

KBPC6005 THRU KBPC610

SINGLE-PHASE BRIDGE RECTIFIER

REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 6.0 Ampere

FEATURES

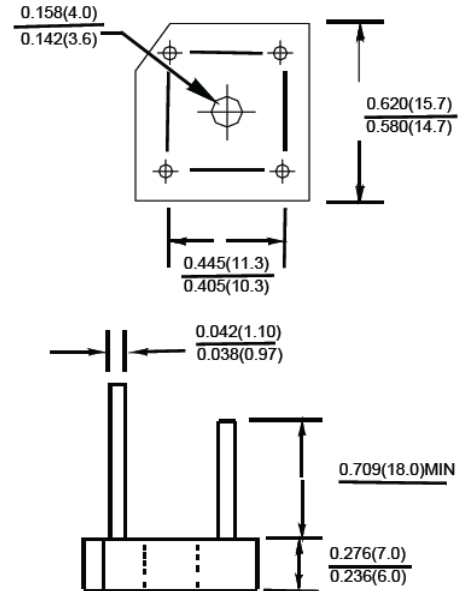
- ◆ High Current Capability
- ◆ High Case Dielectric Strength
- ◆ High Surge Current Capability
- ◆ Ideal for Printed Circuit Board Application
- ◆ Plastic Material has Underwriters Laboratory

Flammability Classification 94V-O

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

BR-6



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

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

PARAMETER	SYMBOL	KBPC 6005	KBPC 601	KBPC 602	KBPC 604	KBPC 606	KBPC 608	KBPC 610	UNIT
Peak Repetitive Reverse Voltage	V_{RRM}								V
Working Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
DC Blocking Voltage	V_R								V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @TC = 50°C	I_O				60				A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}				125				A
Forward Voltage (per element) @ $I_F = 3.0A$	V_{FM}				1.0V				
Peak Reverse Current @TC = 25°C	I_R				5				μA
At Rated DC Blocking Voltage @TC = 100°C	I_R				0.5				mA
I ² t Rating for fusing (t < 8.3ms) (Note 2)	I ² t				64				A ² S
Typical Junction Capacitance (Note 3)	C_J				55				pF
Typical Thermal Resistance (Note 4)	$R_{\theta JC}$				12.5				K/W
Operating and Storage Temperature Range	T_J, T_{STG}				-65 to +125				°C

Note: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC. 2. Device mounted on 75mm x 75mm x 1.6mm Cu Plate Heatsink.

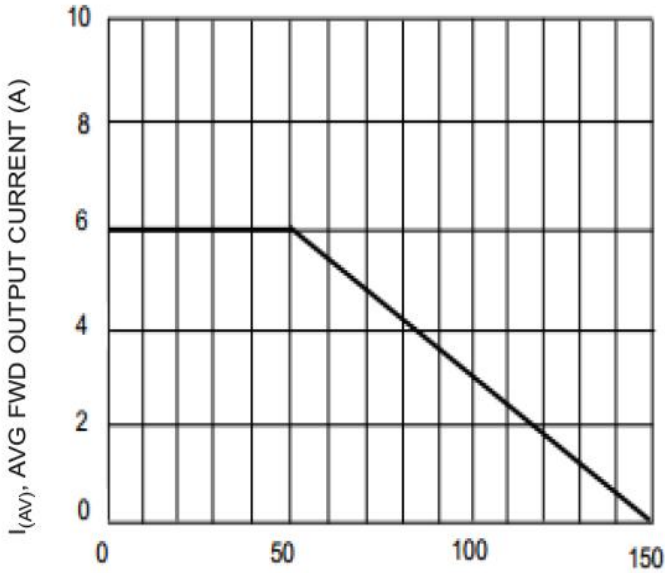
3. Mounted on metal chassis. 4. Non-repetitive, for t > 1ms and < 8.3ms.

