

KBP3005-S5.5 THRU KBP310-S5.5

GLASS PASSIVATED BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 V

Forward Current - 3.0 A

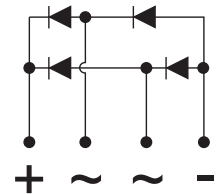
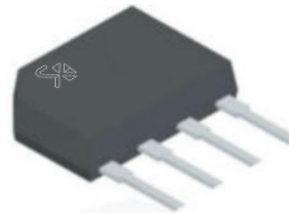
KBP-S5.5

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

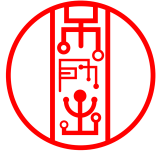


MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	KBP 3005 -S5.5	KBP 301 -S5.5	KBP 302 -S5.5	KBP 304 -S5.5	KBP 306 -S5.5	KBP 308 -S5.5	KBP 310 -S5.5	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=105°C (With heatsink) (Without heatsink)	$I_{(AV)}$	3.0 1.9							A
Peak Forward Surge Current 8.3ms single half sine-wave	I_{FSM}	55							A
Peak Forward Surge Current 1.0ms single half sine-wave	I_{FSM}	110							A
Maximum Forward Voltage at 3.0A DC	V_F	1.1							V
Maximum DC Reverse Current at $T_a = 25^\circ\text{C}$ rated Blocking Voltage $T_a = 125^\circ\text{C}$	I_R	5 500							uA
I^2t Rating for fusing (3ms $\leq t \leq$ 8.3ms)	I^2t	17.5							A ² S
Typical Junction Capacitance per element (Note 1)	C_j	60							pF
Typical thermal resistance (Unit mounted on 30mmx30mmx1mm Copper plate heat sink.)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	30 10 12							°C/W
Typical thermal resistance (without heat sink)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	40 12 18							°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.



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Fig.1 Forward Current Derating Curve

