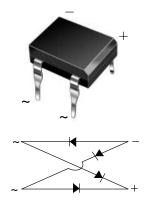


ROHS COMPLIANT

Vishay General Semiconductor

Miniature Glass Passivated Ultrafast Bridge Rectifier



SHA

Case Style DFM

PRIMARY CHARACTERISTICS					
I _{F(AV)}	1 A				
V _{RRM}	50 V to 200 V				
I _{FSM}	50 A				
I _R	5 μΑ				
V _F	1.05 V				
t _{rr}	50 ns				
T _J max.	150 °C				

FEATURES

- UL recognition, file number E54214
- · Ideal for printed circuit boards
- Ultrafast reverse recovery time for high frequency
- Applicable for automative insertion
- High surge current capability
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

TYPICAL APPLICATIONS

General purpose use in ac-to-dc bridge full wave rectification for SMPS, lighting ballaster, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

MECHANICAL DATA

Case: DFM

Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test

Polarity: As marked on body

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	EDF1AM	EDF1BM	EDF1CM	EDF1DM	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	V
Maximum RMS voltage	V _{RMS}	35	70	106	140	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	V
Max. average forward output rectified current at T_{A} = 40 $^{\circ}C$	I _{F(AV)}	1.0				А
Peak forward surge current single sine-wave superimposed on rated load	I _{FSM}	50			А	
Rating for fusing (t < 8.3 ms)	l ² t	10			A ² s	
Operating junction and storage temperature range	T _J , T _{STG}	- 55 to + 150			°C	

ELECTRICAL CHARACTERISTICS ($T_A = 25 \degree C$ unless otherwise noted)							
PARAMETER	TEST CONDITIONS	SYMBOL	EDF1AM	EDF1BM	EDF1CM	EDF1DM	UNIT
Maximum instantaneous forward voltage drop per diode	1.0 A	V _F	1.05			V	
Maximum reverse current at rated DC blocking voltage per diode	T _A = 25 °C T _A = 125 °C	I _R	5.0 1.0			μA mA	
Maximum reverse recovery time per diode	I _F = 0.5 A, I _R = 1.0 A, I _{rr} = 0.25 A	t _{rr}	50			ns	

For technical questions within your region, please contact one of the following: PDD-Americas@vishay.com, PDD-Asia@vishay.com, PDD-Europe@vishay.com



EDF1AM thru EDF1DM

Vishay General Semiconductor



THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	EDF1AM	EDF1BM	EDF1CM	EDF1DM	UNIT
Typical thermal resistance ⁽¹⁾	R _{θJA} R _{θJL}	38 12		°C/W		

Note:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.5 x 0.5" (13 x 13 mm) copper pads

ORDERING INFORMATION (Example)							
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE			
EDF1DM-E3/45	0.418	45	50	Tube			

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

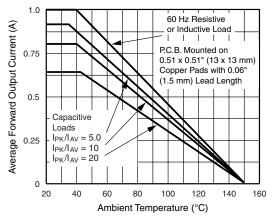


Figure 1. Derating Curves Output Rectified Current

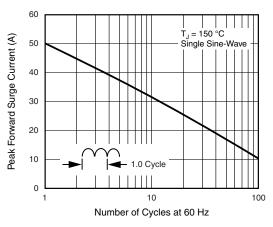


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

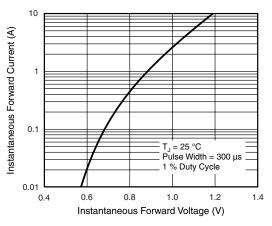


Figure 3. Typical Forward Characteristics Per Diode

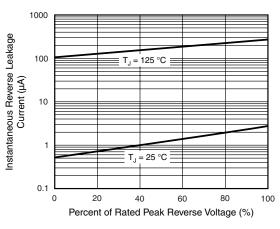


Figure 4. Typical Reverse Leakage Characteristics Per Diode



EDF1AM thru EDF1DM

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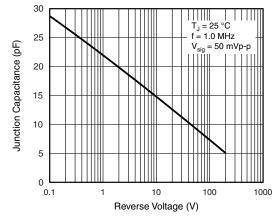
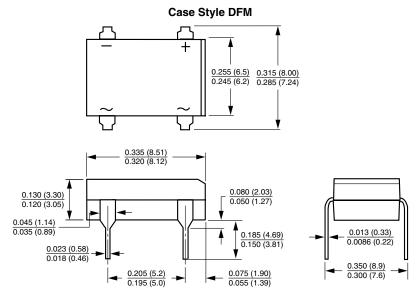


Figure 5. Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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