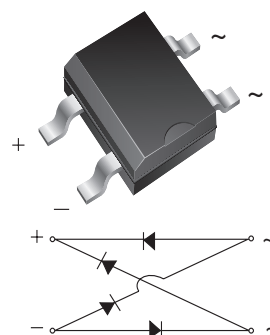


Miniature Glass Passivated Fast Recovery Surface Mount Bridge Rectifier

Major Ratings and Characteristics

$I_{F(AV)}$	0.5 A
V_{RRM}	200 V, 400 V
I_{FSM}	30 A
t_{rr}	150 ns
V_F	1.25 V
T_j max.	150 °C

TO-269AA (MBS)



Features

- UL Recognition, file number E54214
- Saves space on printed circuit boards
- Ideal for automated placement
- Fast recovery, low switching loss
- High surge current capability
- Meets MSL level 1, per J-STD-020C

Mechanical Data

Case: TO-269AA (MBS)

Epoxy meets UL-94V-0 Flammability rating

Terminals: Matte tin plated (E3 Suffix) leads, solderable per J-STD-002B and MIL-STD-750, Method 2026

Polarity: As marked on body

Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Power Supply, Lighting Ballaster, Battery Charger, Home Appliances, Office Equipment, and Telecommunication applications

Maximum Ratings

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

Parameter	Symbol	RMB2S	RMB4S	Unit
Device marking code		2R	4R	
Maximum repetitive peak reverse voltage	V_{RRM}	200	400	V
Maximum RMS voltage	V_{RMS}	140	280	V
Maximum DC blocking voltage	V_{DC}	200	400	V
Maximum average forward output rectified current at $T_A = 30\text{ °C}$ on glass-epoxy P.C.B. on aluminum substrate	$I_{F(AV)}$	0.5 ⁽¹⁾ 0.8 ⁽²⁾		A
Peak forward surge current 8.3 msec single half sine-wave superimposed on rated load	I_{FSM}	30		A
Rating for fusing ($t < 8.3\text{ ms}$)	I^2t	5.0		A ² sec
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150		°C

Electrical Characteristics

($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Parameter	Test condition	Symbol	RMB2S	RMB4S	Unit
Maximum instantaneous forward voltage drop per leg	at 0.4 A	V_F	1.25		V
Maximum DC reverse current at rated DC blocking voltage per leg	$T_A = 25\text{ }^{\circ}\text{C}$ $T_A = 125\text{ }^{\circ}\text{C}$	I_R	5.0 100		μA
Maximum reverse recovery time	at $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{rr} = 0.25\text{ A}$	t_{rr}	150		ns
Typical junction capacitance per leg	at 4.0 V, 1 MHz	C_J	13		pF

Thermal Characteristics

($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	RMB2S	RMB4S	Unit
Typical thermal resistance per leg	R _{θJA}	85 ⁽¹⁾		°C/W
	R _{θJA}	70 ⁽²⁾		
	R _{θJL}	20 ⁽¹⁾		

Notes:

(1) On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3 mm) pads

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

Ratings and Characteristics Curves

($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

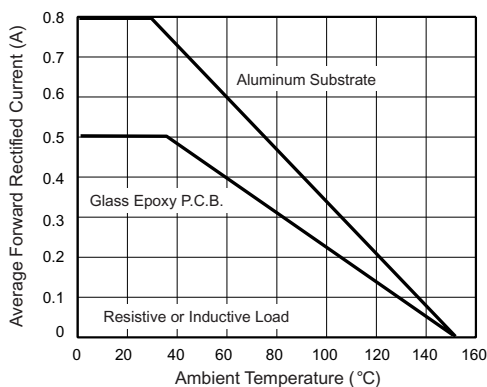


Figure 1. Maximum Forward Current Derating Curve

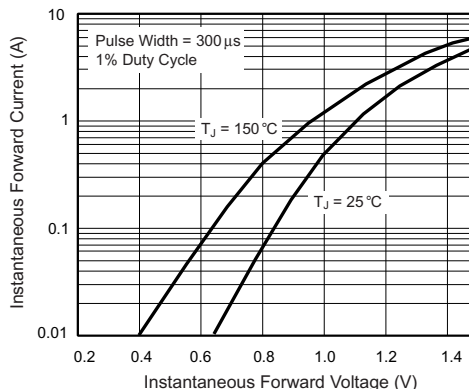


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

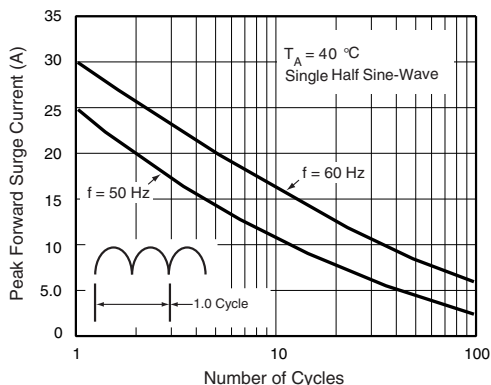


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

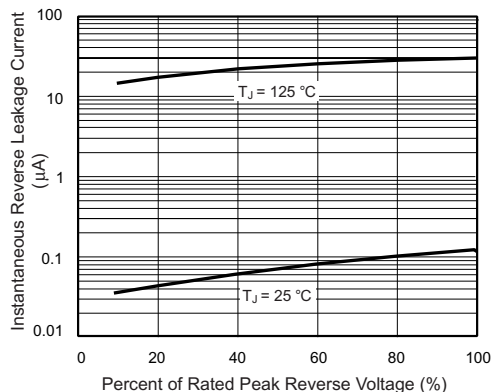


Figure 4. Typical Reverse Leakage Characteristics Per Leg

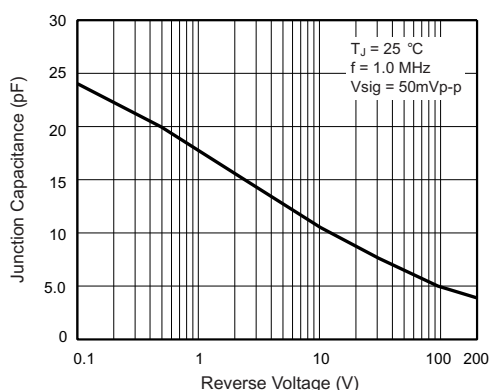


Figure 5. Typical Junction Capacitance Per Leg

Package outline dimensions in inches (millimeters)

