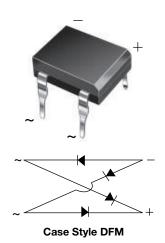


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## Vishay General Semiconductor

## **Glass Passivated Ultrafast Bridge Rectifier**



### **LINKS TO ADDITIONAL RESOURCES**



PRIMARY CHARACTERISTICS						
I <sub>F(AV)</sub>	0.9 A					
V <sub>RRM</sub>	65 V, 125 V, 200 V, 400 V, 600 V					
I <sub>FSM</sub>	45 A					
I <sub>R</sub>	10 μA					
V <sub>F</sub> at I <sub>F</sub> = 0.9 A	1.0 V					
T <sub>J</sub> max.	125 °C					
Package	DFM					
Circuit configuration	Quad					

#### **FEATURES**

• Ideal for automated placement

· High surge current capability



• Solder dip 275 °C max. 10 s, per JESD 22-B106

 Material categorization: for definitions of compliance please see www.vishav.com/doc?99912

### **TYPICAL APPLICATIONS**

General purpose use in AC/DC bridge full wave rectification for SMPS, lighting ballaster, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

#### **MECHANICAL DATA**

Case: DFM

Molding compound meets UL 94 V-0 flammability rating Base P/N-E3 - RoHS-compliant, commercial grade

Terminals: matte tin plated leads, solderable per

J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: as marked on body

<b>MAXIMUM RATINGS</b> (T <sub>A</sub> = 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 <sub>RMS</sub>	40	80	125	250	380	V
Maximum average forward output current R- and L-load	I <sub>F(AV)</sub>	0.9				А	
for free air operation at $T_A = 45$ °C C-load		0.8					
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 <sub>FRM</sub>	10				Α	
Peak forward surge current single sine-wave on rated load	I <sub>FSM</sub>	45				Α	
Rating for fusing at T <sub>J</sub> = 125 °C (t < 100 ms)	l <sup>2</sup> t	10				A <sup>2</sup> s	
Minimum series resistor C-load at V <sub>RMS</sub> = ± 10 %	R <sub>T</sub>	1.0	2.0	4.0	8.0	12.0	Ω
Maximum load capacitance + 50 % - 10 %	CL	5000	2500	1000	500	200	μF
Operating junction temperature range	TJ	-40 to +125			°C		
Storage temperature range	T <sub>STG</sub>	-40 to +150				°C	



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<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °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 <sub>F</sub>	1.0				V	
Maximum reverse current at rated repetitive peak voltage per diode		I <sub>R</sub>			10			μΑ

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °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					°C/W
	$R_{\theta JL}$		•	15	•	•	U/ VV

#### Note

<sup>(1)</sup> Thermal resistance from junction to ambient and from junction to lead mounted on PCB with 0.5" x 0.5" (13 mm x 13 mm) copper pads

ORDERING INFORMATION (Example)								
PREFERRED P/N UNIT WEIGHT (g) PREFERRED PACKAGE CODE BASE QUANTITY DELIVERY M								
B380C800DM-E3/45	0.416	45	50	Tube				

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### RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub> = 25 °C unless otherwise noted)

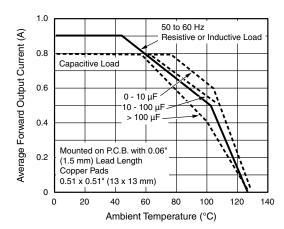


Fig. 1 - Derating Curves Output Rectified Current for B40C800D...B125C800DM

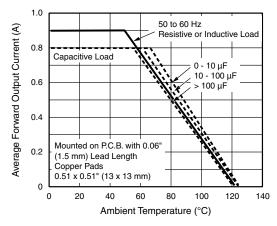


Fig. 2 - Derating Curves Output Rectified Current for B250C800D...B360C800DM

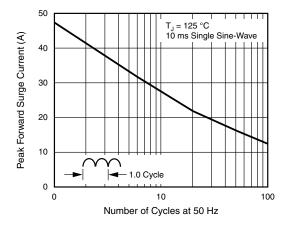


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

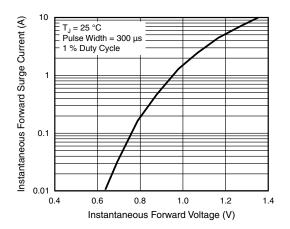


Fig. 4 - Typical Forward Characteristics Per Diode

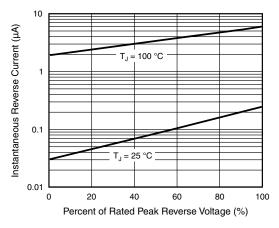


Fig. 5 - Typical Reverse Leakage Characteristics Per Diode

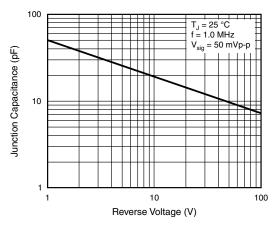
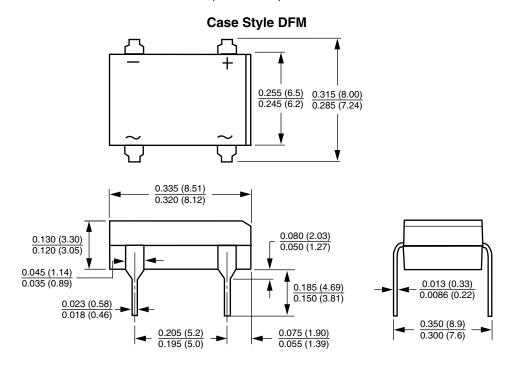


Fig. 6 - Typical Junction Capacitance Per Diode

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



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