



*DC COMPONENTS CO., LTD.*

RECTIFIER SPECIALISTS

GBK25A  
THRU  
GBK25M

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE GLASS PASSIVATED BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 25 Amperes

**FEATURES**

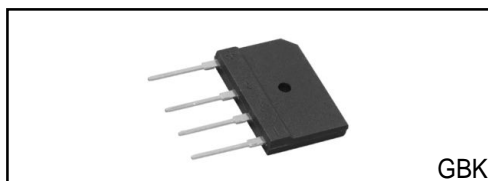
- \* Ideal for printed circuit board
- \* Surge overload rating: 350 Amperes peak
- \* Glass passivated junction

**MECHANICAL DATA**

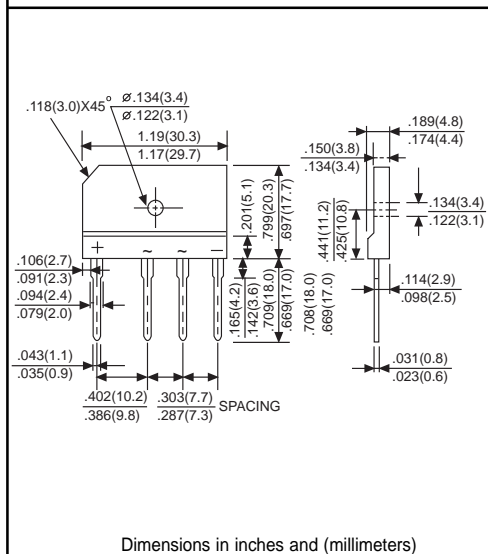
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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



GBK



Dimensions in inches and (millimeters)

	SYMBOL	GBK25A	GBK25B	GBK25D	GBK25G	GBK25J	GBK25K	GBK25M	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current @T <sub>c</sub> =100°C	I <sub>(AV)</sub>					25			Amps
(with heatsink Note 2)						4.2			
(without heatsink)									
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>					350			Amps
Maximum Forward Voltage Drop per element at 12.5A DC	V <sub>F</sub>					1.1			Volts
Maximum DC Reverse Current at Rated	I <sub>R</sub>					10			μAmps
DC Blocking Voltage per element						500			
I <sup>2</sup> t Rating for Fusing (t<8.3ms)	I <sup>2</sup> t					510			A <sup>2</sup> Sec
Typical Junction Capacitance ( Note1)	C <sub>J</sub>					85			pF
Typical Thermal Resistance (Note 2)	R <sub>θJC</sub>					0.6			°C/W
Operating Temperature Range	T <sub>J</sub>					-55 to +150			°C
Storage Temperature Range	T <sub>STG</sub>					-55 to +150			°C

NOTES : 1.Measured at 1 MHz and applied reverse voltage of 4.0 volts

2.Thermal Resistance from Junction to Case per element Unit mounted on 100x100x1.6mm Cu plate heat-sink.

# RATING AND CHARACTERISTIC CURVES (GBK25A THRU GBK25M)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

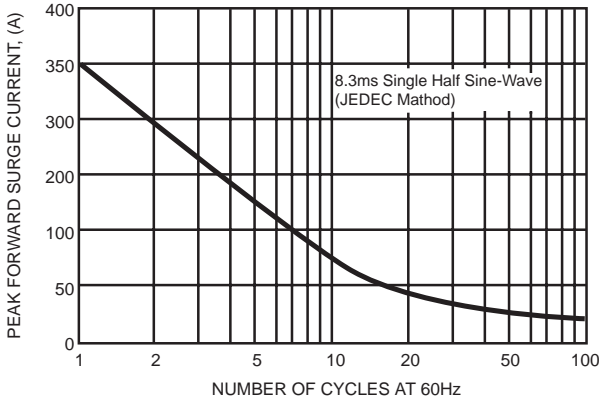


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

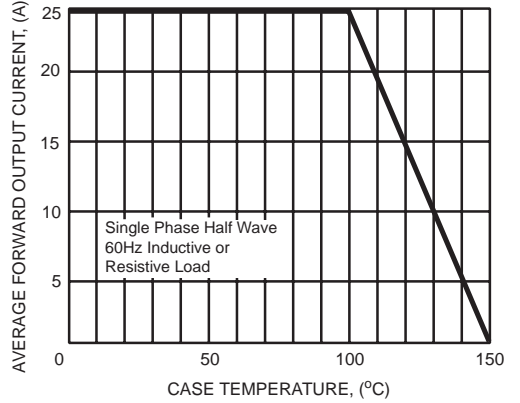


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

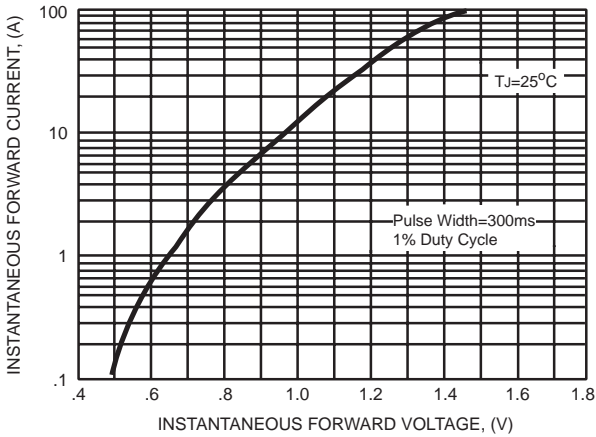


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

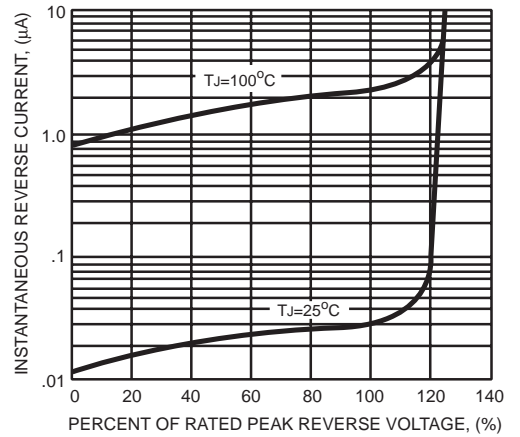
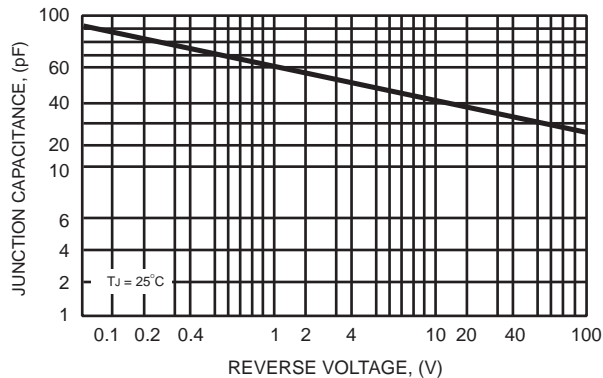


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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