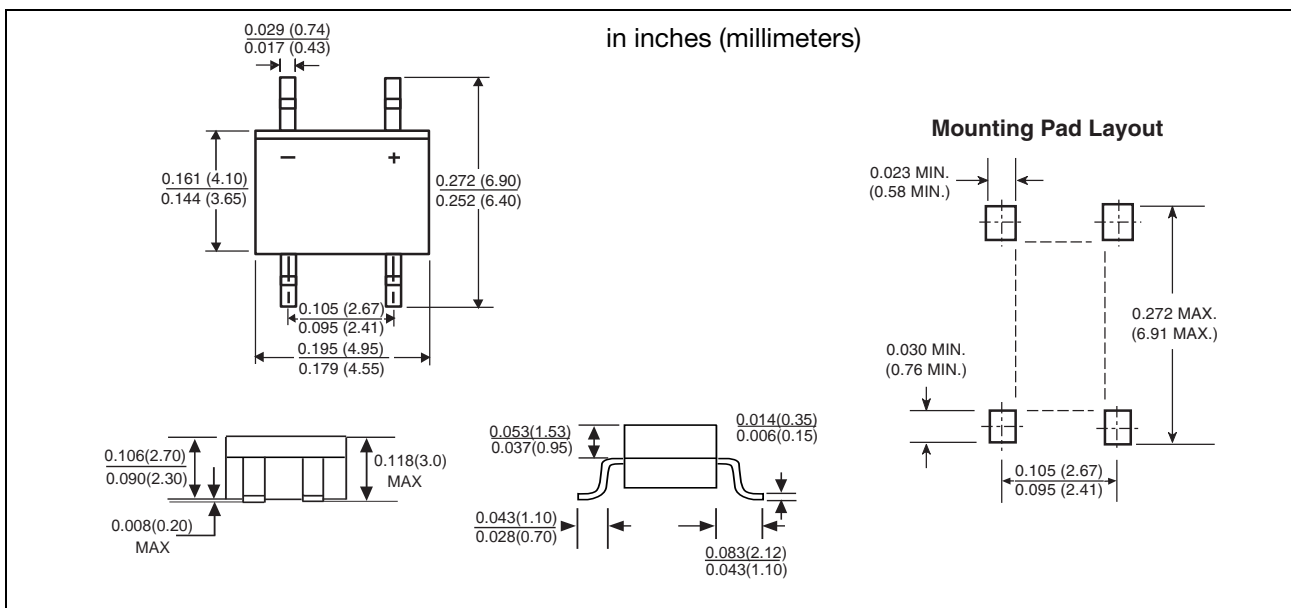
⁽¹⁾ On glass epoxy PCB mounted on 0.05" x 0.05" (1.3 mm x 1.3 mm) pads

⁽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

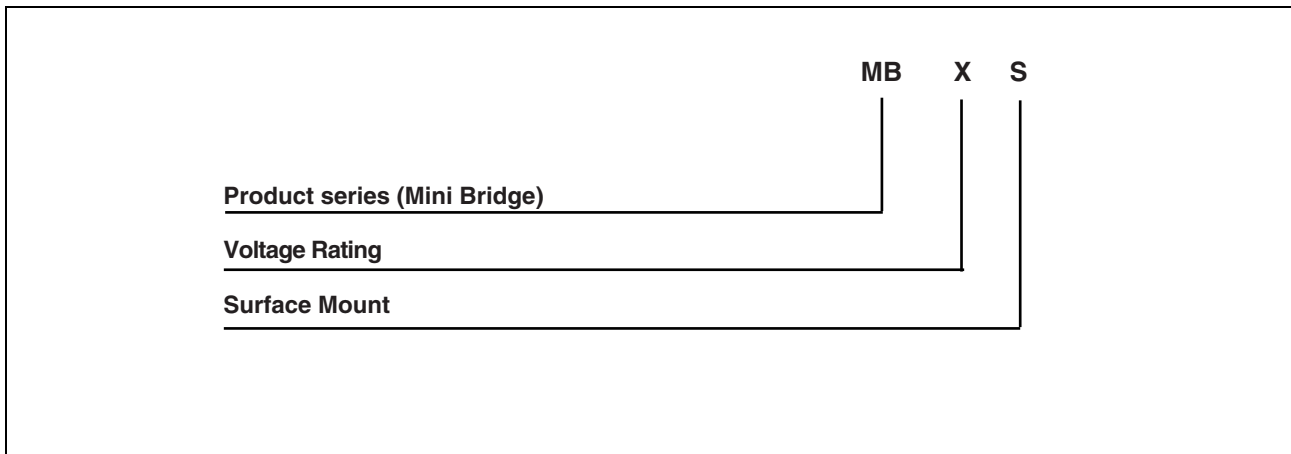
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



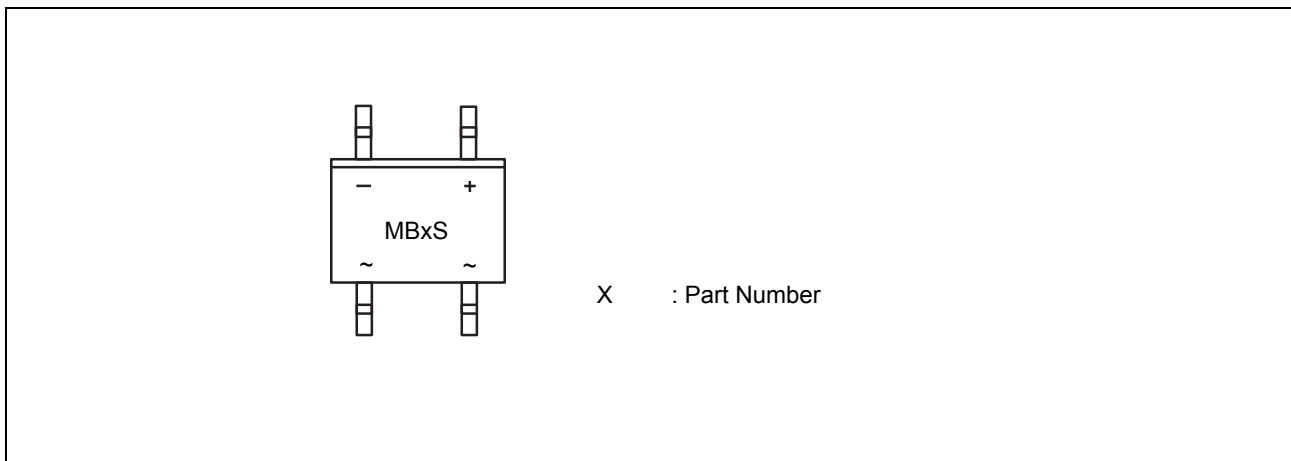
Package Dimensions



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
23-May-2020	1.0	Initial release

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