

**SENSITRON**  
**SEMICONDUCTOR**

**KBPC600-G – KBPC610-G**

6.0A BRIDGE RECTIFIER

Data Sheet 1414, Rev. A

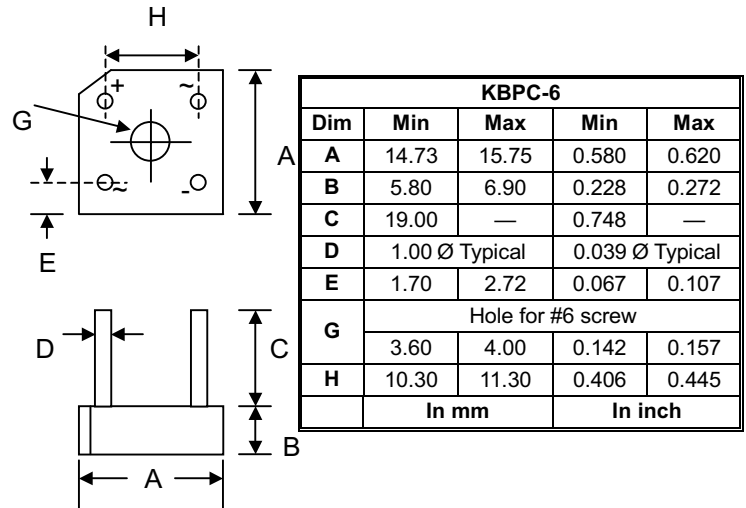
*Green Products*

**Features**

- Diffused Junction
- High Current Capability
- High Case Dielectric Strength
- High Surge Current Capability
- Ideal for Printed Circuit Board Application
- Plastic Material has Underwriters Laboratory Flammability Classification 94V-O
- UL Recognized File # E223064
- Green Products in Compliance with the RoHS Directive

**Mechanical Data**

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Marked on Body
- Weight: 3.8 grams (approx.)
- Mounting Position: Through Hole for #6 Screw
- Mounting Torque: 5.0 Inch-pounds Maximum
- Marking: Type Number



**Maximum Ratings and Electrical Characteristics** @<sub>T<sub>A</sub></sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	KBPC 600-G	KBPC 601-G	KBPC 602-G	KBPC 604-G	KBPC 606-G	KBPC 608-G	KBPC 610-G	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>								V
Working Peak Reverse Voltage	V <sub>RWM</sub>	50	100	200	400	600	800	1000	
DC Blocking Voltage	V <sub>R</sub>								
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @T <sub>C</sub> = 50°C	I <sub>O</sub>	6.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	125							A
Forward Voltage (per element) @I <sub>F</sub> = 3.0A	V <sub>FM</sub>	1.1							V
Peak Reverse Current @T <sub>C</sub> = 25°C	I <sub>R</sub>	10							µA
At Rated DC Blocking Voltage @T <sub>C</sub> = 100°C		1.0							
I <sup>2</sup> t Rating for Fusing (t<8.3ms) (Note 2)	I <sup>2</sup> <sub>t</sub>	64							A <sup>2</sup> s
Typical Junction Capacitance (Note 3)	C <sub>j</sub>	55							pF
Typical Thermal Resistance (Note 4)	R <sub>θJC</sub>	12.5							K/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +125							°C

- Note: 1. Mounted on PC board.  
2. Non-repetitive, for t > 1ms and < 8.3ms.  
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
4. Thermal resistance junction to case per element.

