



**DC COMPONENTS CO., LTD.**  
RECTIFIER SPECIALISTS

**GBK20A  
THRU  
GBK20M**

**TECHNICAL SPECIFICATIONS OF GLASS PASSIVATED BRIDGE RECTIFIER**  
**VOLTAGE RANGE - 50 to 1000 Volts**      **CURRENT - 20 Amperes**

**FEATURES**

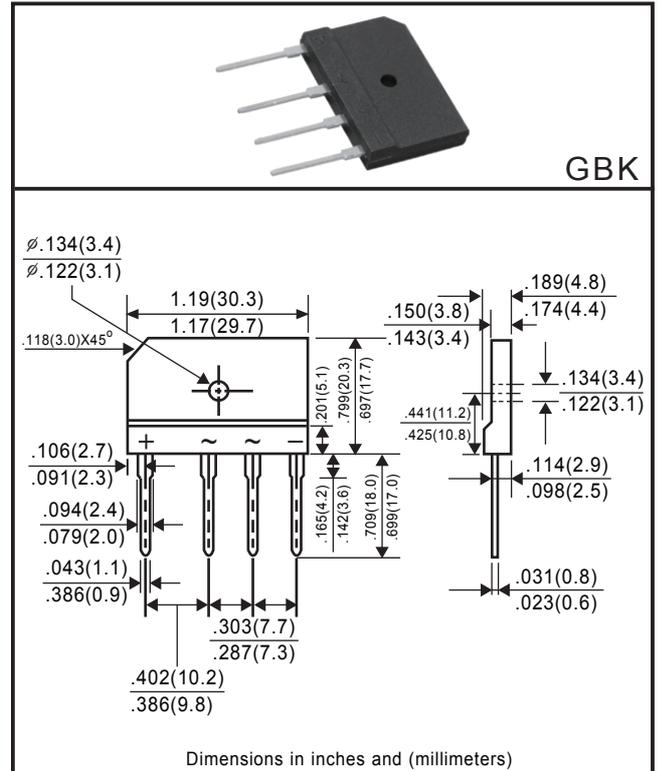
- \* High forward surge capability
- \* High capability
- \* High current capability
- \* Low forward voltage drop
- \* Glass passivated junction

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94-V0 rate flame retardant
- \* Terminals: Solder plated solderable per MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 6.5 gram

**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%.



	SYMBOL	GBK20A	GBK20B	GBK20D	GBK20G	GBK20J	GBK20K	GBK20M	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS 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 at T <sub>A</sub> = 100°C	I <sub>O</sub>	20							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	250							Amps
Maximum Instantaneous Forward Voltage at 10A DC	V <sub>F</sub>	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T <sub>J</sub> = 25°C	10							μAmps
	@T <sub>J</sub> = 125°C	100							
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	60							pF
I <sup>2</sup> t Rating for Fusing ( t < 8.3ms)	I <sup>2</sup> t	280.5							A <sup>2</sup> s
Typical Thermal Resistance to case with heatsink (Note 2)	R <sub>θJC</sub>	0.8							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

Note 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
2. Device mounted on 300mm\*300mm\*1.6mm Cu plate heatsink.

