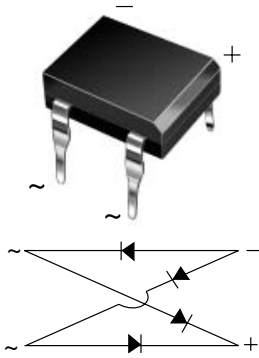




B40C800DM thru B380C800DM

Vishay General Semiconductor

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 μ 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 R + L-load 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 ² sec
Minimum series resistor C-load at $V_{RMS} = \pm 10$ %	R_T	1.0	2.0	4.0	8.0	12	Ω
Maximum load capacitance + 50 % - 10 %	C_L	5000	2500	1000	500	200	μ F
Operating junction temperature range	T_J	- 40 to + 125					°C
Storage temperature range	T_{STG}	- 40 to + 150					°C

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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					μA

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 (1)	$R_{\theta JA}$	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)

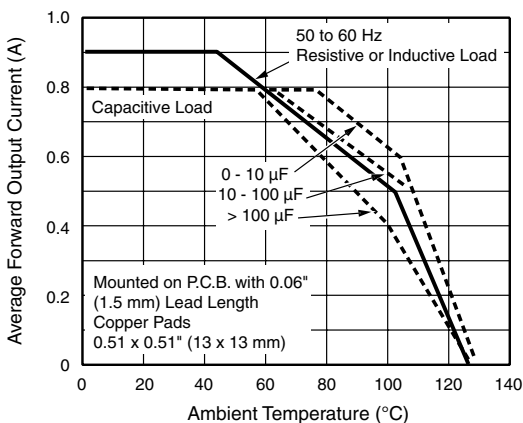


Figure 1. Derating Curves Output Rectified Current for B40C800DM...B125C800DM

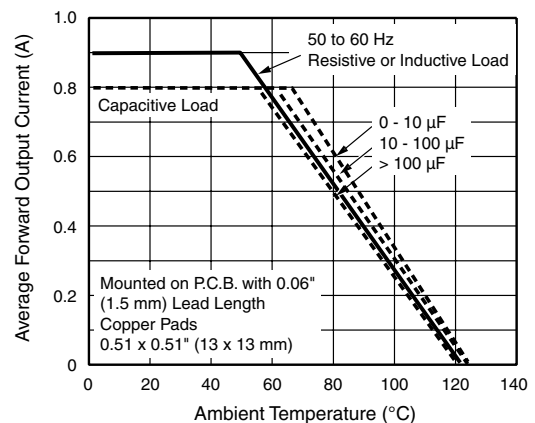


Figure 2. Derating Curves Output Rectified Current for B250C800DM...B360C800DM



B40C800DM thru B380C800DM

Vishay General Semiconductor

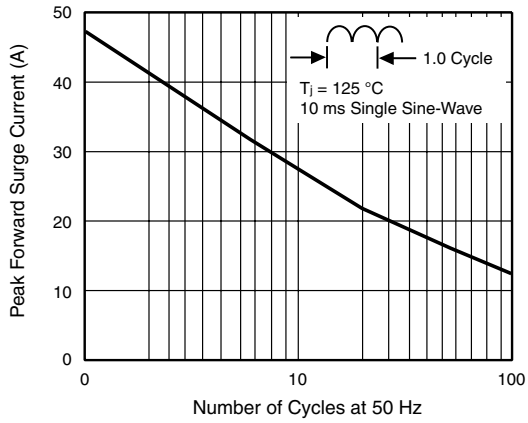


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

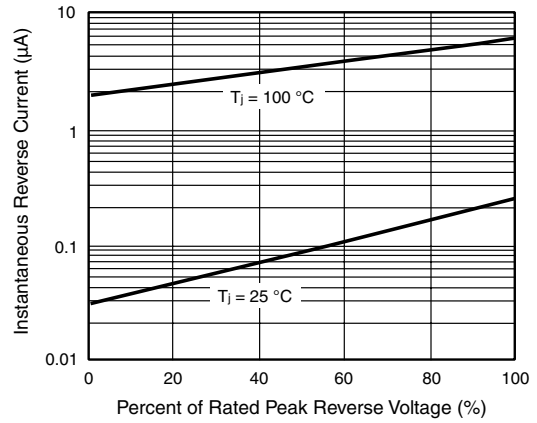


Figure 5. Typical Reverse Leakage Characteristics Per Diode

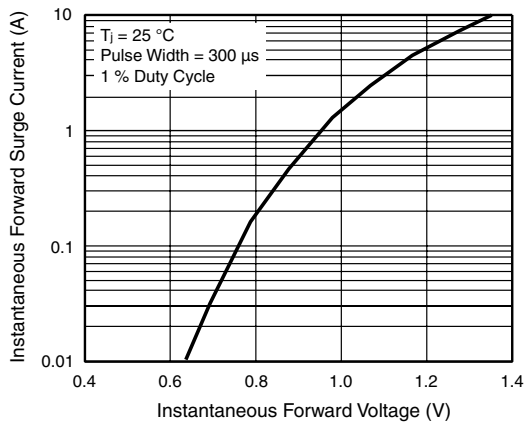


Figure 4. Typical Forward Characteristics Per Diode

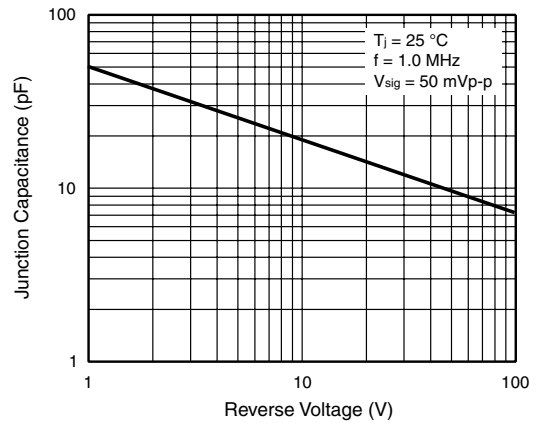
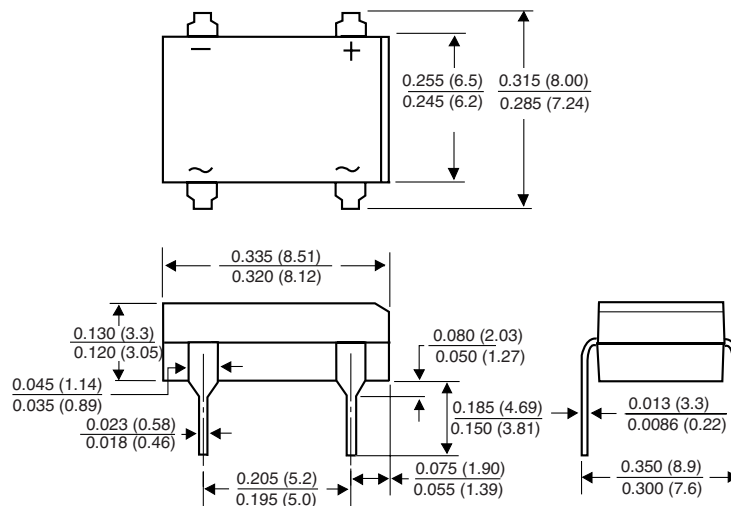


Figure 6. Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Style DFM





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