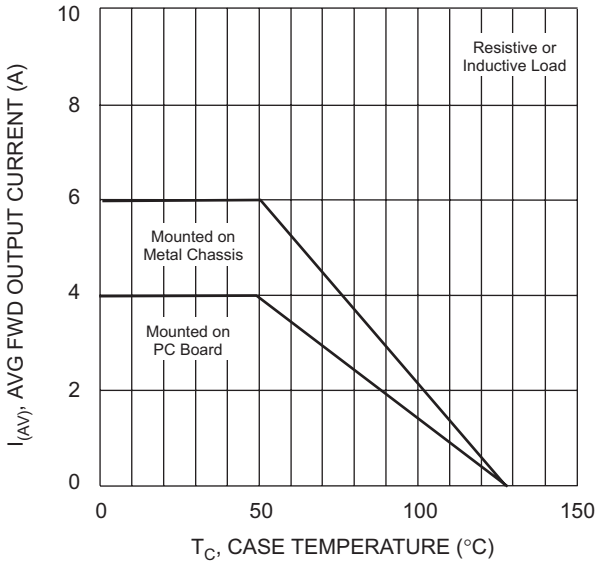


Fig. 1 Forward Current Derating Curve

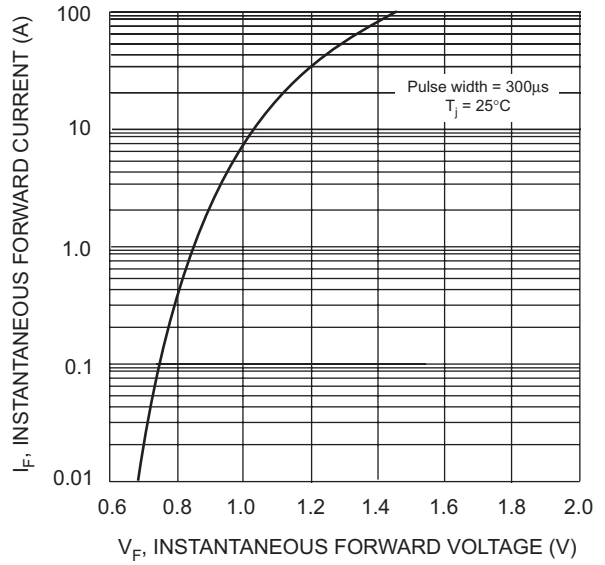


Fig. 2 Typical Forward Characteristics, per element

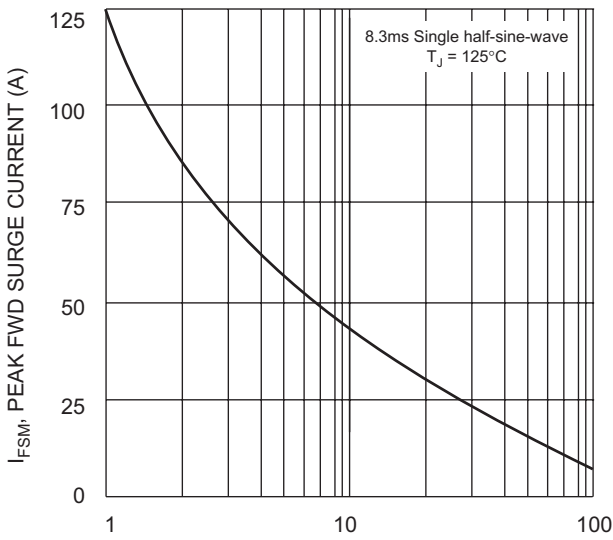


Fig. 3 Peak Forward Surge Current

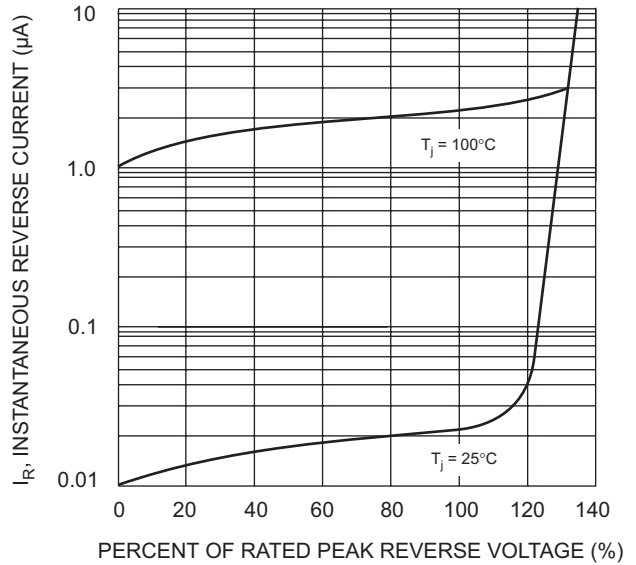


Fig. 4 Typical Reverse Characteristics

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