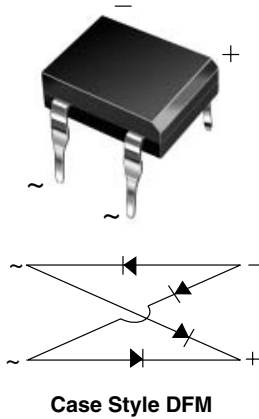


## Glass Passivated Ultrafast Bridge Rectifier



### FEATURES

- Ideal for automated placement
- 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.

### PRIMARY 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
$T_J \text{ max.}$	125 °C

### 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 commercial grade, meets JESD 201 class 1A whisker test

**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- and C-load	$V_{RMS}$	40	80	125	250	380	V
Maximum average forward output current R- and L-load for free air operation at $T_A = 45$ °C C-load	$I_{F(AV)}$	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> s
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

# B40C800DM thru B380C800DM

Vishay General Semiconductor



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	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 (Example)				
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)

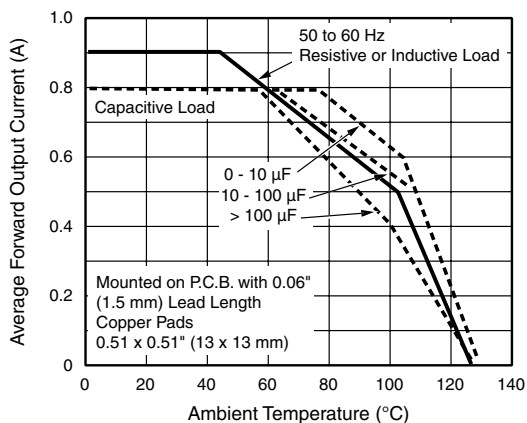


Figure 1. Derating Curves Output Rectified Current for B40C800D...B125C800DM

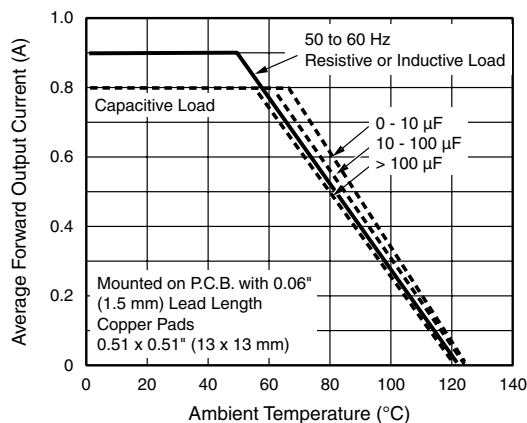


Figure 2. Derating Curves Output Rectified Current for B250C800D...B360C800DM

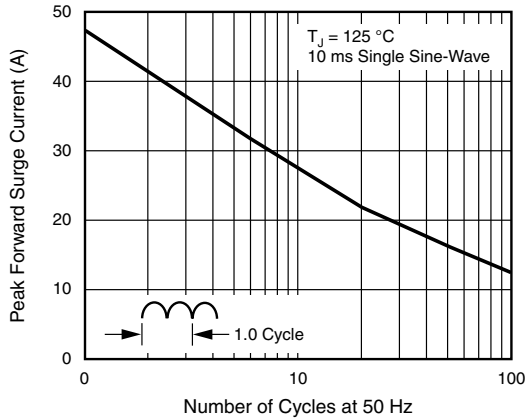


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

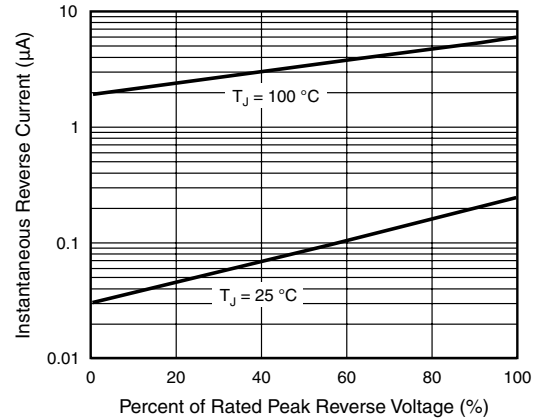


Figure 5. Typical Reverse Leakage Characteristics Per Diode

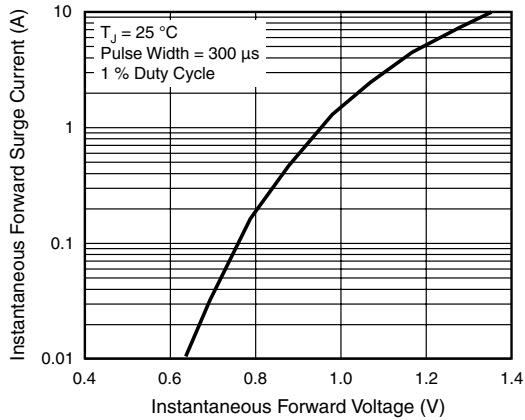


Figure 4. Typical Forward Characteristics Per Diode

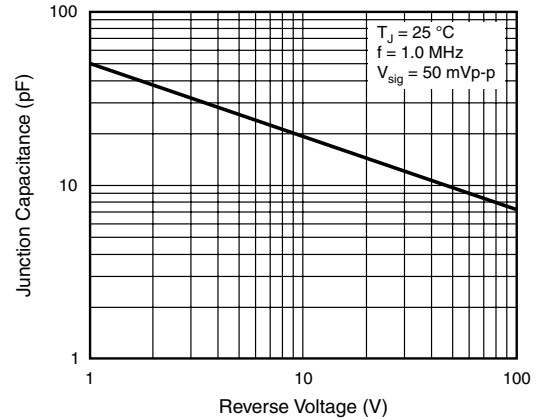
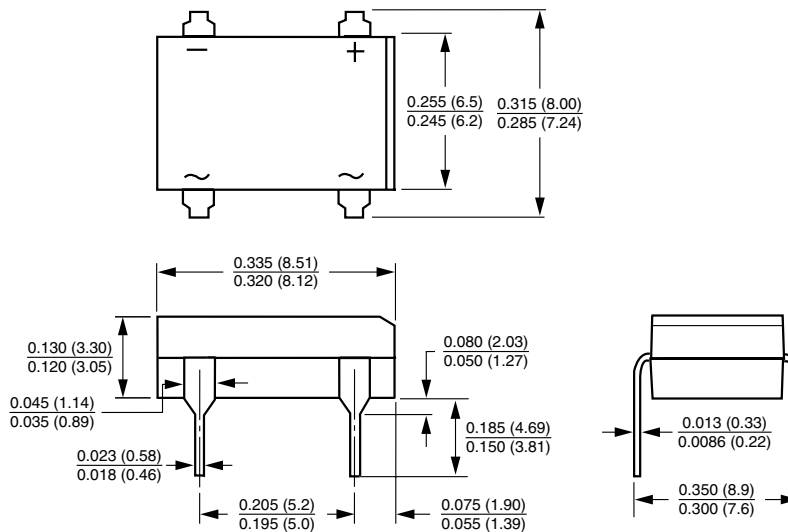


Figure 6. Typical Junction Capacitance Per Diode

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

### Case Style DFM





## Disclaimer

All product specifications and data are subject to change without notice.

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