4A, 400V - 1000V Glass Passivated Bridge Rectifier

FEATURES

- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

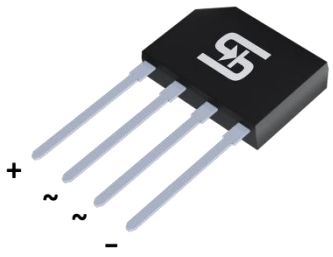
- General purpose use in AC/DC bridge full wave rectification for SMPS, especially for the space constrained appliances applications

MECHANICAL DATA

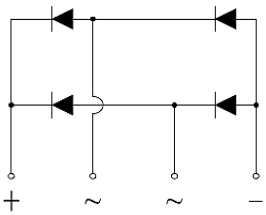
- Case: KBPF
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Polarity: As marked
- Weight: 1.4 g (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	4	A
V_{RRM}	400 - 1000	V
I_{FSM}	120	A
$T_{J\ MAX}$	150	°C
Package	KBPF	
Configuration	Quad	

Pb-Free RoHS COMPLIANT HALOGEN FREE



KBPF



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)						
PARAMETER	**SYMBOL**	**KBPF 404G**	**KBPF 405G**	**KBPF 406G**	**KBPF 407G**	**UNIT**
Marking code on the device		KBPF 404G	KBPF 405G	KBPF 406G	KBPF 407G	
Repetitive peak reverse voltage	V_{RRM}	400	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	280	420	560	700	V
Forward current	I_F	4				A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	120				A
Rating of fusing (t<8.3ms)	I^2t	60				A^2s
Junction temperature	T_J	- 55 to +150				°C
Storage temperature	T_{STG}	- 55 to +150				°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP.	UNIT
Junction-to-lead thermal resistance	$R_{\Theta JL}$	12	°C/W
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	56	°C/W
Junction-to-case thermal resistance	$R_{\Theta JC}$	13	°C/W

Thermal Performance Note: Units mounted on PCB (10mm x 10mm Cu pad test board)

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Forward voltage per diode (1)	I_F = 2A,T_J = 25°C	V_F	-	1.1	V
	I_F = 2A,T_J = 125°C		-	1.0	V
Reverse current @ rated V_R per diode (2)	T_J = 25°C	I_R	-	5	μA
	T_J= 125°C		-	200	μA
Junction capacitance	1 MHz, V_R=4.0V	C_J	39	-	pF

Notes:

1. Pulse test with PW=0.3 ms
2. Pulse test with PW=30 ms

ORDERING INFORMATION

ORDERING CODE	PACKAGE	PACKING
KBPF404G C8G	KBPF	35 / TUBE
KBPF405G C8G	KBPF	35 / TUBE
KBPF406G C8G	KBPF	35 / TUBE
KBPF407G C8G	KBPF	35 / TUBE

