

KBP6005G THRU KBP610G

BRIDGE RECTIFIERS

REVERSE VOLTAGE - **50 to 1000** Volts

FORWARD CURRENT - **6.0** Amperes

FEATURES

- Rating to 1000V PRV
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- The plastic material has UL flammability classification 94V#0

MECHANICAL DATA

- Polarity : As marked on body
- Weight : 0.05 ounces, 1.52 grams
- Mounting position : Any

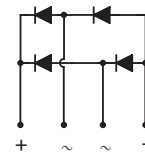
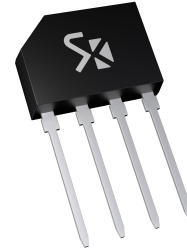
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

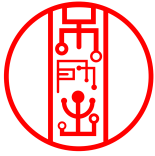
Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	KBP 6005G	KBP 601G	KBP 602G	KBP 604G	KBP 606G	KBP 608G	KBP 610G	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @TC=100°C (With heatsink) (Without heatsink)	$I_{(AV)}$	6.0 2.4							A
Peak Forward Surge Current 8.3ms single half sine-wave	I_{FSM}	150							A
Maximum Forward Voltage at 6.0A DC	V_F	1.0							V
Maximum DC Reverse Current at $T_j = 25^\circ\text{C}$ rated Blocking Voltage $T_j = 125^\circ\text{C}$	I_R	5 500							uA
I^2t Rating for fusing ($3\text{ms} \leq t \leq 8.3\text{ms}$)	I^2t	93.375							A ² S
Typical Junction Capacitance per element (Note 1)	C_j	60							pF
Typical thermal resistance (Unit mounted on 75mmx75mmx1.6mm Copper plate heat sink.)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	15 6 8							°C/W
Typical thermal resistance (without heat sink)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	40 14 20							°C/W
Operating Junction Temperature Range	T_j	-55 ~ +150							°C
Storage Temperature Range	T_{stg}	-55 ~ +150							°C

