DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

GBK8A THRU GBK8M

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE GLASS PASSIVATED BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts *CURRENT - 8.0 Amperes*

FEATURES

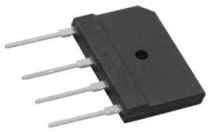
* Ideal for printed circuit board
* Surge overload rating: 200 Amperes peak
* Glass passivated junction

MECHANICAL DATA

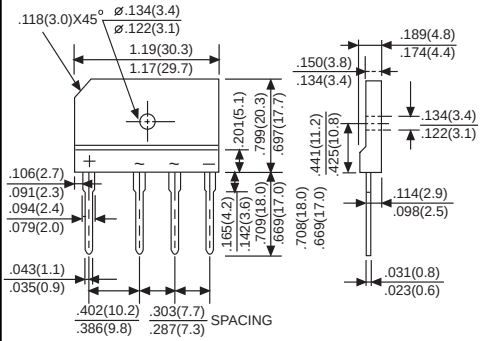
* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Terminals: MIL-STD-202E, Method 208 guaranteed
* Polarity: Symbols molded or marked on body
* Mounting position: Any

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	GBK8A	GBK8B	GBK8D	GBK8G	GBK8J	GBK8K	GBK8M	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input 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 (with heatsink Note 2) Rectified Current @Tc=100°C (without heatsink)		$I_{(AV)}$	8.0 2.9							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	175							Amps
Maximum Forward Voltage Drop per element at 4.0A DC		V_F	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	@T_J = 25°C	I_R	10							µAmps
	@T_J = 125°C		500							
I^2t Rating for Fusing (t<8.3ms)		I^2t	120							A^2Sec
Typical Junction Capacitance (Note1)		C_J	55							pF
Typical Thermal Resistance (Note 2)		$R\theta_{JC}$	1.8							°C/W
Operating Temperature Range		T_J	-55 to +150							°C
Storage Temperature Range		T_{STG}	-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 (GBK8A THRU GBK8M)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

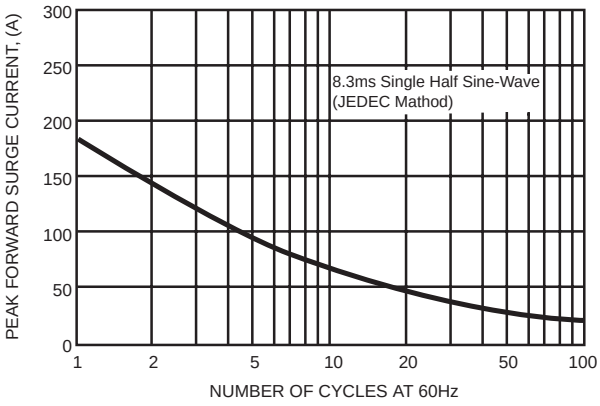


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

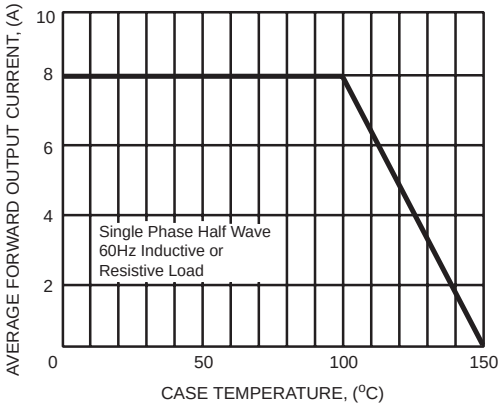


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

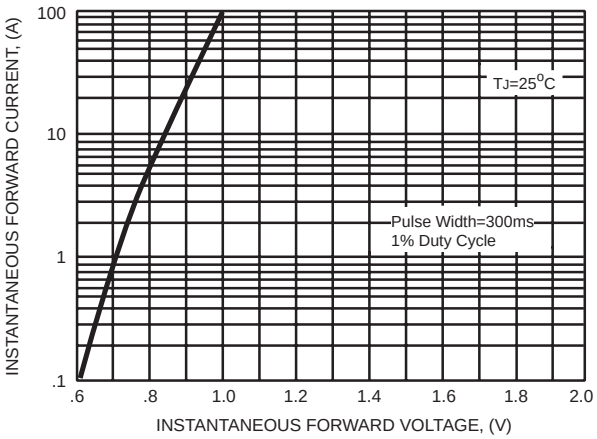


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

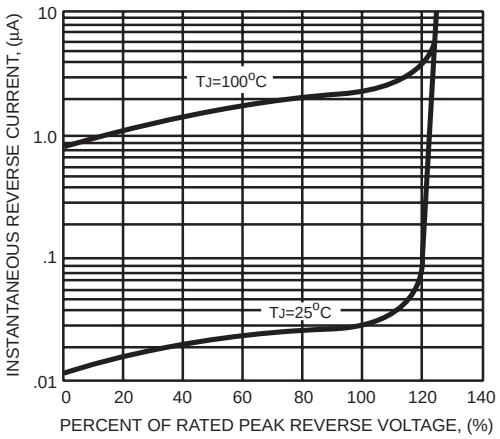


FIG. 5 - TYPICAL JUNCTION CAPACITANCE