SAMYANG ELECTRONICS *KBP3005G --- KBP310G*

GLASS PASSIVATED BRIDGE RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 3.0 A

Features

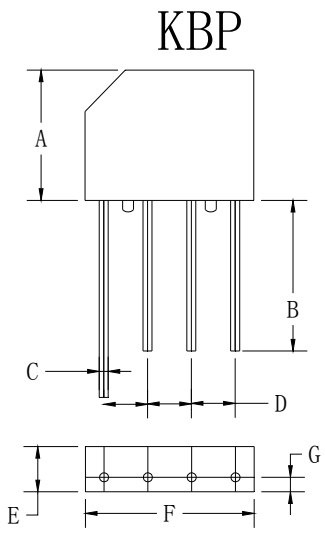
- UL recognition, file #E230084
- Ideal for printed circuit boards
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances, office equipment, industrial automation applications.

Mechanical Data

- **Package**: KBP
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body



Dimensions in millimeters

KBP		
Dim	Min	Max
A	11.0	11.6
B	12.7	/
C	0.7	0.9
D	3.6	4.1
E	3.7	3.95
F	14.4	15.0
G	1.10	1.27

■Maximum Ratings (T_a=25 Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	KBP3005	KBP301	KBP302	KBP304	KBP306	KBP308	KBP310
Device marking code			KBP3005G	KBP301G	KBP302G	KBP304G	KBP306G	KBP308G	KBP310G
Repetitive peak reverse voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, R-load, Without heatsink T_a =30℃	I_O	A	3						
Surge(non-repetitive)forward current @60HZ half-sine wave, 1 cycle, T_j=25℃	I_{FSM}	A	60						
Current squared time @1ms≤t<8.3ms T_j=25℃, rating of per diode	I^2t	A^2S	14.9						
Storage temperature	T_{stg}	℃	-55 ~+150						
Junction temperature	T_j	℃	-55 ~+150						

■Electrical Characteristics (T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	KBP3005	KBP301	KBP302	KBP304	KBP306	KBP308	KBP310
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=3.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM}	μA	V_{RM}=V_{RRM}	10						

■Thermal Characteristics (T_a=25℃ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	KBP3005	KBP301	KBP302	KBP304	KBP306	KBP308	KBP310
Thermal Resistance (1)	Between junction and ambient,	$R_{\theta J-A}$	℃/W	20						
	Between junction and lead	$R_{\theta J-L}$		11						

Notes

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.47×0.47"(12×12mm) copper pads

FIG1: Io-Ta Curve

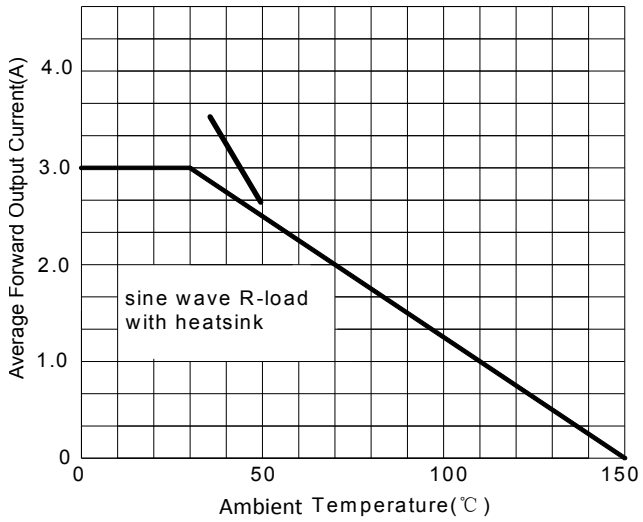


FIG2:Surge Forward Current Capability

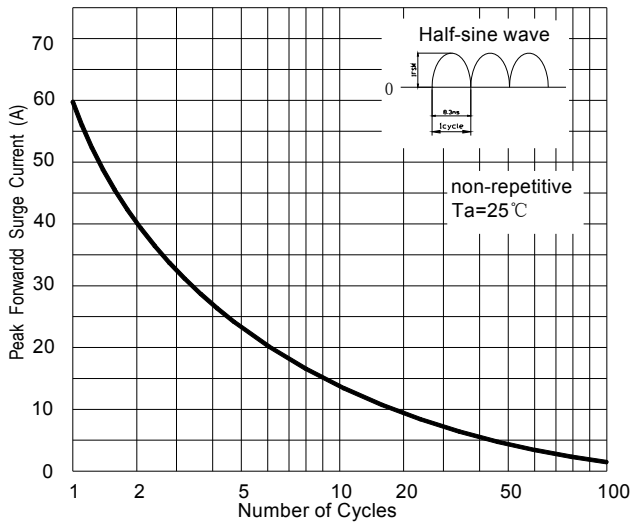


FIG3:Instantaneous Forward Voltage

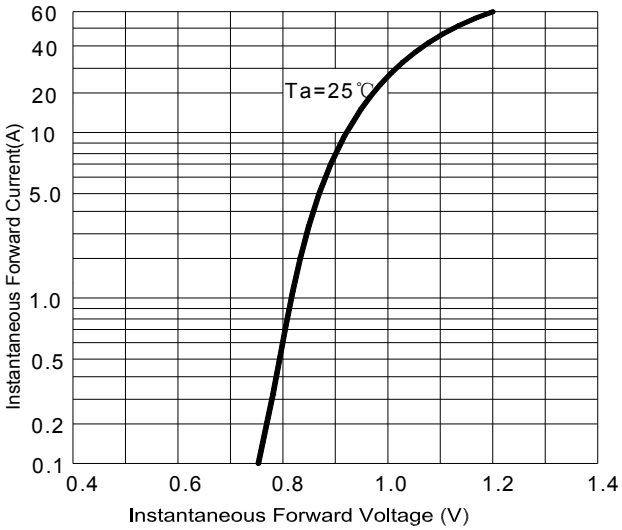


FIG4:Typical Reverse Characteristics