Note: (1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

KBP





KBP6005G THRU KBP610G

Fig.1 Forward Current Derating Curve

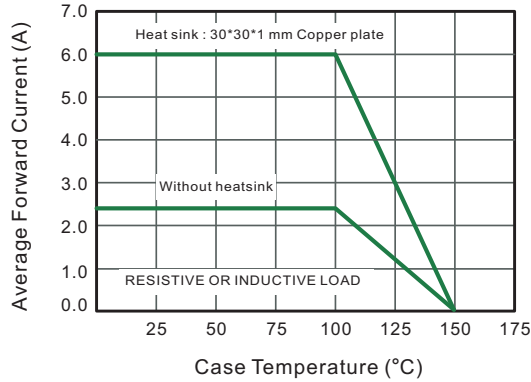


Fig.2 Typical Instantaneous Reverse Characteristics

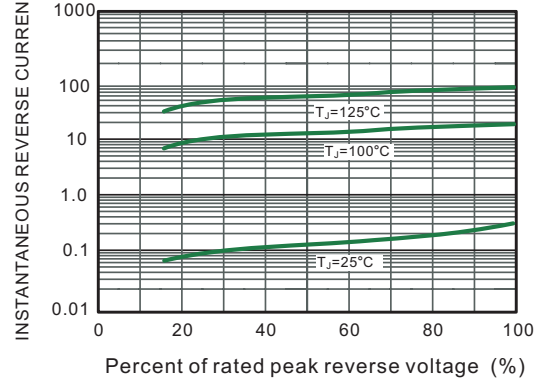


Fig.3 Typical Forward Characteristic

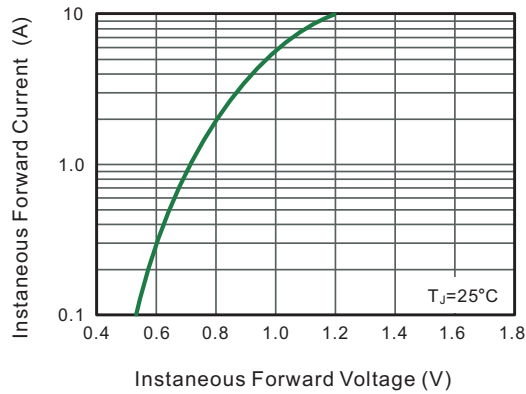


Fig.4 Typical Junction Capacitance

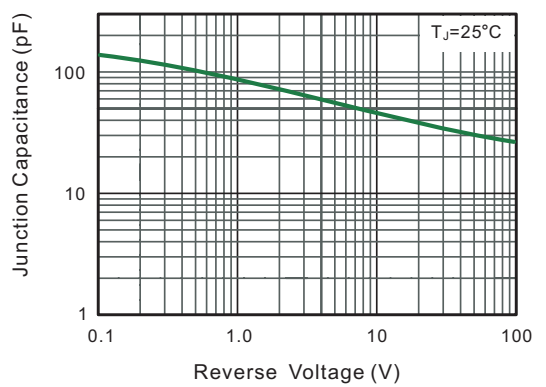


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

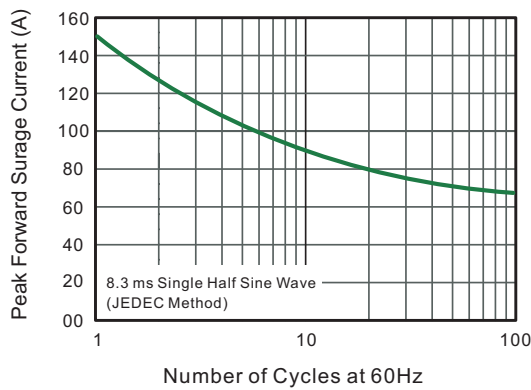
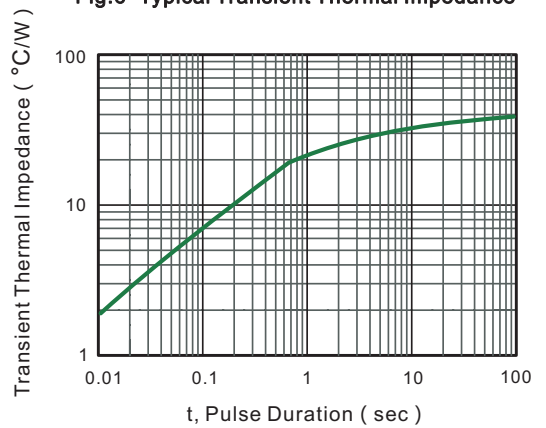


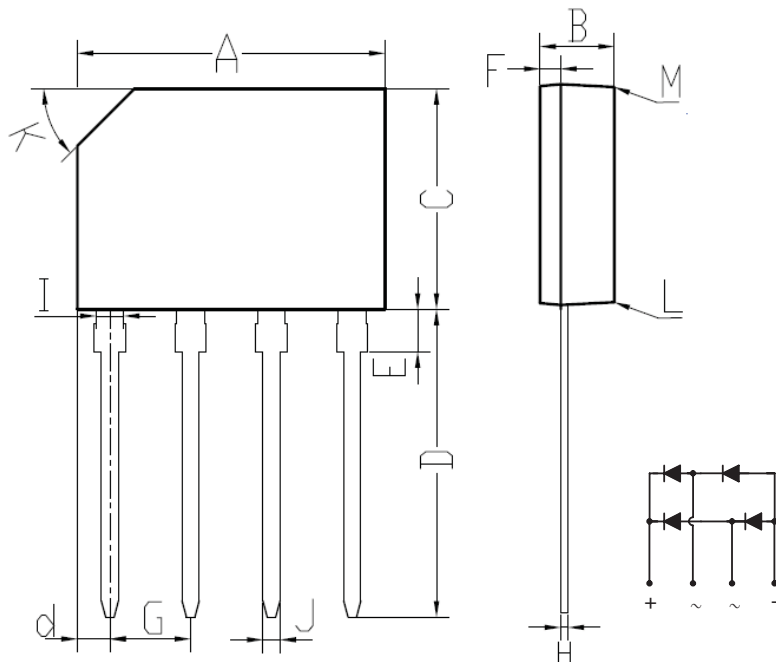
Fig.6- Typical Transient Thermal Impedance





KBP6005G THRU KBP610G

KBP Package Outline Dimensions



KBP		
DIM.	MIN.	MAX.
A	14.25	14.75
B	3.35	3.65
C	10.20	10.60
D	14.25	14.73
d	1.40	1.70
E	1.80	2.20
F	0.80	1.10
G	3.56	4.06
H	0.35	0.55
I	1.22	1.42
J	0.76	0.86
K	2.7 x 45° (Typ)	
L	#	3°
M	#	2°
All Dimensions in millimeter		