

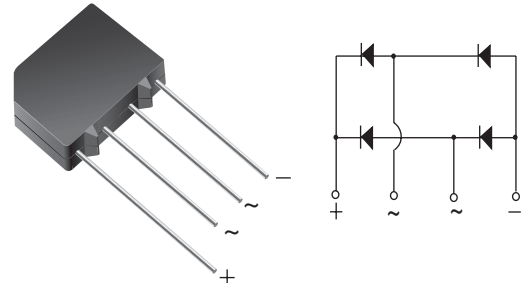


## Glass Passivated Single-Phase Bridge Rectifier

### Major Ratings and Characteristics

$I_{F(AV)}$	2 A
$V_{RRM}$	50 V to 1000 V
$I_{FSM}$	60 A
$I_R$	5 $\mu$ A
$V_F$	1.1 V
$T_j$ max.	150 °C

Case Style KBPM



### Features

- UL Recognition file number E54214
- Ideal for printed circuit board
- High surge current capability
- High case dielectric strength
- Solder Dip 260 °C, 40 seconds



### Mechanical Data

**Case:** KBPM

Epoxy meets UL-94V-0 Flammability rating

**Terminals:** Silver plated (E4 Suffix) leads, solderable per J-STD-002B and JESD22-B102D

**Polarity:** As marked on body

### Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Switching Power Supply, Home Appliances, Office Equipment, and Telecommunication applications

### Maximum Ratings

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	2KBP 005M	2KBP 01M	2KBP 02M	2KBP 04M	2KBP 06M	2KBP 08M	2KBP 10M	Units
		3N253	3N254	3N255	3N256	3N257	3N258	3N259	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Max. average forward output rectified current at $T_A = 55$ °C	$I_{F(AV)}$	2.0							A
Peak forward surge current single half sine-wave superimposed on rated load	$I_{FSM}$	60							A
Rating for fusing ( $t < 8.3$ ms)	$I^2t$	15							A <sup>2</sup> sec
Operating junction and storage temperature range	$T_J, T_{STG}$	- 55 to + 165							°C

### Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Test condition	Symbols	2KBP	2KBP	2KBP	2KBP	2KBP	2KBP	2KBP	Units
			005M	01M	02M	04M	06M	08M	10M	
Maximum instantaneous forward voltage drop per leg	at 3.14 A	$V_F$	3N253	3N254	3N255	3N256	3N257	3N258	3N259	V
Maximum DC reverse current at rated DC blocking voltage per leg	$T_A = 25\text{ °C}$	$I_R$	5.0							$\mu\text{A}$
	$T_A = 125\text{ °C}$		500							
Typical junction capacitance per leg	at 4.0 V, 1 MHz	$C_J$	25							pF

### Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	2KBP	2KBP	2KBP	2KBP	2KBP	2KBP	2KBP	Units
		005M	01M	02M	04M	06M	08M	10M	
Typical thermal resistance per leg <sup>(1)</sup>	$R_{\theta JA}$	3N253	3N254	3N255	3N256	3N257	3N258	3N259	$^{\circ}\text{C/W}$
	$R_{\theta JL}$	11							

Notes:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with, 0.47 x 0.47" (12 x 12 mm) copper pads.

### Ratings and Characteristics Curves

( $T_A = 25\text{ °C}$  unless otherwise noted)

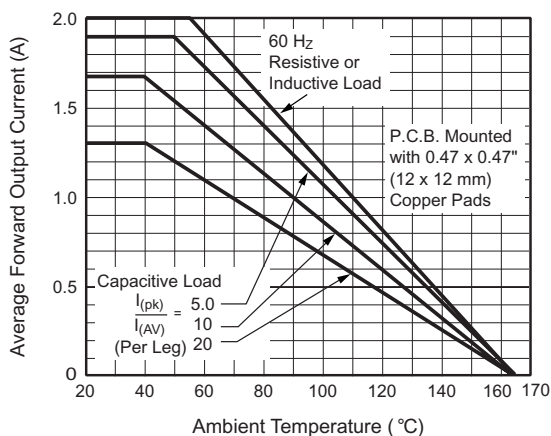


Figure 1. Derating Curve Output Rectified Current

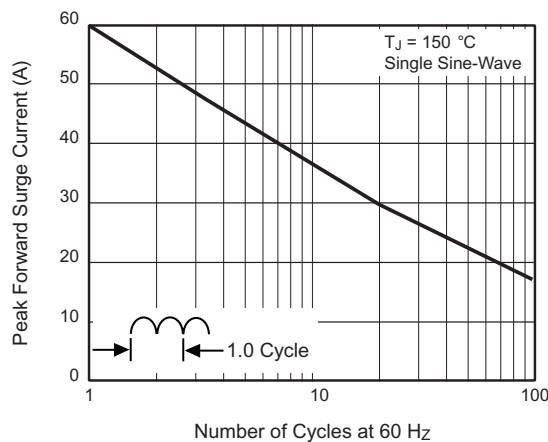


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

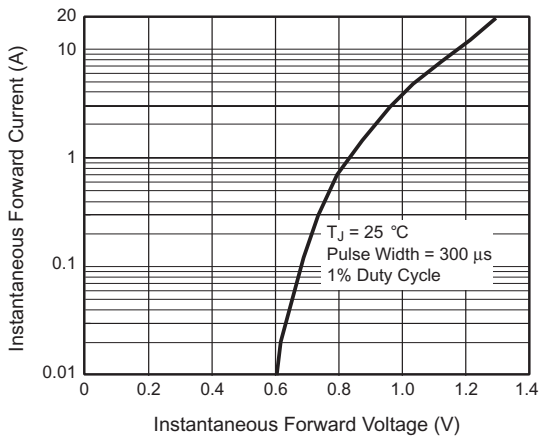


Figure 3. Typical Forward Characteristics Per Leg

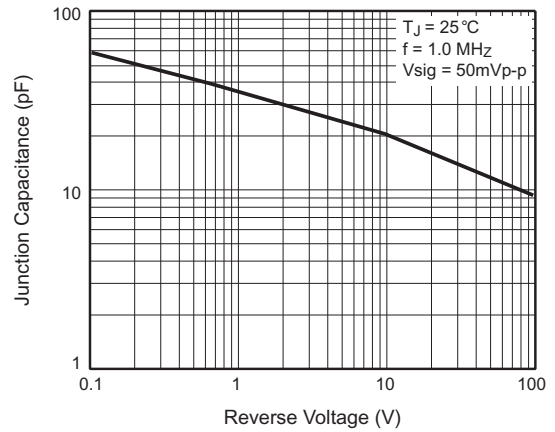


Figure 5. Typical Junction Capacitance Per Leg

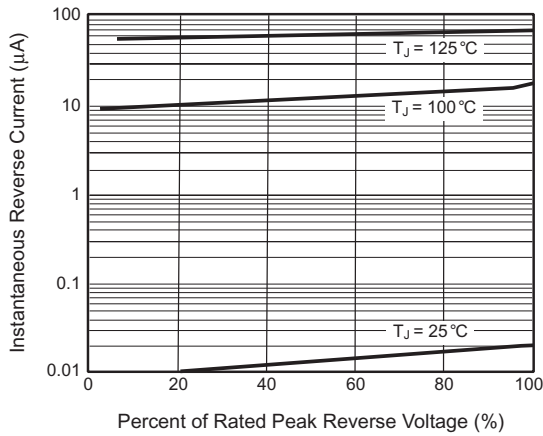


Figure 4. Typical Reverse Leakage Characteristics Per Leg

## Package outline dimensions in inches (millimeters)