KBPC6005 THRU KBPC610

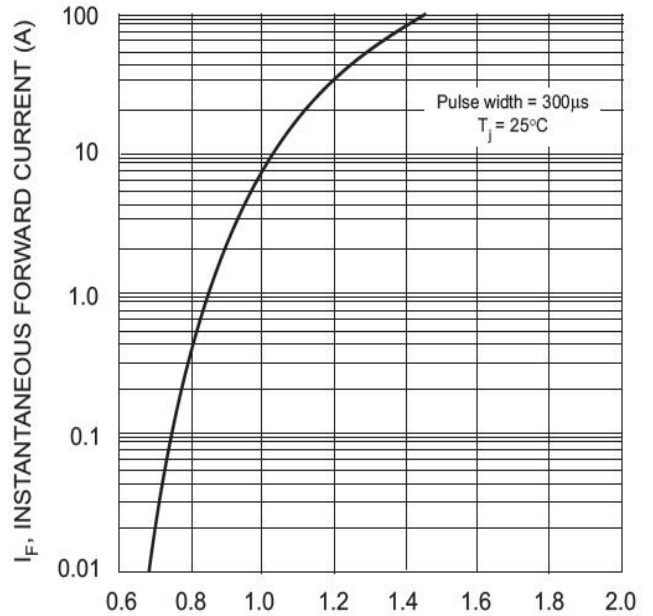
SINGLE-PHASE BRIDGE RECTIFIER

REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 6.0 Ampere

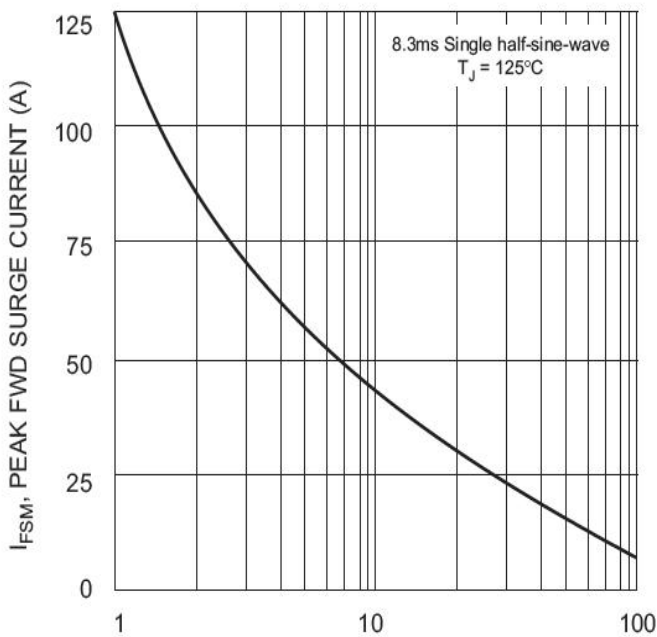
RATING AND CHARACTERISTIC CURVES KBPC6005 THRU KBPC610



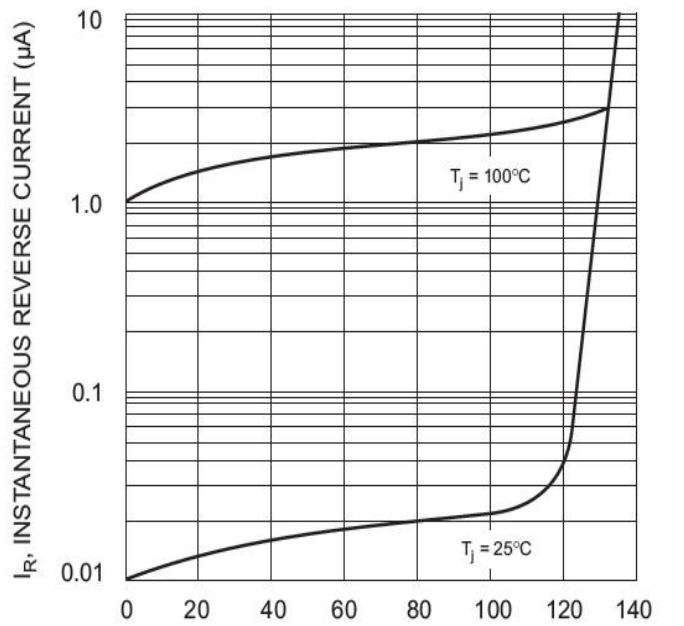
T_C , CASE TEMPERATURE (°C)
Fig. 1 Forward Current Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics, per element



NUMBER OF CYCLES AT 60Hz
Fig. 3 Peak Forward Surge Current



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
Fig. 4 Typical Reverse Characteristics

Note: Specifications are subject to change without notice. For more detail and update, please visit our website.