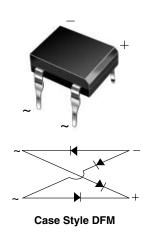


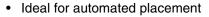
Vishay General Semiconductor

Glass Passivated Ultrafast Bridge Rectifier



PRIMARY CHARACTERISTICS						
I _{F(AV)} 0.9 A						
V_{RRM}	65 V to 600 V					
I _{FSM}	45 A					
I _R	10 μΑ					
V _F	1.0 V					
T _J max.	125 °C					

FEATURES





• 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 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		0.9 0.8					Α
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					Α
Peak forward surge current single sine-wave on rated load	I _{FSM}	45					Α
Rating for fusing at T _J = 125 °C (t < 100 ms)	l ² t	10					A ² s
Minimum series resistor C-load at V _{RMS} = ± 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	μF
Operating junction temperature range	T_J	- 40 to + 125					°C
Storage temperature range	T _{STG}	- 40 to + 150					°C

B40C800DM thru B380C800DM

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ELECTRICAL CHARACTERISTICS (T _A = 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 _F	1.0		٧			
Maximum reverse current at rated repetitive peak voltage per diode		I _R	10		μΑ			

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL	B40 C800DM	B80 C800DM	B125 C800DM	B250 C800DM	B380 C800DM	UNIT
Typical thermal resistance (1)	$R_{ hetaJA} \ R_{ hetaJL}$			40 15			°C/W

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 °C unless otherwise noted)

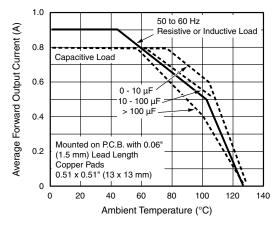


Figure 1. Derating Curves Output Rectified Current for B40C800D...B125C800DM

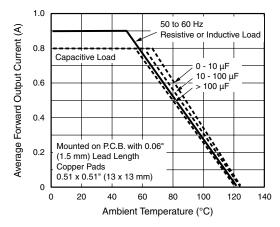


Figure 2. Derating Curves Output Rectified Current for B250C800D...B360C800DM



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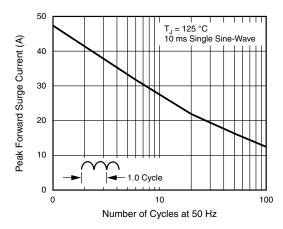


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

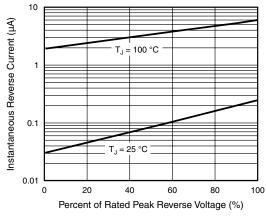


Figure 5. Typical Reverse Leakage Characteristics Per Diode

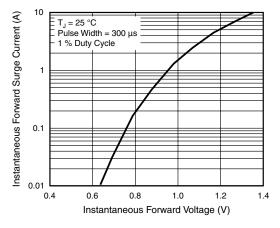


Figure 4. Typical Forward Characteristics Per Diode

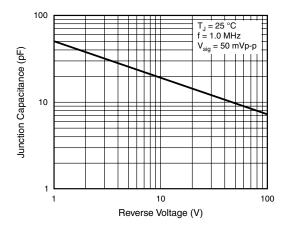
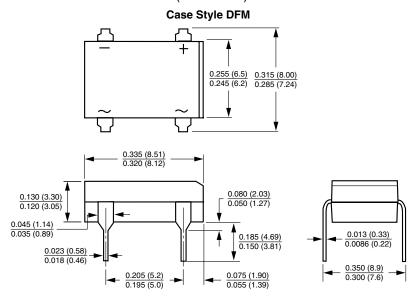


Figure 6. Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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