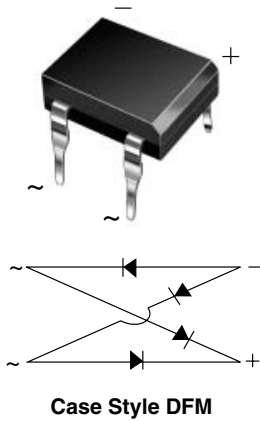


Miniature Glass Passivated Ultrafast Bridge Rectifier



FEATURES

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


RoHS
COMPLIANT

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

PRIMARY CHARACTERISTICS

$I_{F(AV)}$	1 A
V_{RRM}	50 V to 200 V
I_{FSM}	50 A
I_R	5 μ A
V_F	1.05 V
t_{rr}	50 ns
T_J max.	150 °C

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 $T_A = 40$ °C	$I_{F(AV)}$	1.0				A
Peak forward surge current single sine-wave superimposed on rated load	I_{FSM}	50				A
Rating for fusing ($t < 8.3$ ms)	I^2t	10				A ² s
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150				°C

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 $T_A = 125$ °C	I_R	5.0 1.0				μ A 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 ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)						
PARAMETER	SYMBOL	EDF1AM	EDF1BM	EDF1CM	EDF1DM	UNIT
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$			38		$^\circ\text{C/W}$
	$R_{\theta JL}$			12		

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

($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

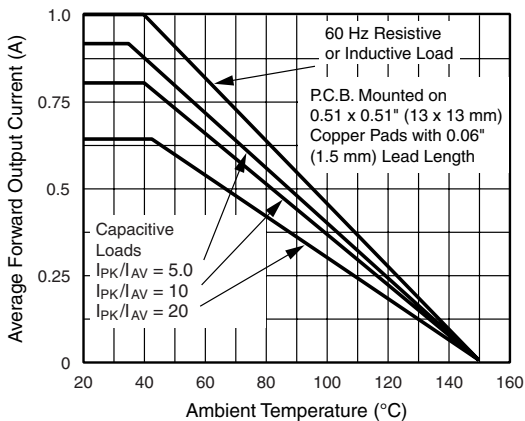


Figure 1. Derating Curves Output Rectified Current

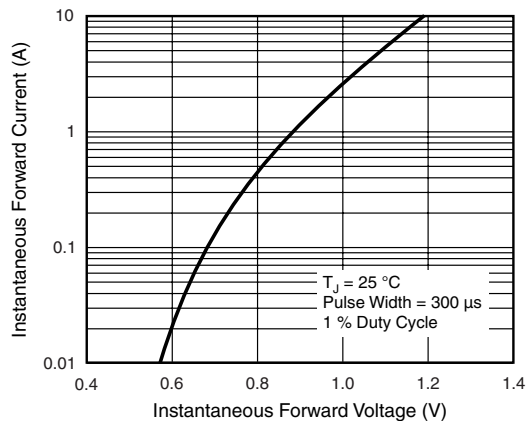


Figure 3. Typical Forward Characteristics Per Diode

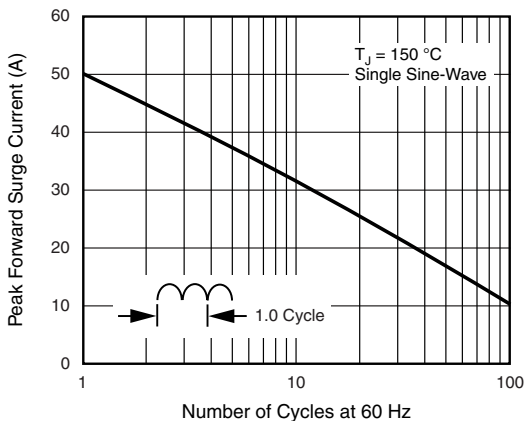


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

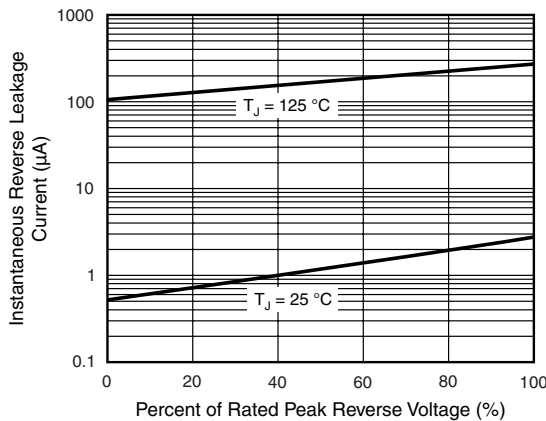


Figure 4. Typical Reverse Leakage Characteristics Per Diode

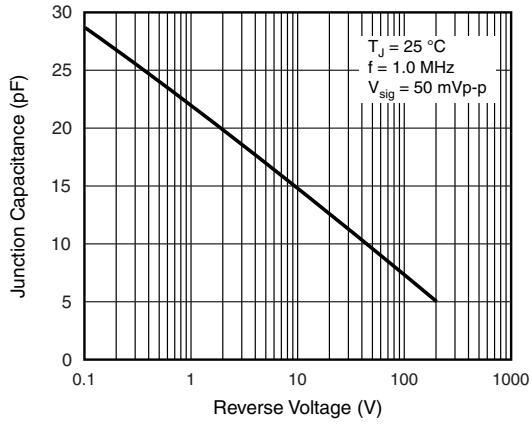
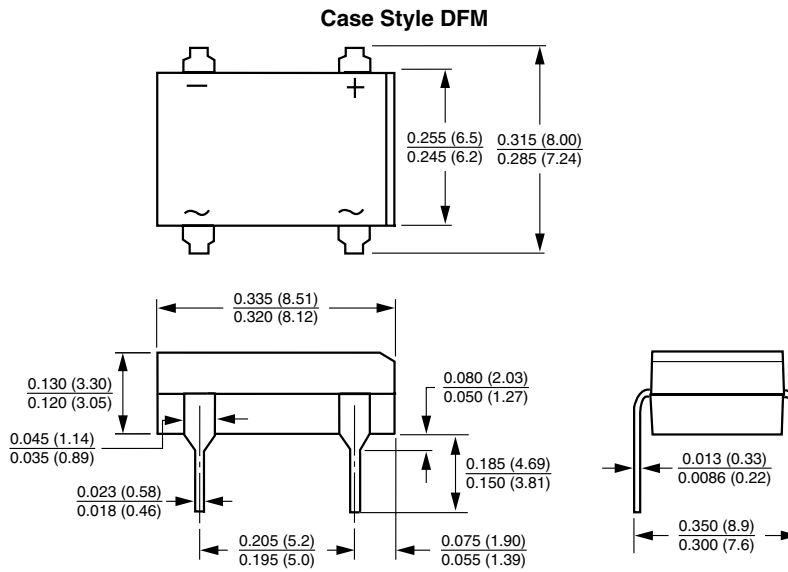


Figure 5. Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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