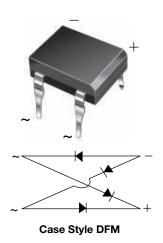


### EDF1AM, EDF1BM, EDF1CM, EDF1DM

Vishay General Semiconductor

# Miniature Glass Passivated Ultrafast Bridge Rectifier



PRIMARY CHARACTERISTICS					
Package	DFM				
I <sub>F(AV)</sub>	1 A				
$V_{RRM}$	50 V, 100 V, 150 V, 200 V				
I <sub>FSM</sub>	50 A				
I <sub>R</sub>	5 μΑ				
V <sub>F</sub> at I <sub>F</sub> = 1.0 A	1.05 V				
t <sub>rr</sub>	50 ns				
T <sub>J</sub> max.	150 °C				
Diode variations	Quad				

#### **FEATURES**





- Ideal for printed circuit boards
- Ultrafast reverse recovery time for high frequency
- Applicable for automative insertion



COMPLIANT

- · High surge current capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

#### TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for SMPS, lighting ballaster, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

#### **MECHANICAL DATA**

Case: DFM

Molding compound meets UL 94 V-0 flammability rating Base P/N-E3 - RoHS-compliant, commercial grade

Terminals: Matte tin plated leads, solderable per

J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: As marked on body

MAXIMUM RATINGS (T <sub>A</sub> = 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 <sub>RMS</sub>	35	70	106	140	V
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	V
Maximum average forward output rectified current at T <sub>A</sub> = 40 °C	I <sub>F(AV)</sub>	1.0			Α	
Peak forward surge current single sine-wave superimposed on rated load	I <sub>FSM</sub>	50			Α	
Rating for fusing (t < 8.3 ms)	I <sup>2</sup> t	10			A <sup>2</sup> s	
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to + 150			°C	

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)							
PARAMETER	TEST CONDITIONS	SYMBOL	EDF1AM	EDF1BM	EDF1CM	EDF1DM	UNIT
Maximum instantaneous forward voltage drop per diode	1.0 A	V <sub>F</sub>	1.05			V	
Maximum reverse current at rated DC	T <sub>A</sub> = 25 °C	5.0			μΑ		
blocking voltage per diode	T <sub>A</sub> = 125 °C	IR	1.0				mA
Maximum reverse recovery time per diode	I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>rr</sub> = 0.25 A	t <sub>rr</sub>	50			ns	

# EDF1AM, EDF1BM, EDF1CM, EDF1DM

### Vishay General Semiconductor

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	EDF1AM	EDF1BM	EDF1CM	EDF1DM	UNIT
Typical thermal resistance (1)	$R_{\theta JA}$		°C/W			
Typical trieffial resistance (7)	$R_{ heta JL}$		5/ ٧٧			

#### Note

<sup>(1)</sup> Thermal resistance from junction to ambient and from junction to lead mounted on PCB with 0.5" x 0.5" (13 mm 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<sub>A</sub> = 25 °C unless otherwise noted)

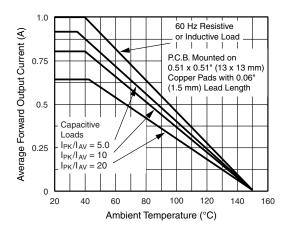


Fig. 1 - Derating Curves Output Rectified Current

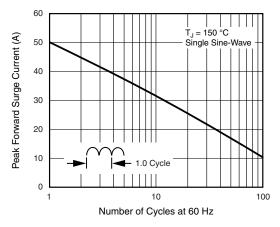


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

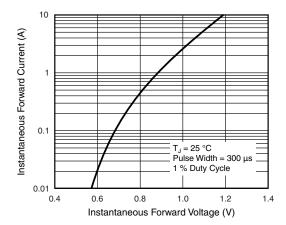


Fig. 3 - Typical Forward Characteristics Per Diode

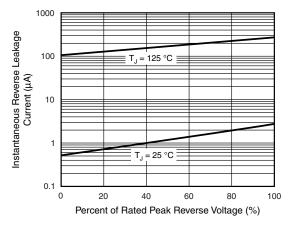


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode



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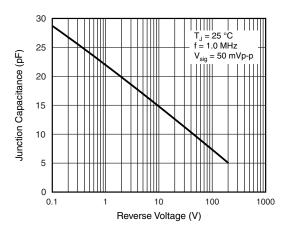
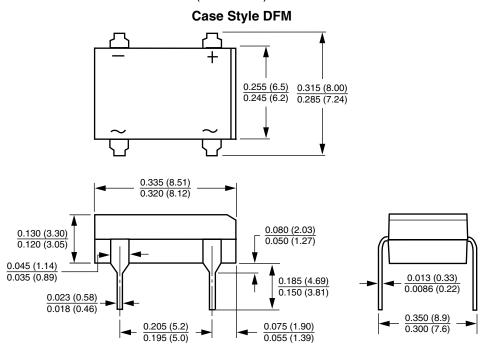


Fig. 5 - Typical Junction Capacitance Per Diode

### **PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)





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