



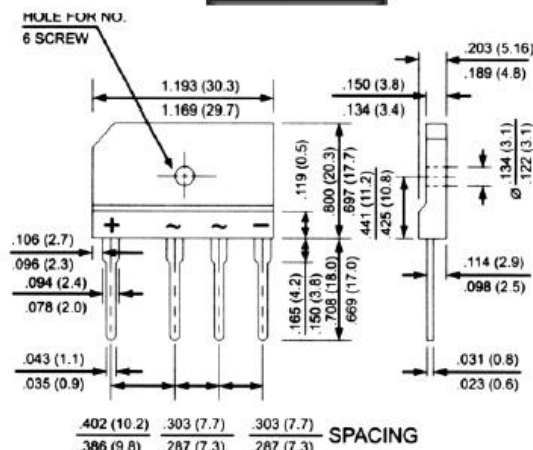
SYNSEMI SEMICONDUCTOR

# GBJ/KBJ8A thru GBJ/KBJ8M

Glass Passivated Single-Phase Bridge Rectifiers  
Voltage Range 50 to 1000 Volts Forward Current 8.0 Amperes

## Features

- ◆ Rating to 1000V PRV
- ◆ Ideal for printed circuit boards
- ◆ Low forward voltage drop, high current capability
- ◆ Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- ◆ The plastic material has Underwriters Laboratory Flammability Classification 94V-0



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

Parameter	Symbols	KBJ8A	KBJ8B	KBJ8D	KBJ8G	KBJ8J	KBJ8K	KBJ8M	Units
		GBJ8A	GBJ8B	GBJ8D	GBJ8G	GBJ8J	GBJ8K	GBJ8M	
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified output current @ $T_c=100^{\circ}\text{C}$ (with heatsink Note 2) (without heatsink)	$I_{FAV}$	8.0 2.9						Amps	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	170.0						Amps	
Max. instantaneous forward voltage drop at 4.0A DC	$V_F$	1.0						Volt	
Maximum DC reverse current @ $T_J=25^{\circ}\text{C}$ at rated DC blocking voltage per element @ $T_J=125^{\circ}\text{C}$	$I_R$	5.0 500.0						$\mu\text{A}$	
Rating for fusing ( $t<8.3\text{ms}$ )	$I^2t$	120						$\text{A}^2\text{sec}$	
Typical junction capacitance per element (Note 1)	$C_j$	55						pF	
Typical thermal resistance (Note 2)	$R_{\theta JC}$	1.6						$^{\circ}\text{C}/\text{W}$	
Operating temperature range	$T_J$	-55 to +150						$^{\circ}\text{C}$	
Storage temperature range	$T_{STG}$	-55 to +150						$^{\circ}\text{C}$	

- Notes:**
1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC
  2. Device mounted on 100mm x 100mm x 1.6mm Cu plate heatsink

# GBJ/KBJ8A thru GBJ/KBJ8M

## RATINGS AND CHARACTERISTIC CURVES

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

FIG. 1 - FORWARD CURRENT DERATING CURVE

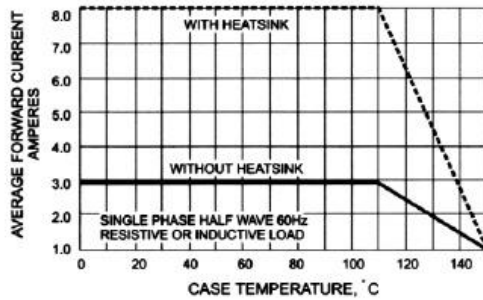


FIG. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

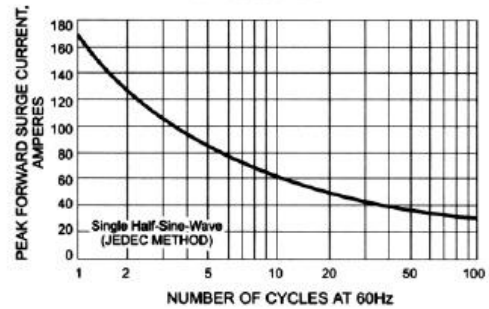


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

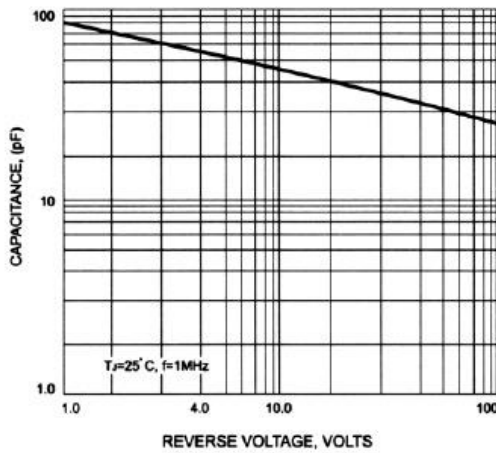


FIG. 4 - TYPICAL FORWARD CHARACTERISTICS

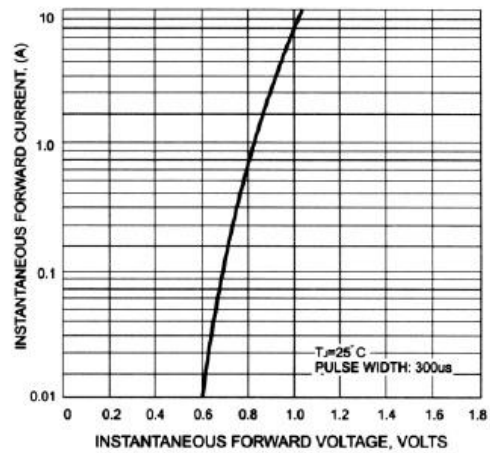


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

