

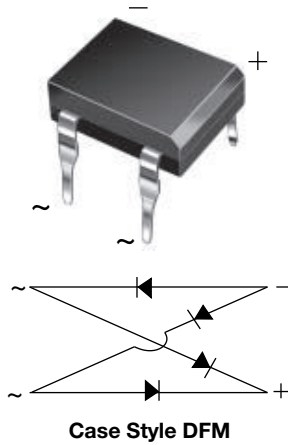


**THE DATASHEET OF  
B40C800DM-E3/45**





## Glass Passivated Single-Phase 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](http://www.vishay.com/doc?99912)



**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

### 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 $\mu$ 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 <sup>2</sup> s
Minimum series resistor C-load at $V_{RMS} = \pm 10$ %	$R_T$	1.0	2.0	4.0	8.0	12.0	$\Omega$
Maximum load capacitance	$C_L$	5000	2500	1000	500	200	$\mu$ F
Operating junction temperature range	$T_J$	-40 to +125					°C
Storage temperature range	$T_{STG}$	-40 to +150					°C



<b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ 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	0.9 A	$V_F$	1.0					V
Maximum reverse current at rated repetitive peak voltage per diode		$I_R$	10					$\mu\text{A}$

<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)							
PARAMETER	SYMBOL	B40 C800DM	B80 C800DM	B125 C800DM	B250 C800DM	B380 C800DM	UNIT
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$	40					$^\circ\text{C/W}$
	$R_{\theta JL}$	15					

**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

<b>ORDERING INFORMATION</b> (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** ( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

