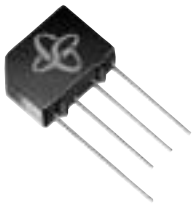
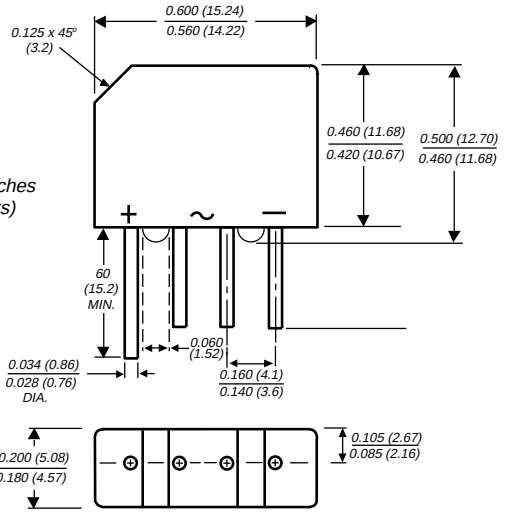
GENERAL SEMICONDUCTOR®

2KBP005M thru 2KBP10M
3N253 thru 3N259
Glass Passivated Single-Phase Bridge Rectifier

Reverse Voltage 50 to 1000 V
Forward Current 2.0 A



Case Style KBPM



Dimensions in inches and (millimeters)

Polarity shown on front side of case: positive lead by beveled corner

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- This series is UL listed under Recognized Component Index, file number E54214
- Typical I_R less than 0.1μA
- High case dielectric strength
- Ideal for printed circuit boards
- High temperature soldering guaranteed: 260°C/10 seconds at 5 lbs. (2.3kg) tension

Mechanical Data

Case: Molded plastic body over passivated junctions
Terminals: Plated leads solderable per MIL-STD-750, Method 2026
Polarity: Polarity symbols marked on case
Mounting Position: Any
Weight: 0.06 ounce, 1.7 grams

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	2KBP 005M 3N253	2KBP 01M 3N254	2KBP 02M 3N255	2KBP 04M 3N256	2KBP 06M 3N257	2KBP 08M 3N258	2KBP 10M 3N259	UNITS
* 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
Maximum 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 (JEDEC Method) T_J=150°C	I_{FSM}	60							A
Rating for fusing (t < 8.3ms)	I^2t	15							A^2sec
Typical thermal resistance per leg (NOTE 1)	$R_{\Theta JA}$ $R_{\Theta JL}$	30 11							°C/W
* 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.

	SYMBOLS	2KBP 005M 3N253	2KBP 01M 3N254	2KBP 02M 3N255	2KBP 04M 3N256	2KBP 06M 3N257	2KBP 08M 3N258	2KBP 10M 3N259	UNITS
* Maximum instantaneous forward voltage drop per leg at 3.14A	V_F	1.1							V
* Maximum DC reverse current at rated DC blocking voltage per leg T_A=25°C T_A=125°C	I_R	5.0 500							μA
Typical junction capacitance per leg at 4.0V, 1MHz	C_J	25							pF

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 x12mm) copper pads
* JEDEC registered values

12/21/99

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Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

FIG. 1 - DERATING CURVE OUTPUT RECTIFIED CURRENT

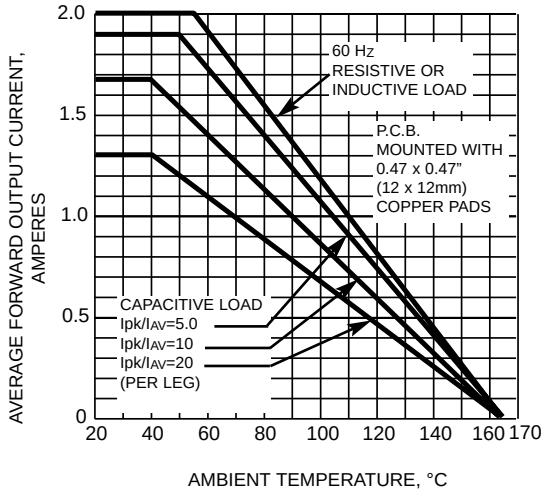

FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

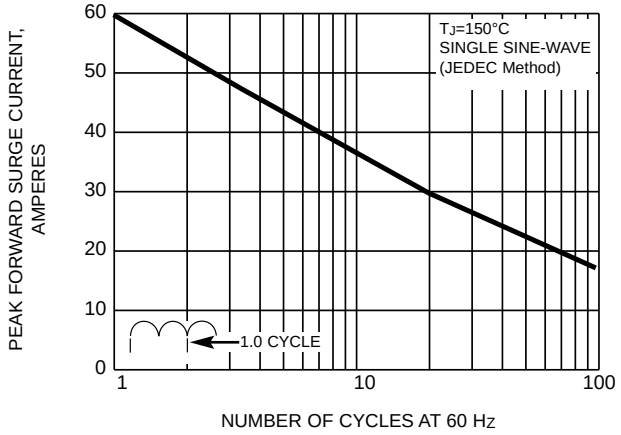

FIG. 3 - TYPICAL FORWARD CHARACTERISTICS PER LEG

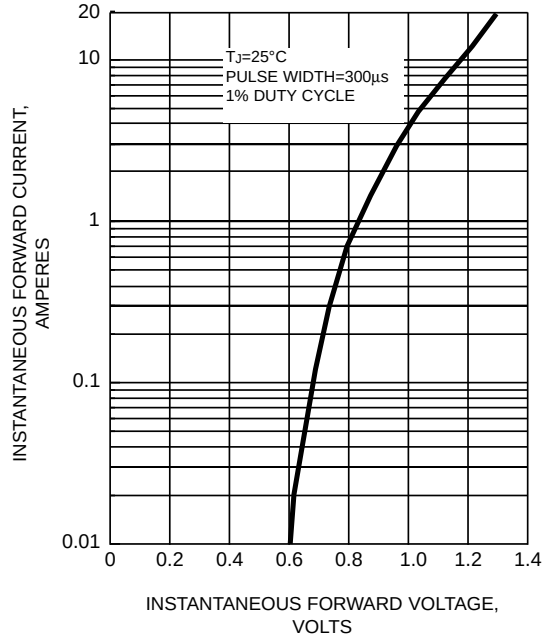

FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

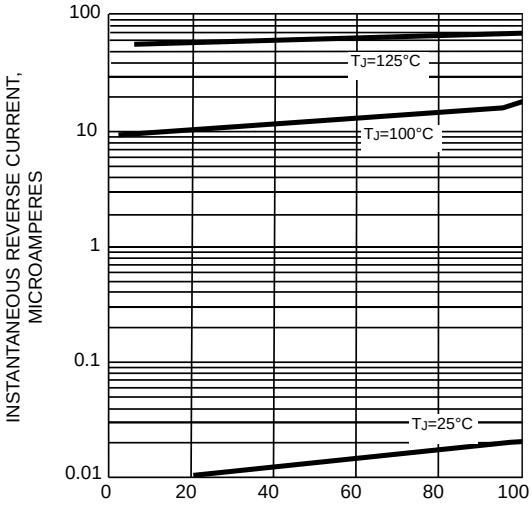

FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG