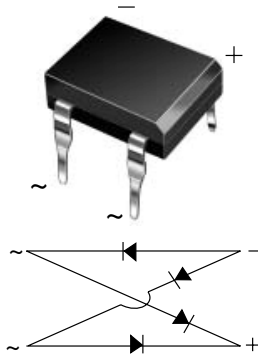


## Glass Passivated Ultrafast Bridge Rectifier



Case Style DFM

### FEATURES

- UL Recognition, file number E54214
- Ideal for automated placement
- High surge current capability
- Solder Dip 260 °C, 40 seconds
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



### 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.

### MAJOR RATINGS AND CHARACTERISTICS

$I_{F(AV)}$	0.9 A
$V_{RRM}$	65 V to 600 V
$I_{FSM}$	45 A
$I_R$	10 $\mu$ A
$V_F$	1.0 V
$T_j$ max.	125 °C

### MECHANICAL DATA

Case: DFM

Epoxy meets UL 94V-0 flammability rating

**Terminals:** Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D

E3 suffix for commercial grade

**Polarity:** As marked on body

### MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)

PARAMETER	SYMBOL	B40 C800DM	B80 C800DM	B125 C800DM	B250 C800DM	B380 C800DM	UNIT	
Maximum repetitive peak reverse voltage	$V_{RRM}$	65	125	200	400	600	V	
Maximum RMS input voltage R + C-load	$V_{RMS}$	40	80	125	250	380	V	
Maximum average forward output current for free air operation at $T_A = 45$ °C	$I_{F(AV)}$	R + L-load C-load					0.9 0.8	A
Maximum DC blocking voltage	$V_{DC}$	65	125	200	400	600	V	
Maximum peak working voltage	$V_{RWM}$	90	180	300	600	900	V	
Maximum non-repetitive peak voltage	$V_{RSM}$	100	200	350	650	1000	V	
Maximum repetitive peak forward surge current	$I_{FRM}$	10					A	
Peak forward surge current single sine wave on rated load	$I_{FSM}$	45					A	
Rating for fusing at $T_j = 125$ °C ( $t < 100$ ms)	$I^2t$	10					A <sup>2</sup> sec	
Minimum series resistor C-load at $V_{RMS} = \pm 10$ %	$R_T$	1.0	2.0	4.0	8.0	12	$\Omega$	
Maximum load capacitance + 50 % - 10 %	$C_L$	5000	2500	1000	500	200	$\mu$ F	
Operating junction temperature range	$T_J$	- 40 to + 125					°C	
Storage temperature range	$T_{STG}$	- 40 to + 150					°C	

ELECTRICAL CHARACTERISTICS ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)								
PARAMETER	TEST CONDITIONS	SYMBOL	B40 C800DM	B80 C800DM	B125 C800DM	B250 C800DM	B380 C800DM	UNIT
Maximum instantaneous forward voltage drop per diode	at 0.9 A	$V_F$	1.0					V
Maximum reverse current at rated repetitive peak voltage per diode		$I_R$	10					$\mu\text{A}$

THERMAL CHARACTERISTICS ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)								
PARAMETER	SYMBOL	B40 C800DM	B80 C800DM	B125 C800DM	B250 C800DM	B380 C800DM	UNIT	
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$	40					$^\circ\text{C/W}$	
	$R_{\theta JL}$	15						

**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				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
B38C800DM-E3/45	0.416	45	50	Tube

