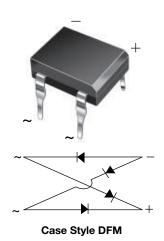


Vishay General Semiconductor

Miniature Glass Passivated Ultrafast Bridge Rectifier



LINKS TO ADDITIONAL RESOURCES



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

FEATURES

• UL recognition, file number E54214

• Ideal for printed circuit boards



Ultrafast reverse recovery time for high frequency

- Applicable for automated 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 °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 °C	I _{F(AV)}	1.0			Α	
Peak forward surge current single sine-wave superimposed on rated load	I _{FSM}	50			Α	
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	



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ELECTRICAL CHARACTERISTICS (T _A = 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 _F	1.05				V	
Maximum reverse current at rated DC blocking voltage per diode	T _A = 25 °C	1_		5.0)		μΑ	
	T _A = 125 °C	IR	1.0				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		

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL	EDF1AM	EDF1BM	EDF1CM	EDF1DM	UNIT	
Typical thermal resistance (1)	$R_{\theta JA}$	38				°C/W	
Typical thermal resistance (**)	$R_{ heta JL}$	12				C/VV	

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)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE				
EDF1DM-E3/45	0.418	45	50	Tube				

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RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

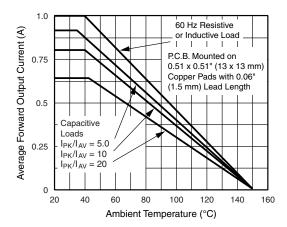


Fig. 1 - Derating Curves Output Rectified Current

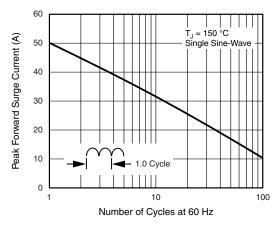


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

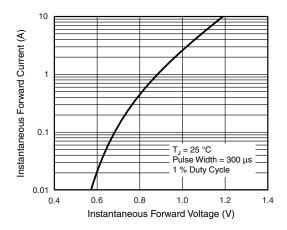


Fig. 3 - Typical Forward Characteristics Per Diode

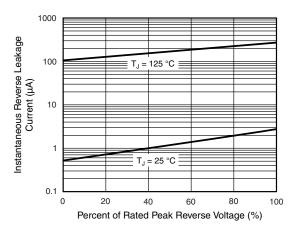


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

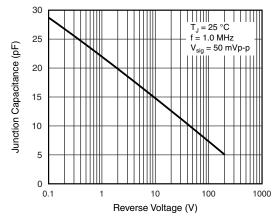
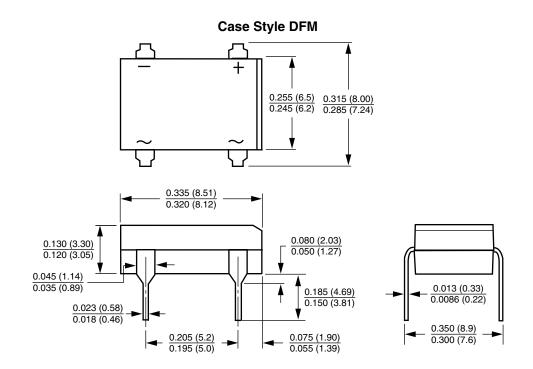


Fig. 5 - Typical Junction Capacitance Per Diode

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PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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