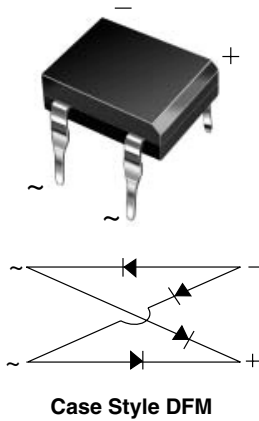


## Miniature Glass Passivated Ultrafast Bridge Rectifier



### 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 $\mu$ 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 <sup>2</sup> 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				$\mu$ 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 <sup>(1)</sup>	$R_{\theta JA}$			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)

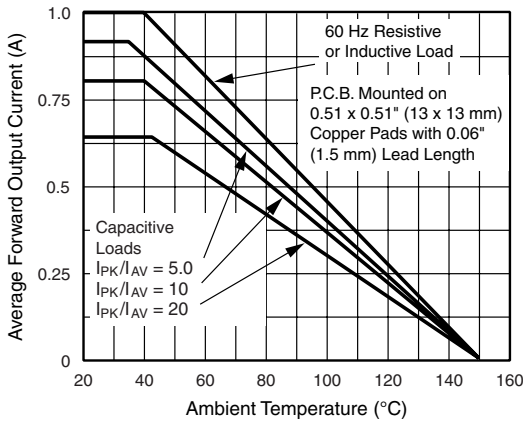


Figure 1. Derating Curves Output Rectified Current

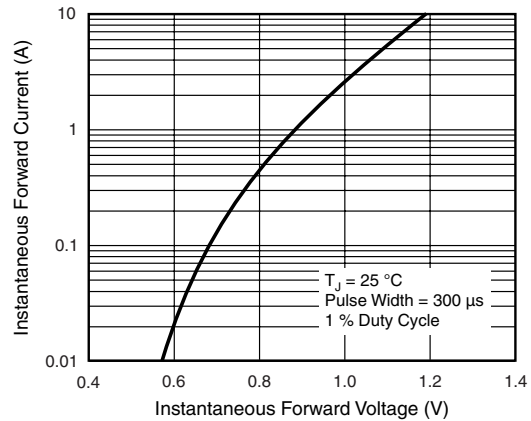


Figure 3. Typical Forward Characteristics Per Diode

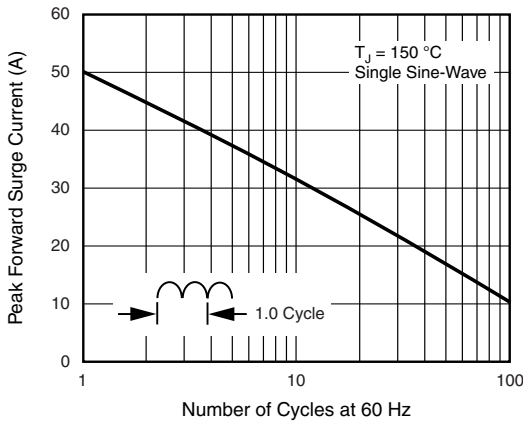


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

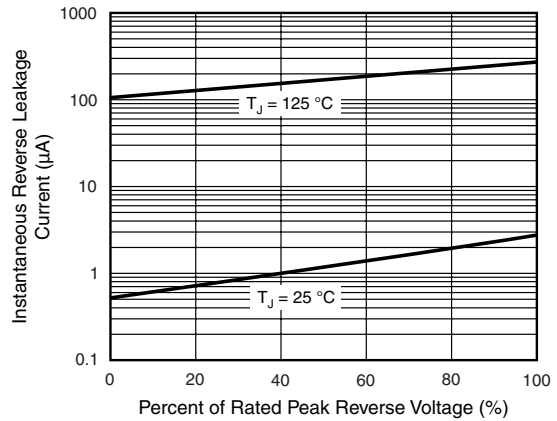


Figure 4. Typical Reverse Leakage Characteristics Per Diode

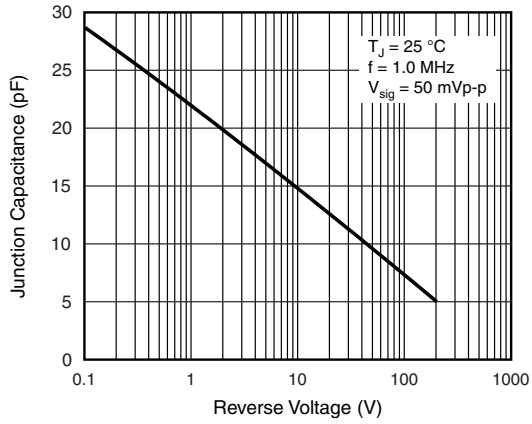
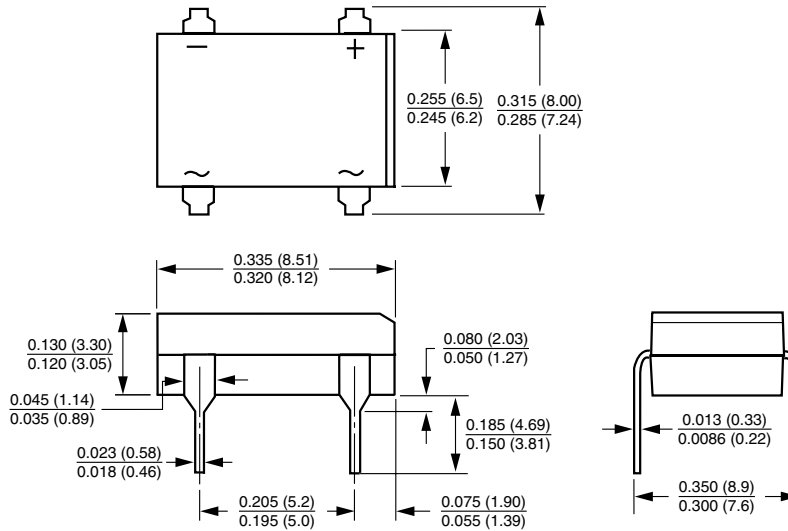


Figure 5. Typical Junction Capacitance Per Diode

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

**Case Style DFM**





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