# RATING AND CHARACTERISTIC CURVES (GBK20A THRU GBK20M)

FIG. 1  
TYPICAL FORWARD CURRENT  
DERATING CURVE

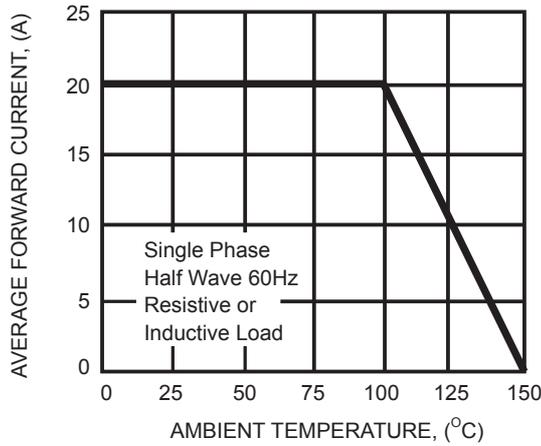


FIG. 2  
MAXIMUM NON-REPETITIVE FORWARD  
SURGE CURRENT

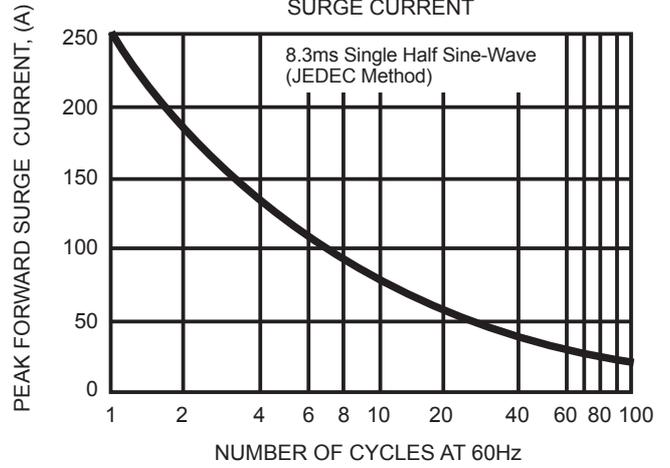


FIG. 3  
TYPICAL INSTANTANEOUS  
FORWARD CHARACTERISTICS

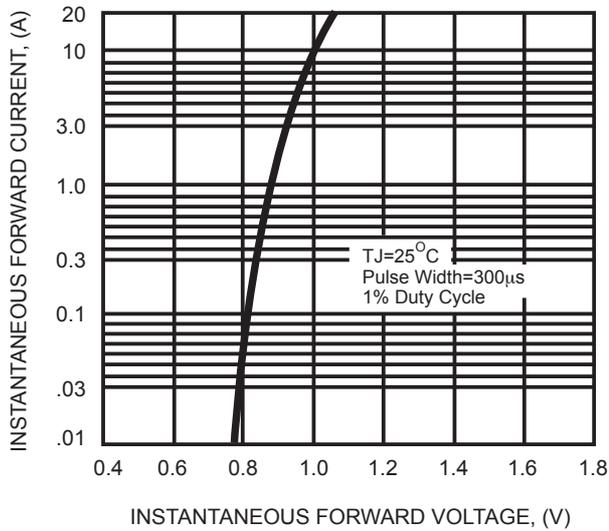


FIG. 4  
TYPICAL REVERSE CHARACTERISTICS

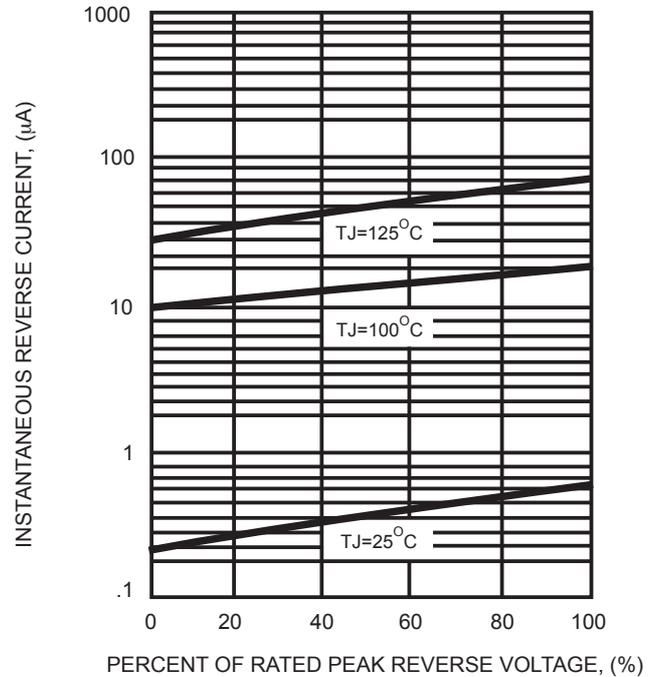
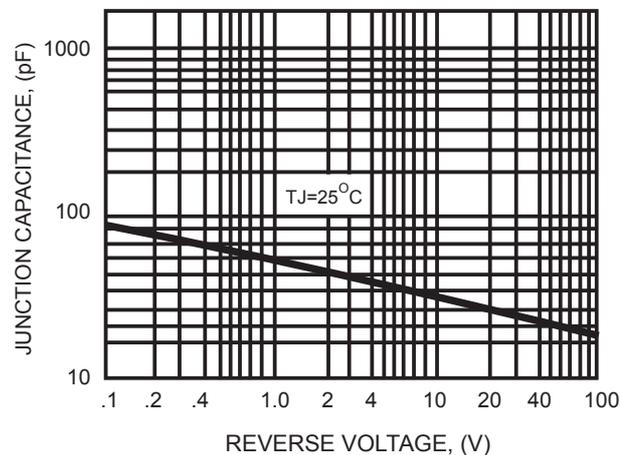


FIG. 5  
TYPICAL JUNCTION CAPACITANCE



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