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

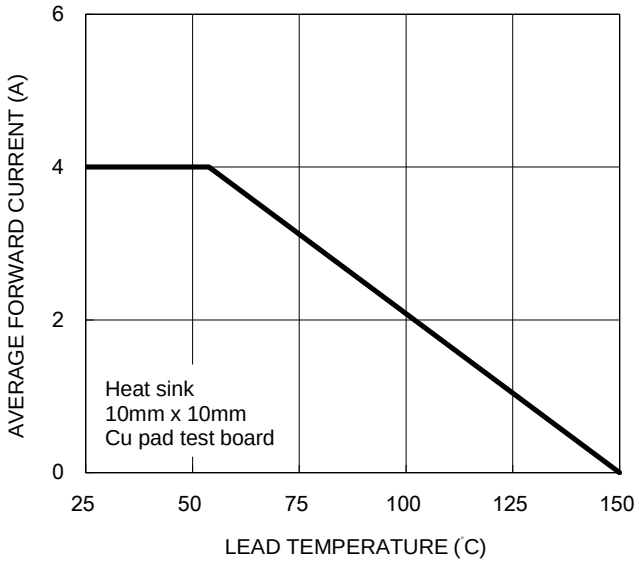


Fig.2 Typical Junction Capacitance

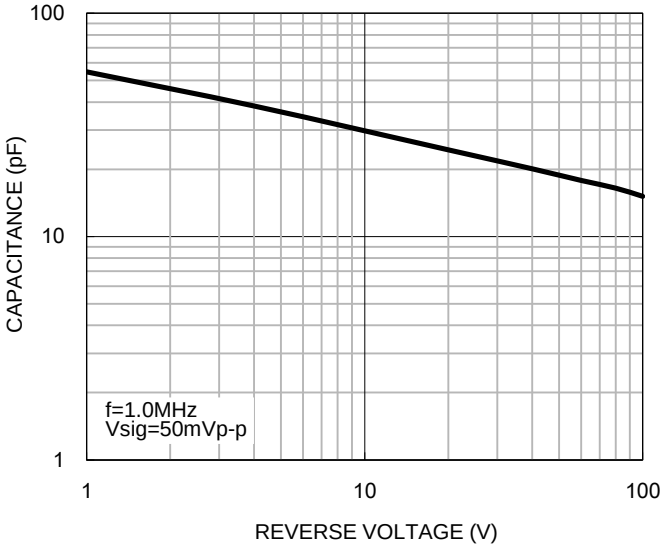


Fig.3 Typical Reverse Characteristics

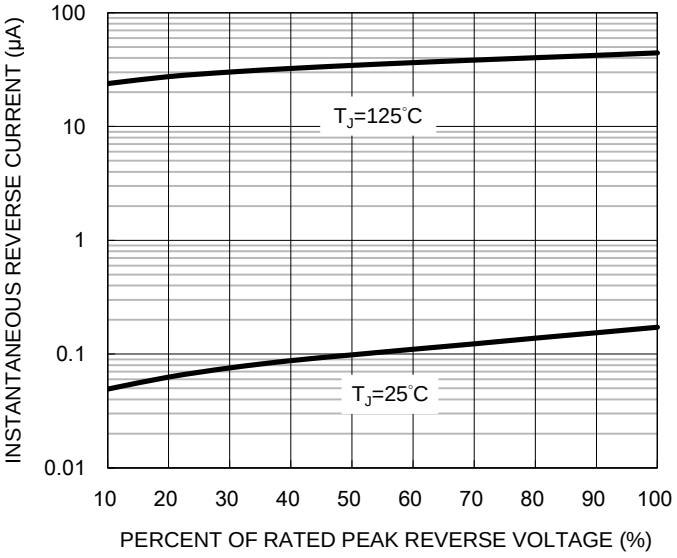
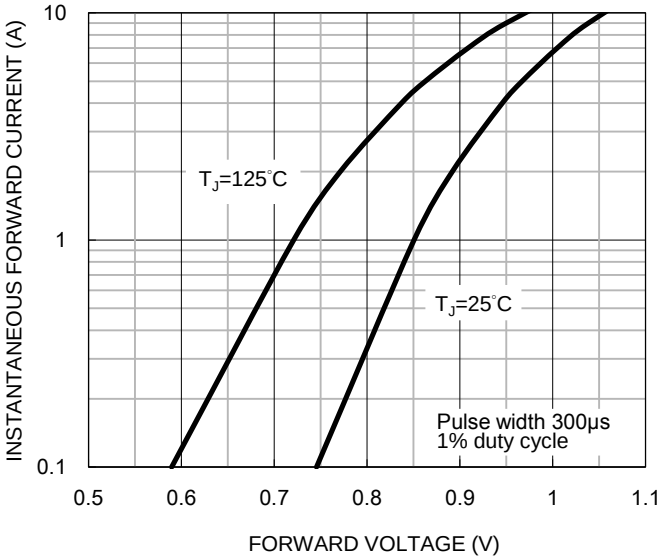
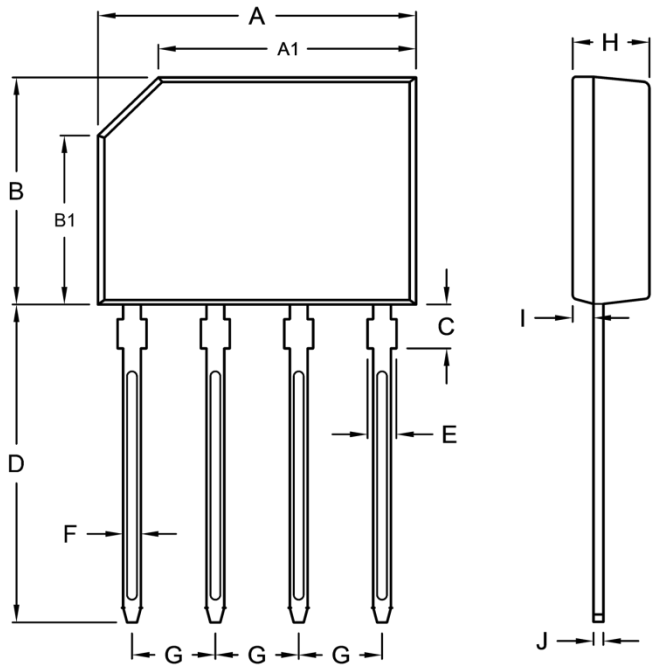


Fig.4 Typical Forward Characteristics



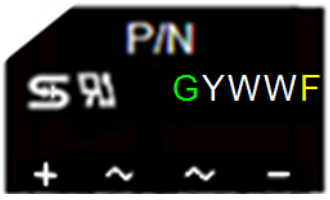
PACKAGE OUTLINE DIMENSIONS

KBPF



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	14.25	14.75	0.561	0.581
A1	11.45	12.05	0.451	0.474
B	10.10	10.60	0.398	0.417
B1	7.40	8.00	0.291	0.315
C	1.80	2.20	0.071	0.087
D	14.25	14.73	0.561	0.580
E	1.22	1.42	0.048	0.056
F	0.76	0.86	0.030	0.034
G	3.70	3.90	0.146	0.154
H	3.35	3.65	0.132	0.144
I	0.80	1.10	0.031	0.043
J	0.35	0.55	0.014	0.022

MARKING DIAGRAM



P/N = Marking Code
G =Green Compound
YWW = Date Code
F = Factory Code

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