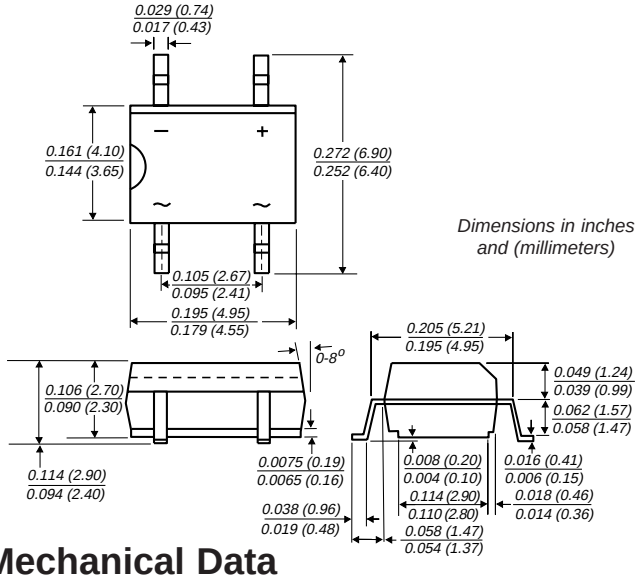
Vishay Semiconductors
formerly General Semiconductor

Miniature Glass Passivated Fast Recovery Surface Mount Bridge Rectifier

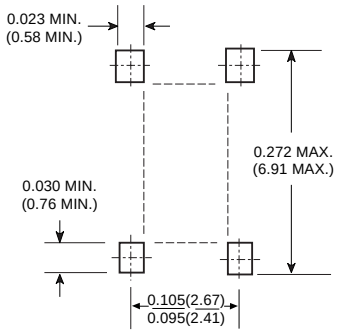
Reverse Voltage 200 to 400 V
Forward Current 0.5 A
Reverse Recovery time 150 ns

TO-269AA (MBS)



Dimensions in inches and (millimeters)

Mounting Pad Layout



Mechanical Data

Case: Molded plastic body over passivated junctions
Terminals: Plated leads solderable per MIL-STD-750, Method 2026
Polarity: Polarity symbols marked on body
Mounting Position: Any **Weight:** 0.0078 oz., 0.22 g
Packaging Codes-Options (Antistatic):
80/3K per 13" Paper Reel, 36K/carton

Features

- Plastic package has UL Flammability Classification 94V-0
- This series is UL recognized under Component Index, file number E54214
- Glass passivated chip junctions
- Saves space on printed circuit boards
- Fast recovery, low switching loss
- High temperature soldering guaranteed: 260°C/10 seconds at 5 lbs. (2.3kg) tension

Maximum Ratings and Thermal Characteristics (T_A = 25°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°C - on glass-epoxy P.C.B. - on aluminum substrate	$I_{F(AV)}$	0.5(1) 0.8(2)		A
Peak forward surge current 8.3msec single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30		A
Rating for fusing (t<8.3ms)	I^2t	5.0		A^2sec
Typical thermal resistance per leg	$R_{\Theta JA}$ $R_{\Theta JA}$ $R_{\Theta JL}$	85(1) 70(2) 20(1)		°C/W
Operating junction and storage temperature range	T_J, T_{STG}	55 to +150		°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Maximum instantaneous forward voltage drop per leg at 0.4A	V_F	1.25	V
Maximum DC reverse current at rated DC blocking voltage per leg T_A=25°C T_A=125°C	I_R	5.0 100	µA
Maximum reverse recovery time at I_F=0.5A, I_R=1.0A, I_{rr}=0.25A	t_{rr}	150	ns
Typical junction capacitance per leg at 4.0V, 1MHz	C_J	13	pF

Notes: (1) On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads
(2) On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 – Maximum Forward Current Derating Curve

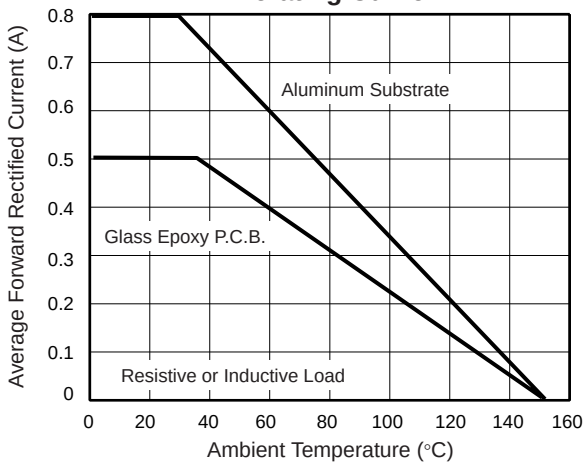


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg

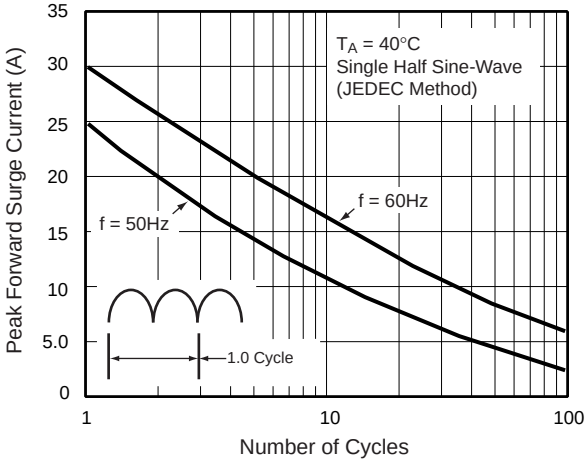


Fig. 3 – Typical Instantaneous Forward Characteristics Per Leg

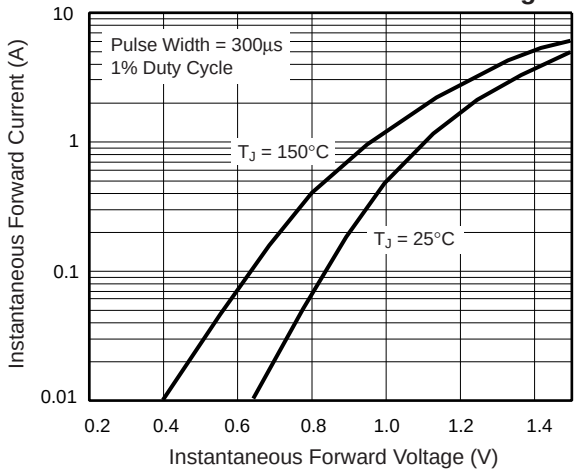


Fig. 4 – Typical Reverse Leakage Characteristics Per Leg

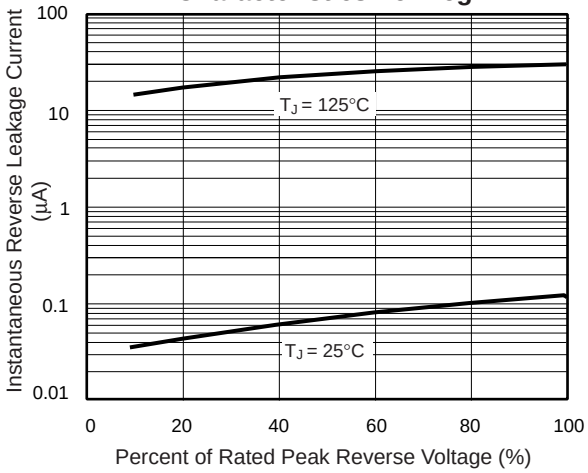


Fig. 5 – Typical Junction Capacitance Per Leg