



# CHENMKO ENTERPRISE CO.,LTD

Lead free devices

## SINGLE PHASE SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 4 Amperes

**KBJ4APT**  
**THRU**  
**KBJ4MPT**

### FEATURES

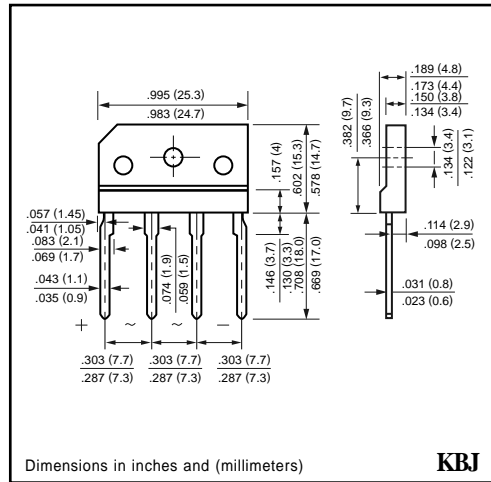
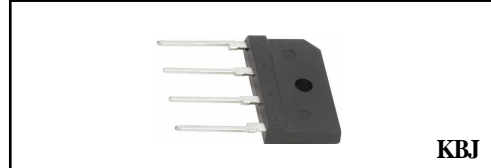
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Idea for printed circuit board
- \* Glass passivated chip junctions
- \* Low power loss
- \* Low forward voltage, high current capability
- \* High surge current capability
- \* High temperature soldering guaranteed : 260°C/10 seconds at terminals

### MECHANICAL DATA

**Case:** KBJ molded plastic  
**Terminals:** Lead solderable per MIL-STD-750, Method 2026  
**Polarity:** As marked

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.



### MAXIMUM RATINGS ( At TA = 25°C unless otherwise noted )

RATINGS	SYMBOL	KBJ4BPT	KBJ4APT	KBJ4DPT	KBJ4GPT	KBJ4JPT	KBJ4KPT	KBJ4MPT	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	I <sub>O</sub>	4.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	150							Amps
Rating for fusing ( t > 1 mSec, t < 8.3 mSec )	I <sup>2</sup> t	93							A <sup>2</sup> Sec
Typical Junction capacitance per leg ( NOTE 1 )	C <sub>J</sub>	45							pF
Typical thermal resistance ( NOTE 2 )	R <sub>θJ-C</sub>	4.0							°C / W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

### ELECTRICAL CHARACTERISTICS ( At TA = 25°C unless otherwise noted )

CHARACTERISTICS	SYMBOL	KBJ4BPT	KBJ4APT	KBJ4DPT	KBJ4GPT	KBJ4JPT	KBJ4KPT	KBJ4MPT	UNITS
Maximum Instantaneous Forward Voltage at 4.0 A DC	V <sub>F</sub>	1.0							Volts
Maximum DC reverse current at rated DC blocking voltage per leg	TA = 25°C	5.0							uAmps
	TA = 125°C	500							

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts  
2. Thermal resistance from junction to case and device mounted on 50 X 50 X 1.6 mm copper heatsink.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

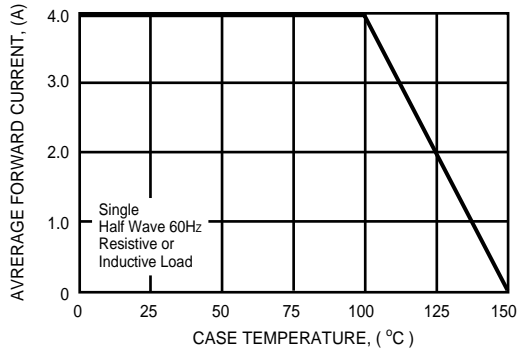


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

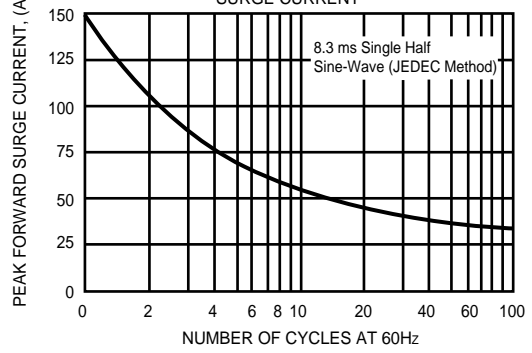


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

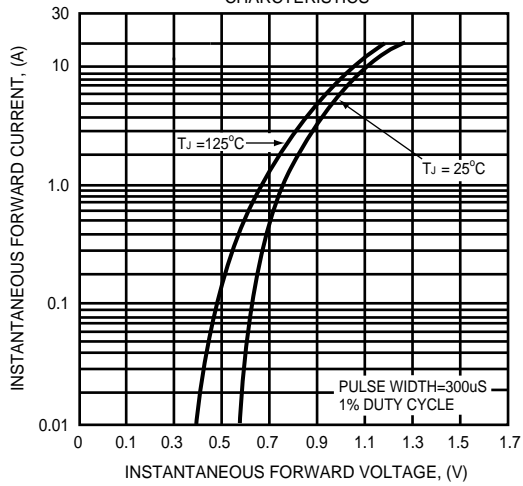


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

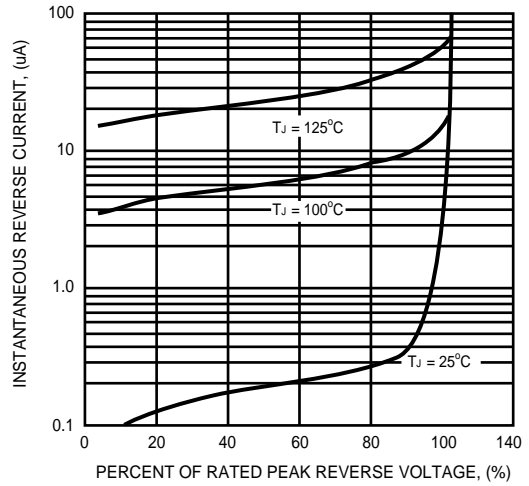


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

