

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

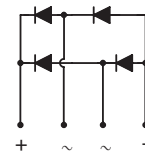
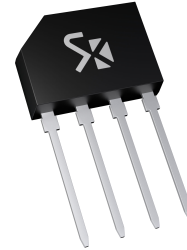
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

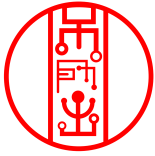
Ratings at 25°C ambient temperature unless otherwise specified.

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





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Fig.1 Forward Current Derating Curve

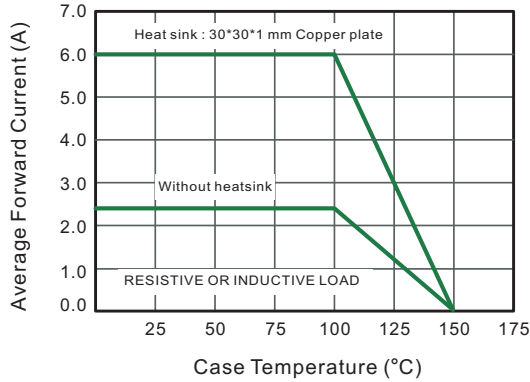


Fig.2 Typical Instantaneous Reverse Characteristics

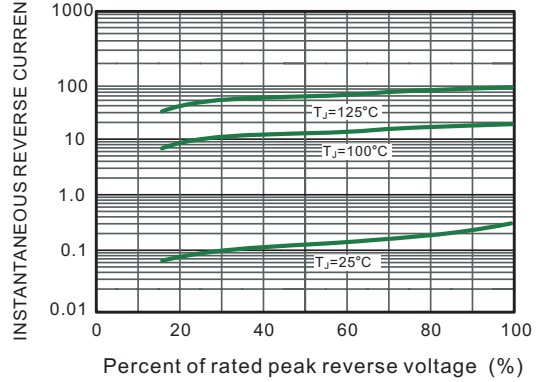


Fig.3 Typical Forward Characteristic

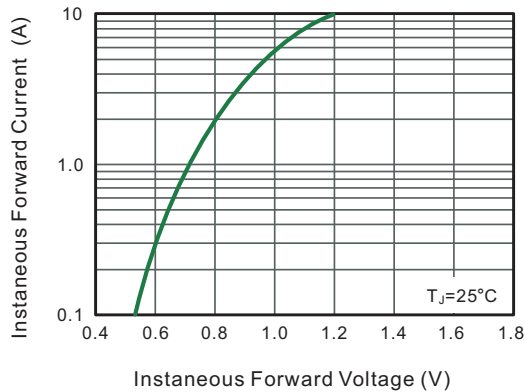


Fig.4 Typical Junction Capacitance

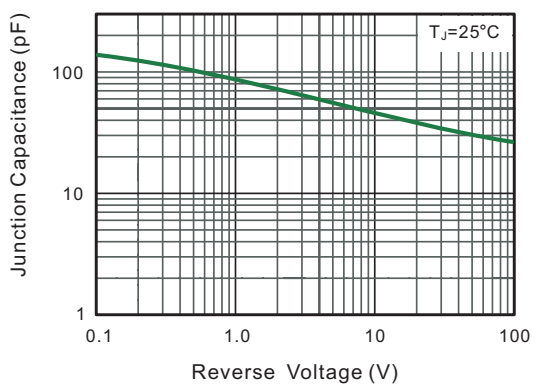


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

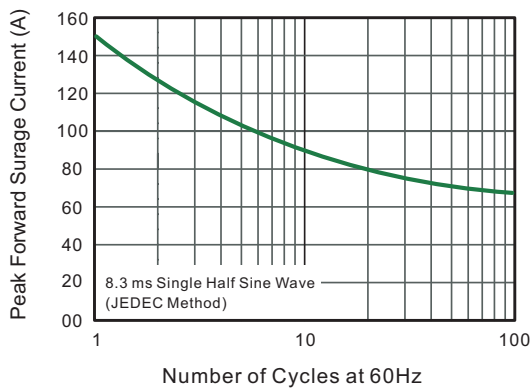
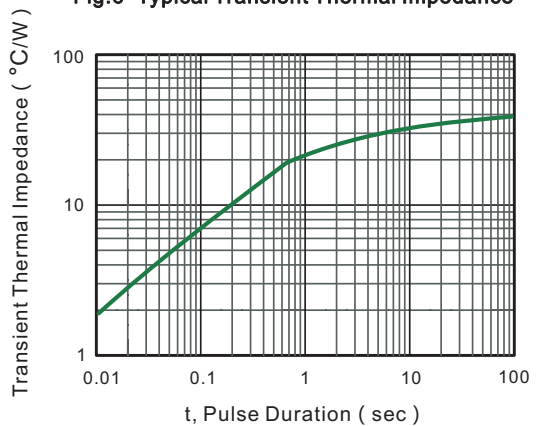
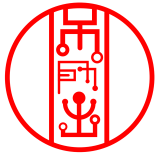


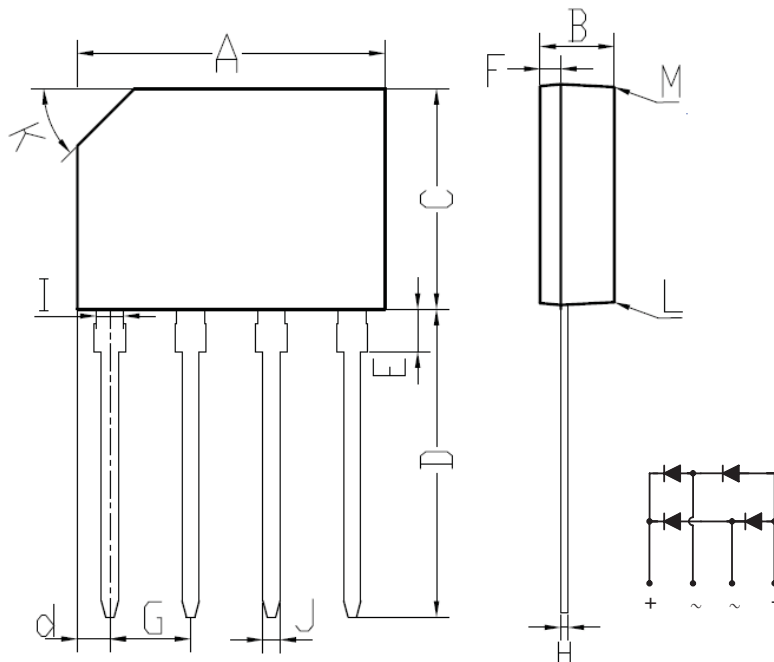
Fig.6- Typical Transient Thermal Impedance





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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		