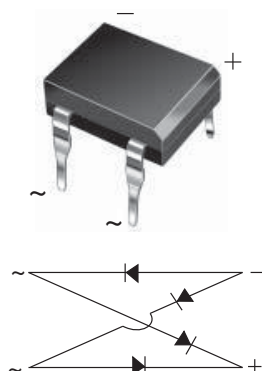


Glass Passivated Ultrafast Bridge Rectifier



Case Style DFM

FEATURES

- Ideal for automated placement
- High surge current capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC


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 JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test

Polarity: As marked on body

PRIMARY CHARACTERISTICS

$I_{F(AV)}$	0.9 A
V_{RRM}	65 V to 600 V
I_{FSM}	45 A
I_R	10 μ A
V_F	1.0 V
T_J max.	125 °C

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 C-load	$I_{F(AV)}$	0.9 0.8					A
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 + 50 % - 10 %	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** ($T_A = 25^\circ\text{C}$ 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					μA

THERMAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	B40 C800DM	B80 C800DM	B125 C800DM	B250 C800DM	B380 C800DM	UNIT
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$ $R_{\theta JL}$	40 15					$^\circ\text{C/W}$

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 PCKAGE CODE	BASE QUANTITY	DELIVERY MODE
B380C800DM-E3/45	0.416	45	50	Tube

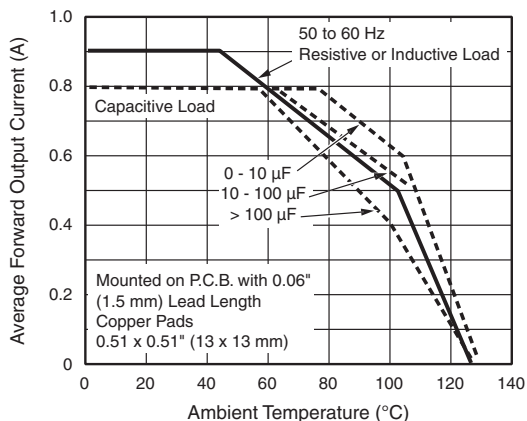
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Derating Curves Output Rectified Current for B40C800DM...B125C800DM

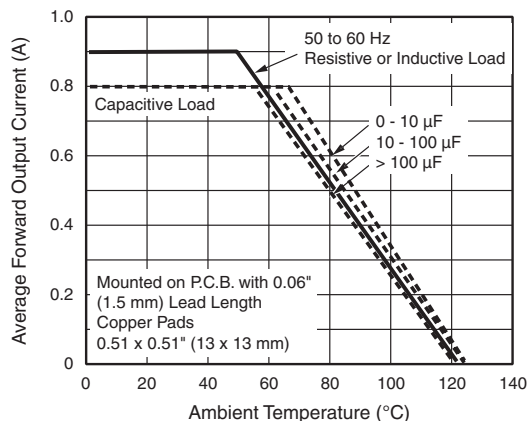


Fig. 2 - Derating Curves Output Rectified Current for B250C800DM...B360C800DM

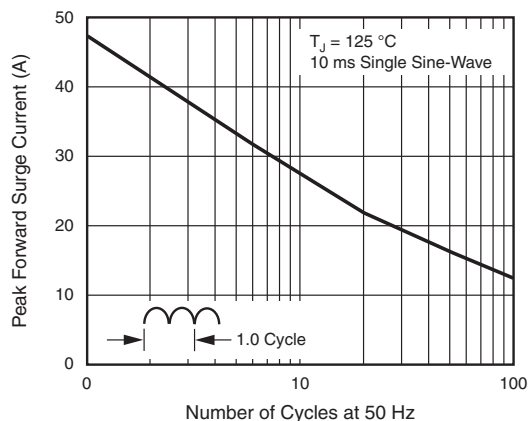


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

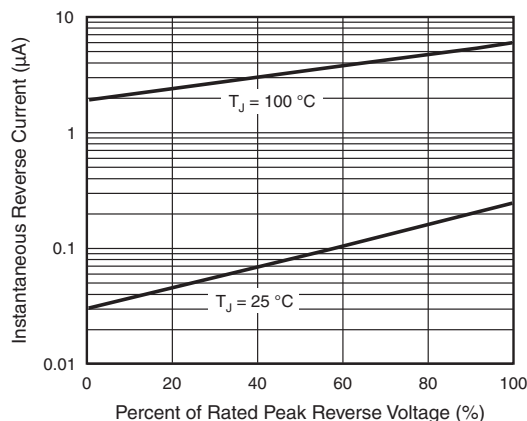


Fig. 5 - Typical Reverse Leakage Characteristics Per Diode

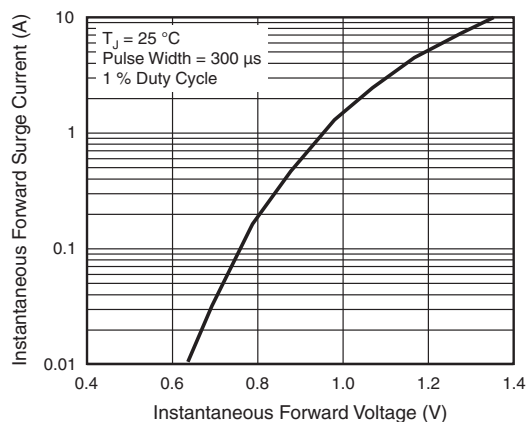


Fig. 4 - Typical Forward Characteristics Per Diode

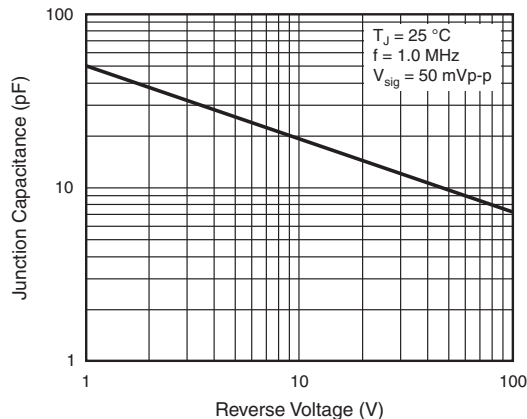
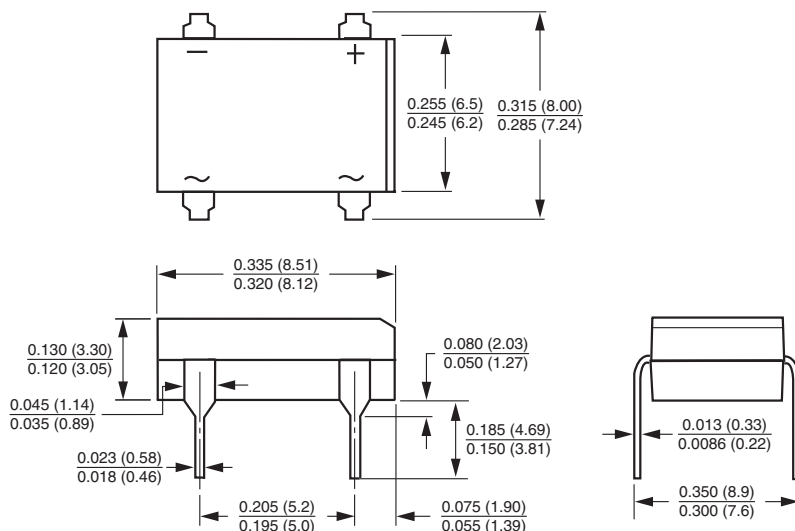


Fig. 6 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Style DFM





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