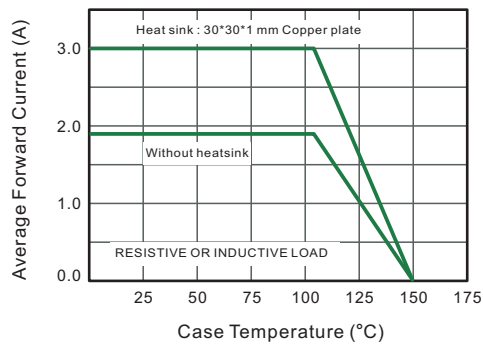


Fig.2 Typical Instantaneous Reverse Characteristics

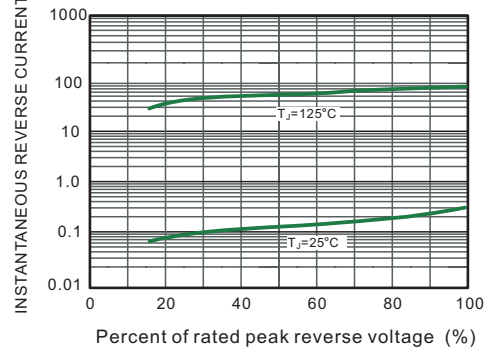


Fig.3 Typical Forward Characteristic

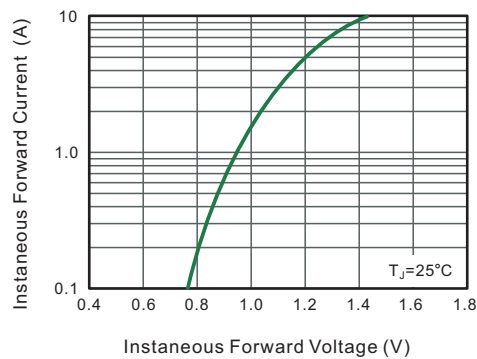


Fig.4 Typical Junction Capacitance

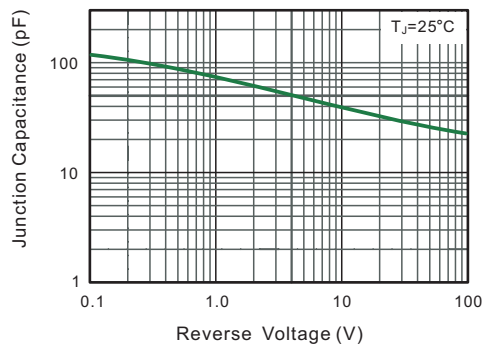


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

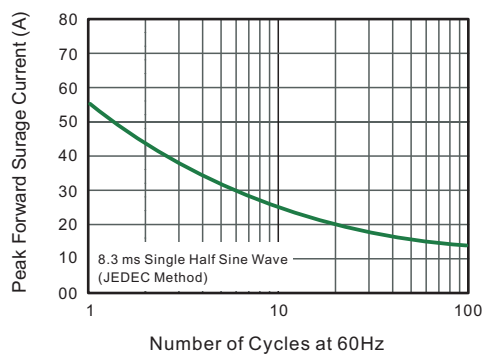
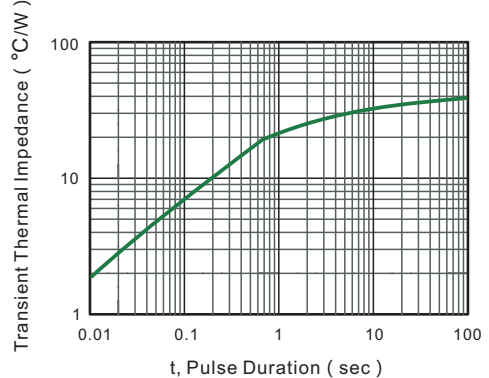
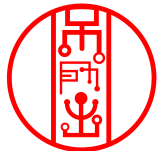


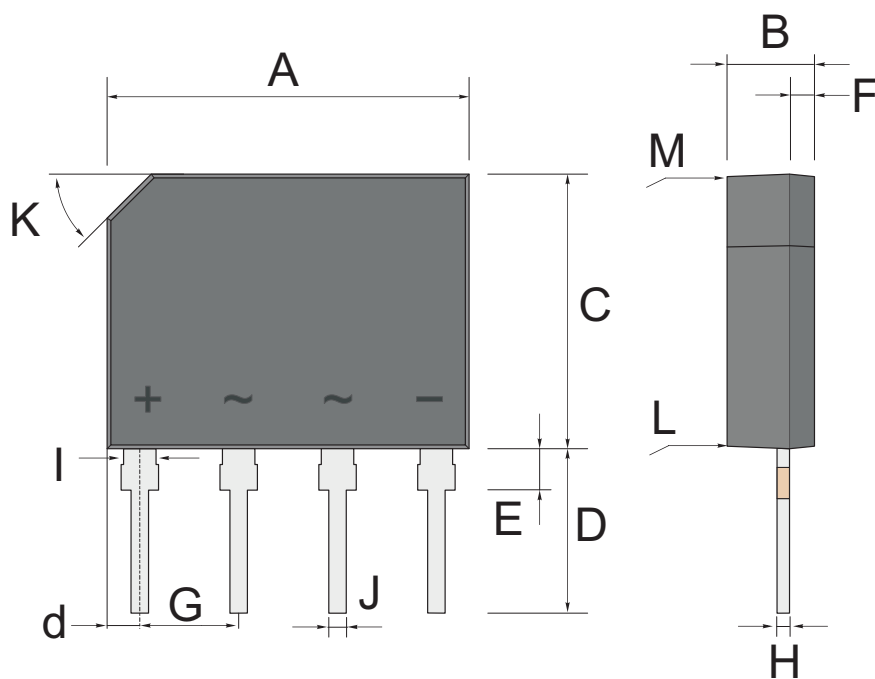
Fig.6- Typical Transient Thermal Impedance





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KBP-S5.5 Package Outline Dimensions



Unit : mm

KBP-S5.5		
DIM.	MIN.	MAX.
A	14.25	14.75
B	3.35	3.65
C	10.20	10.60
D	5.0	6.0
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	2.7X45°(typ)	
L	#	3°
M	#	2°
All dimensions in millimrter		