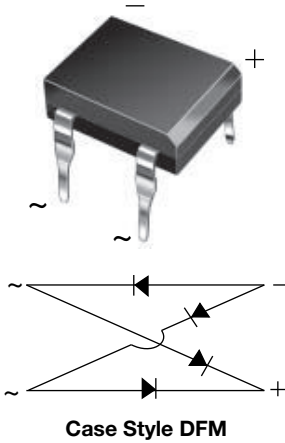




Glass Passivated Ultrafast Bridge Rectifier



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



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

LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	0.9 A
V_{RRM}	65 V, 125 V, 200 V, 400 V, 600 V
I_{FSM}	45 A
I_R	10 μ A
V_F at $I_F = 0.9$ A	1.0 V
T_J max.	125 °C
Package	DFM
Circuit configuration	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	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 ² s
Minimum series resistor C-load at $V_{RMS} = \pm 10$ %	R_T	1.0	2.0	4.0	8.0	12.0	Ω
Maximum load capacitance	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



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 _{θJA}	40					°C/W	
	R _{θJL}	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)

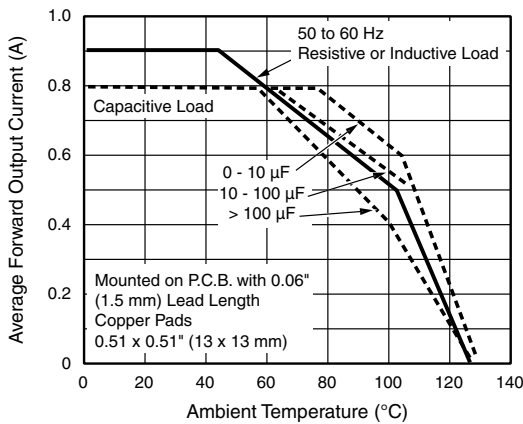


Fig. 1 - Derating Curves Output Rectified Current for B40C800D...B125C800DM

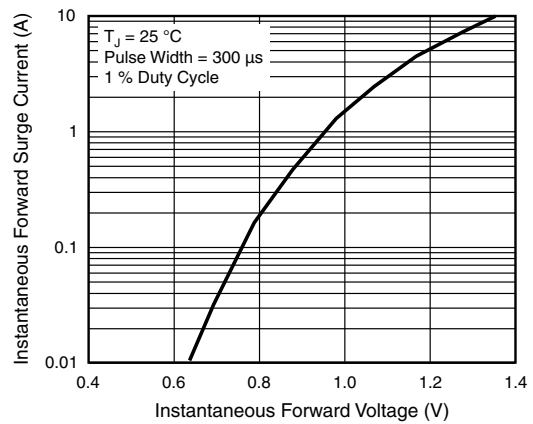


Fig. 4 - Typical Forward Characteristics Per Diode

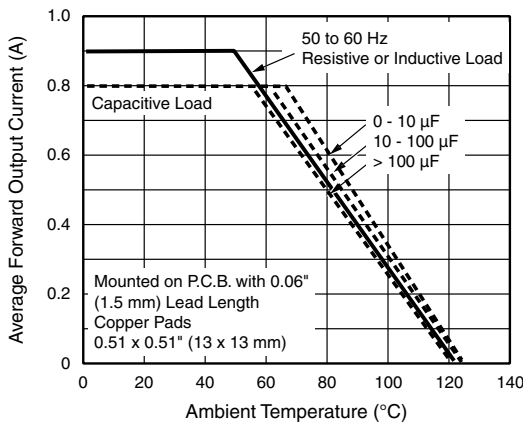


Fig. 2 - Derating Curves Output Rectified Current for B250C800D...B360C800DM

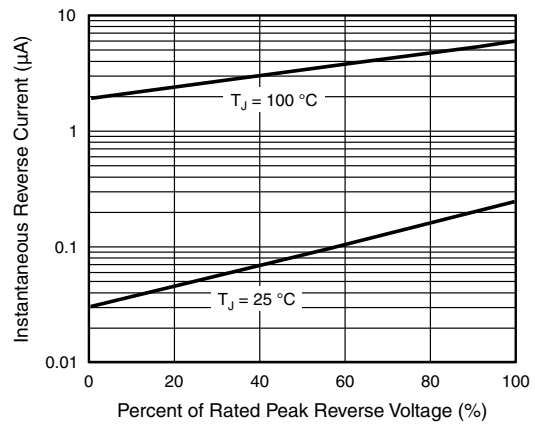


Fig. 5 - Typical Reverse Leakage Characteristics Per Diode

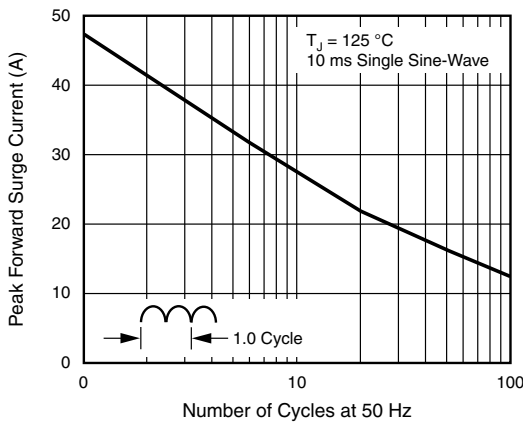


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

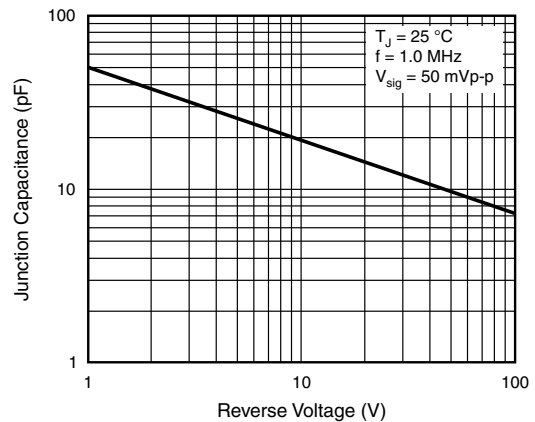
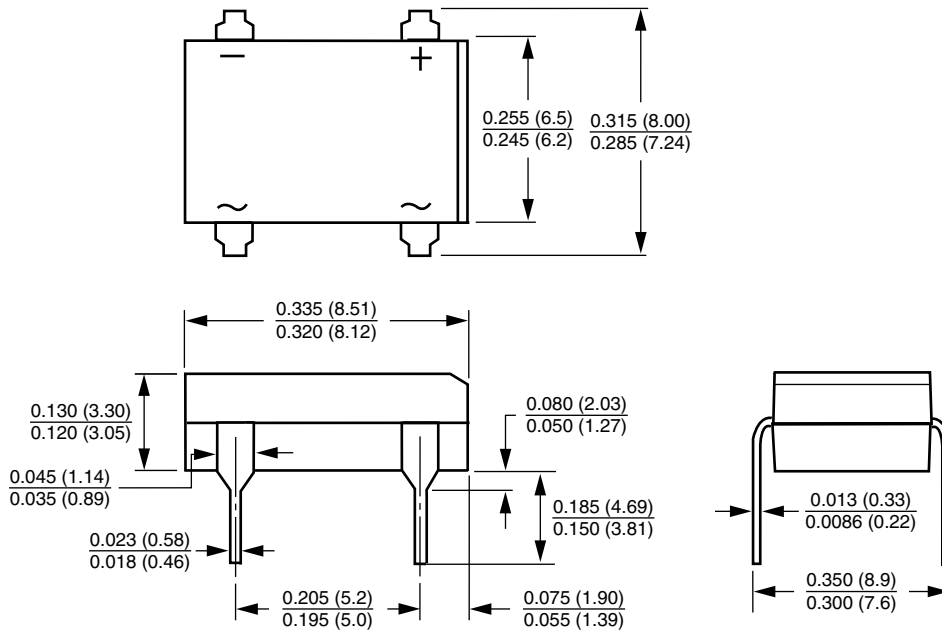


Fig. 6 - Typical Junction Capacitance Per Diode



PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Style DFM





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