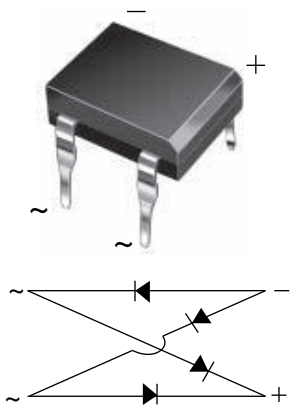
B40C800DM, B80C800DM, B125C800DM, B250C800DM, B380C800DM

Glass Passivated Ultrafast Bridge Rectifier



Case Style DFM

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.vishay.com/doc?99912

Pb e3 RoHS COMPLIANT

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

PRIMARY CHARACTERISTICS	
Package	DFM
$I_{F(AV)}$	0.9 A
V_{RRM}	65 V, 125 V, 200 V, 400 V, 600 V
I_{FSM}	45 A
I_R	10 µA
V_F at I_F = 0.9 A	1.0 V
T_J max.	125 °C
Diode variations	Quad

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 for free air operation at T_A = 45 °C	R- and L-load	$I_{F(AV)}$	0.9					A
	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_{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^2s
Minimum series resistor C-load at V_{RMS} = ± 10 %		R_T	1.0	2.0	4.0	8.0	12.0	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

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					V
Maximum reverse current at rated repetitive peak voltage per diode		I_R	10					µA

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)	$R_{\theta JA}$	40					°C/W
	$R_{\theta JL}$	15					

Note

(1) 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 MODE
B380C800DM-E3/45	0.416	45	50	Tube