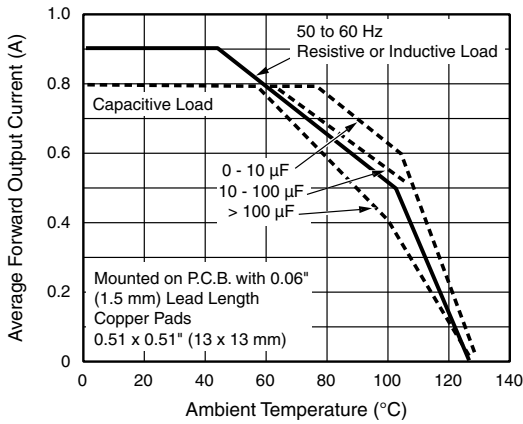


Fig. 1 - Derating Curves Output Rectified Current for B40C800D...B125C800DM

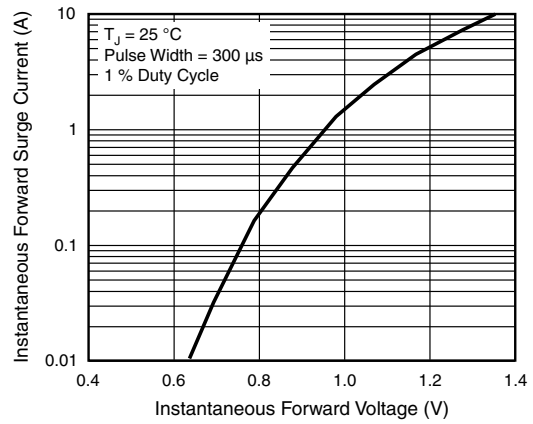


Fig. 4 - Typical Forward Characteristics Per Diode

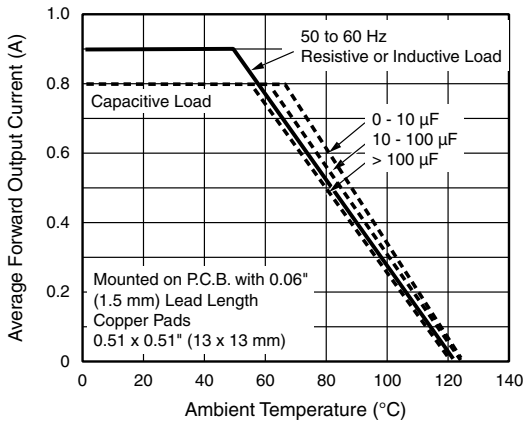


Fig. 2 - Derating Curves Output Rectified Current for B250C800D...B360C800DM

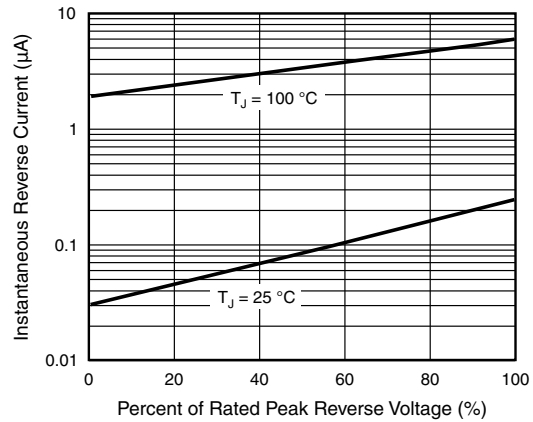


Fig. 5 - Typical Reverse Leakage Characteristics Per Diode

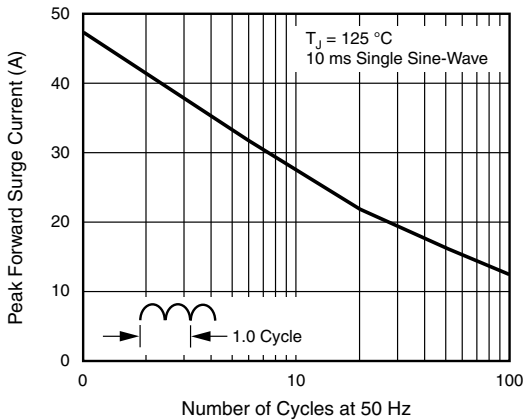


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

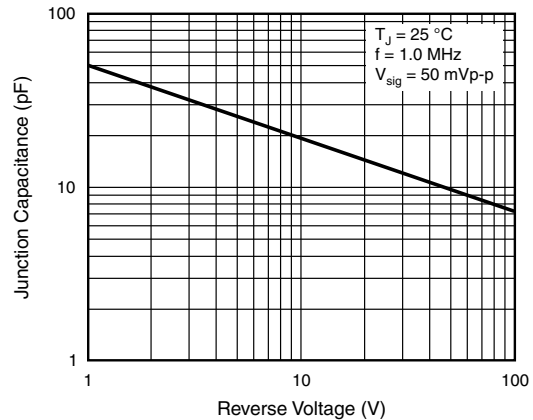
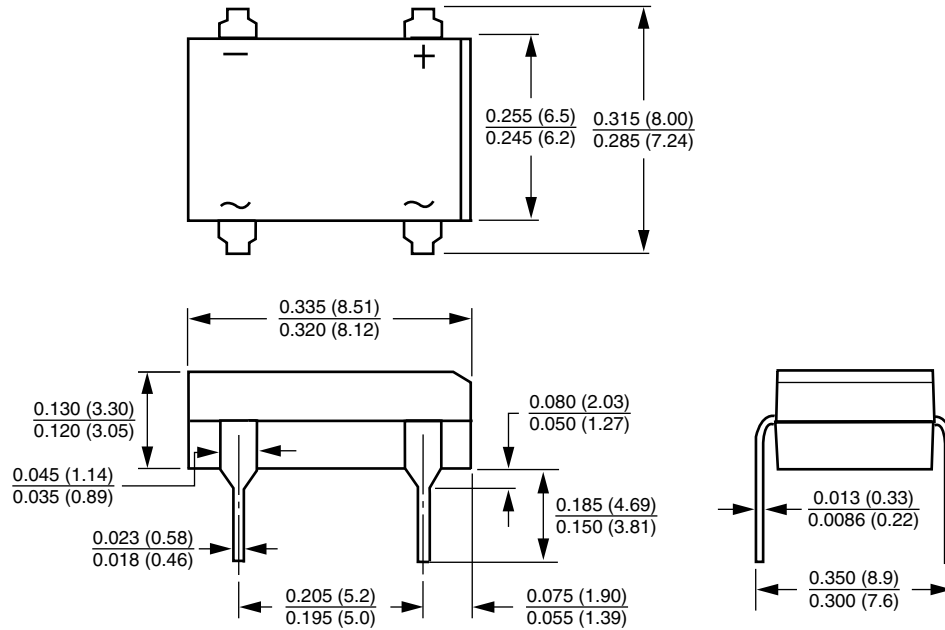


Fig. 6 - Typical Junction Capacitance Per Diode



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

**Case Style DFM**





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