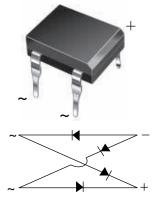


EDF1AM, EDF1BM, EDF1CM, EDF1DM

Vishay General Semiconductor

Miniature Glass Passivated Ultrafast Bridge Rectifier



Case Style DFM

PRIMARY CHARACTERISTICS					
Package	DFM				
I _{F(AV)}	1 A				
V _{RRM}	50 V, 100 V, 150 V, 200 V				
I _{FSM}	50 A				
I _R	5 µA				
V_F at $I_F = 1.0$ A	1.05 V				
t _{rr}	50 ns				
T _J max.	150 °C				
Diode variations	Quad				

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 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see <u>www.vishay.com/doc?99912</u>

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 ($T_A = 25 \text{ °C}$ 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	
Maximum 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 ($T_A = 25 \text{ °C}$ 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	T _A = 25 °C	1-	5.0			μA		
blocking voltage per diode	T _A = 125 °C	IR	1.0				mA	
Maximum reverse recovery time per diode	$I_F = 0.5 \text{ A}, I_R = 1.0 \text{ A}, I_{rr} = 0.25 \text{ A}$	t _{rr}	50			ns		

Revision: 16-Aug-13

Document Number: 88577

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RoHS

COMPLIANT



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THERMAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted)						
PARAMETER	SYMBOL	DL EDF1AM EDF1BM EDF1CM EDF1DM				UNIT
Typical thermal resistance ⁽¹⁾	$R_{ ext{ heta}JA}$		°C/W			
Typical mermanesistance (*)	$R_{ ext{ heta}JL}$		0/10			

Note

(1) 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)	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)

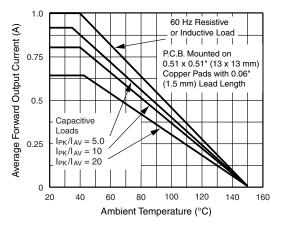


Fig. 1 - Derating Curves Output Rectified Current

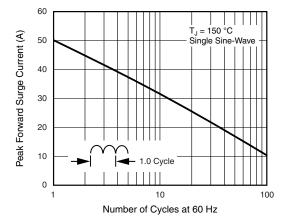
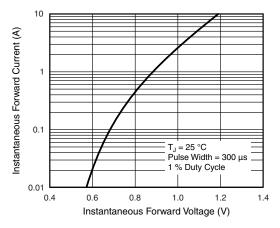
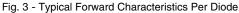
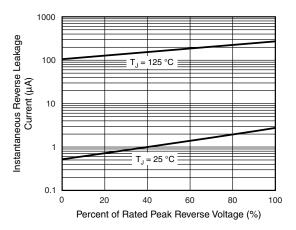


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode









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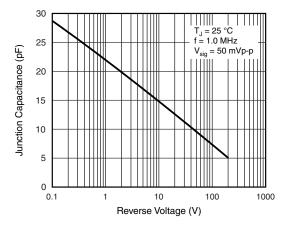
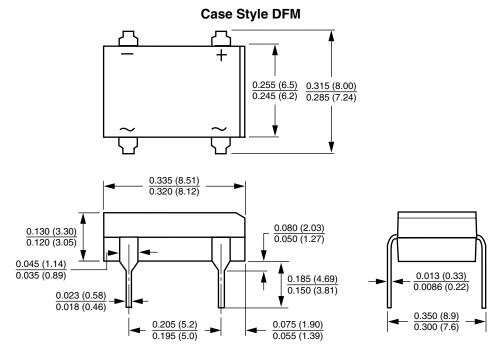


Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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