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

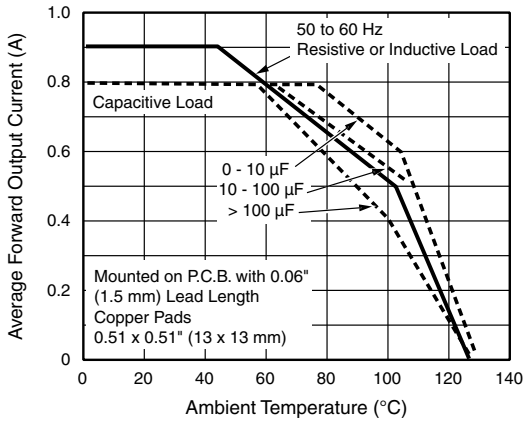


Fig. 1 - Derating Curves Output Rectified Current for B40C800D...B125C800DM

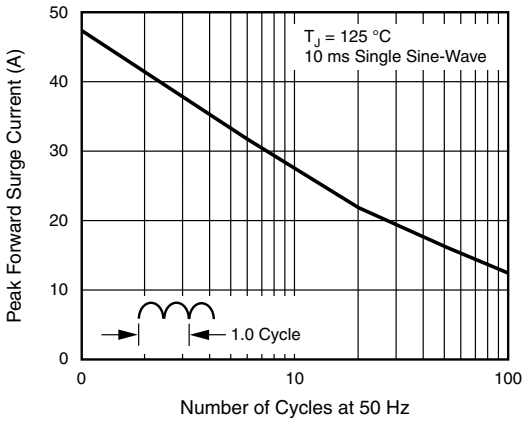


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

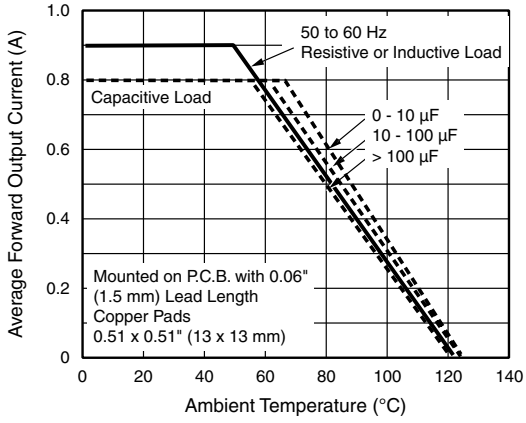


Fig. 2 - Derating Curves Output Rectified Current for B250C800D...B360C800DM

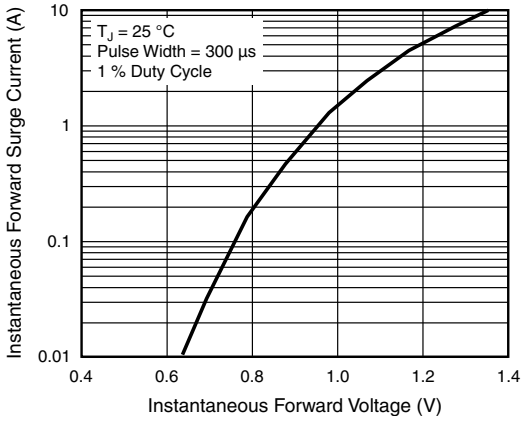


Fig. 4 - Typical Forward Characteristics Per Diode

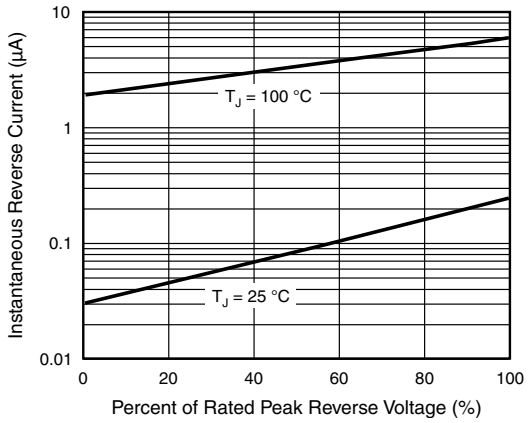


Fig. 5 - Typical Reverse Leakage Characteristics Per Diode

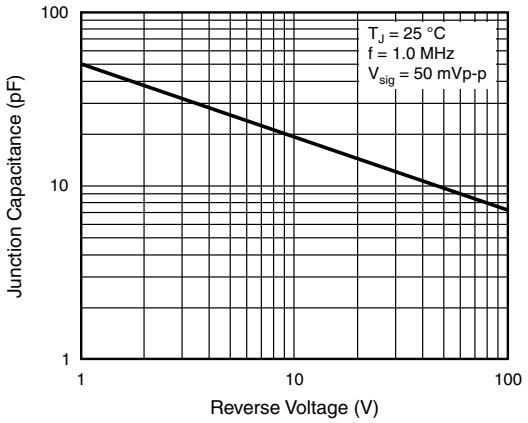
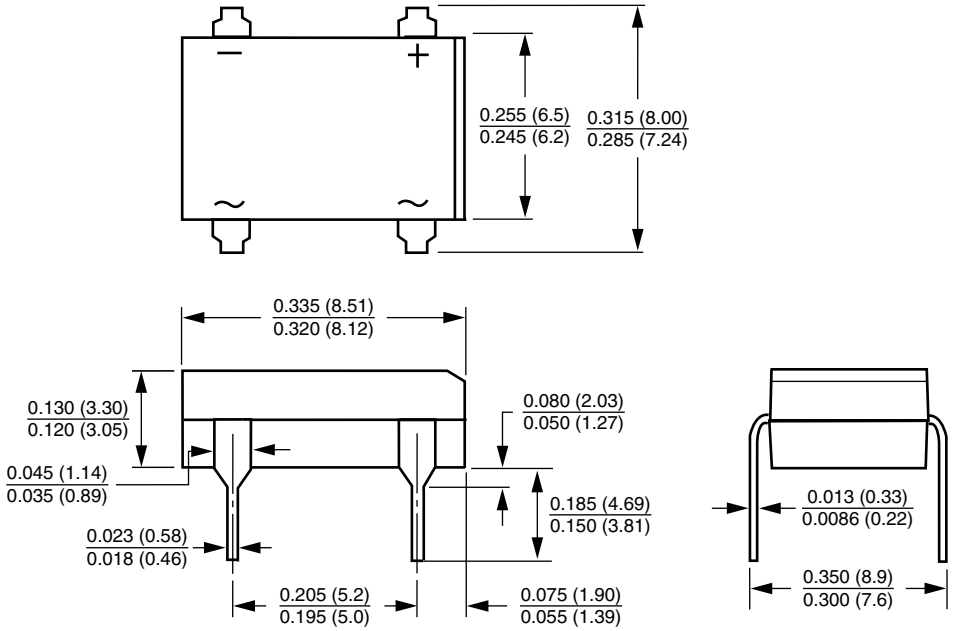


Fig. 6 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Style DFM



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