## RATINGS AND CHARACTERISTICS CURVES

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

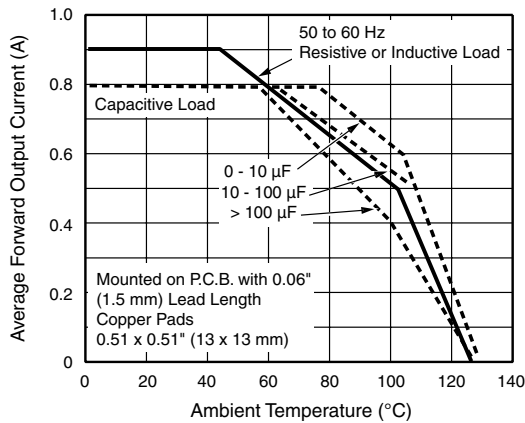


Figure 1. Derating Curves Output Rectified Current for B40C800D...B125C800DM

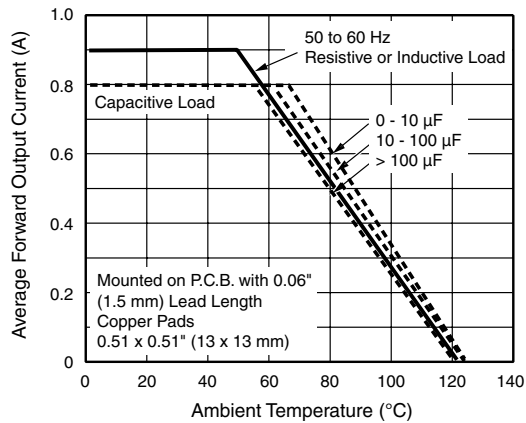


Figure 2. Derating Curves Output Rectified Current for B250C800D...B360C800DM

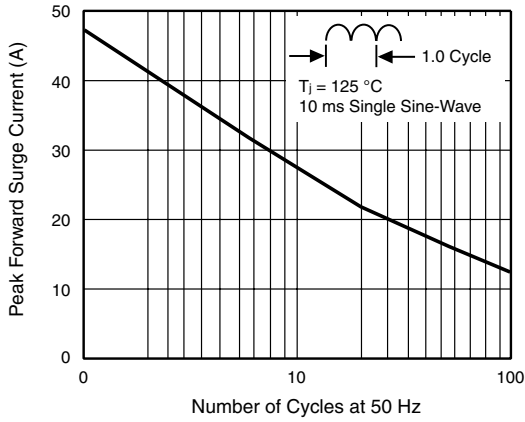


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

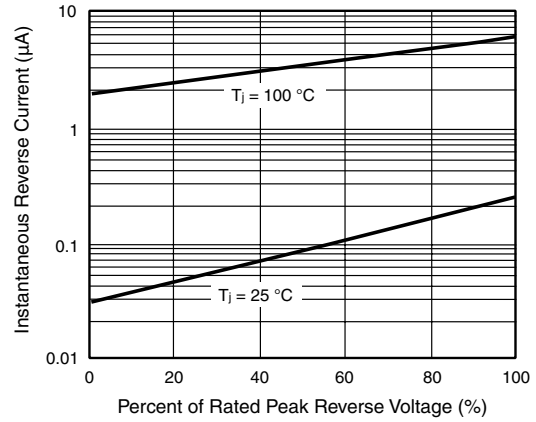


Figure 5. Typical Reverse Leakage Characteristics Per Diode

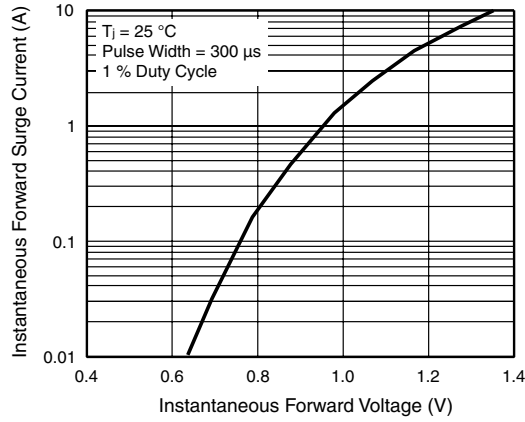


Figure 4. Typical Forward Characteristics Per Diode

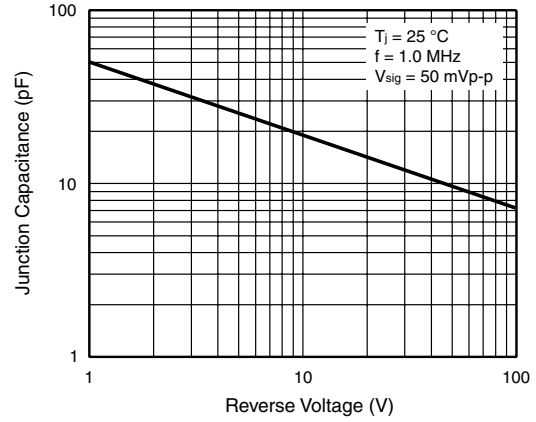
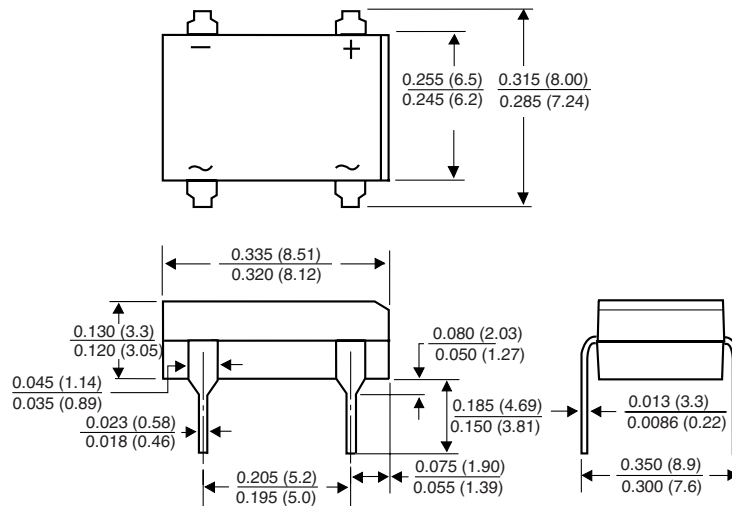


Figure 6. Typical Junction Capacitance Per Diode

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

### Case Style DFM





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