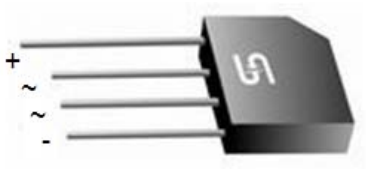
Glass Passivated Single-Phase Bridge Rectifier

FEATURES

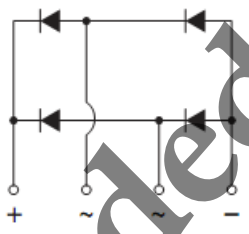
- Ideal for printed circuit board
- High case dielectric strength
- High surge current capability
- Typical IR less than 0.1uA
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



KBP

Pb-Free

RoHS COMPLIANT



MECHANICAL DATA

Case: Molded plastic body

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - halogen-free

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Polarity: Polarity as marked on the body

Weight: 1.54 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)

PARAMETER		SYMBOL	KBP 301G	KBP 302G	KBP 303G	KBP 304G	KBP 305G	KBP 306G	KBP 307G	UNIT
Maximum repetitive 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		$I_{F(AV)}$	3							A
Peak forward surge current, 8.3 ms single half sine-wave	T_J = 25℃	I_{FSM}	80							A
	T_J = 125℃		50							
Peak forward surge current, 1.0 ms single half sine-wave	T_J = 25℃	I_{FSM}	160							A
	T_J = 125℃		100							
Rating of fusing (t<8.3ms)		I^2t	26.5							A^2s
Maximum instantaneous forward voltage (Note 1) I_F= 3 A		V_F	1.1							V
Maximum reverse current @ rated VR	T_J=25 ℃	I_R	10							μA
	T_J=125 ℃		500							
Typical junction capacitance per leg (Note 2)		Cj	215							pF
Typical thermal resistance		$R_{\theta jL}$ $R_{\theta jA}$	11 30							$^OC/W$
Operating junction temperature range		T_J	- 55 to +150							^OC
Storage temperature range		T_{STG}	- 55 to +150							^OC

Note 1: Pulse test with PW=300μs, 1% duty cycle

Note 2: Measured at 1MHz and applied Reverse bias of 4.0V DC

ORDERING INFORMATION				
PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
KBP30xG (Note 1)	C2	Suffix "G"	KBP	25 / Tube

Note 1: "x" defines voltage from 50V (KBP301G) to 1000V (KBP307G)

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
KBP306G C2	KBP306G	C2		
KBP306G C2G	KBP306G	C2	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

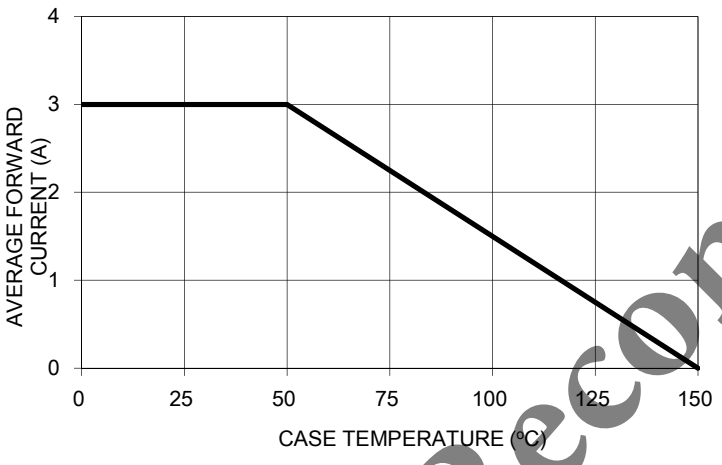


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

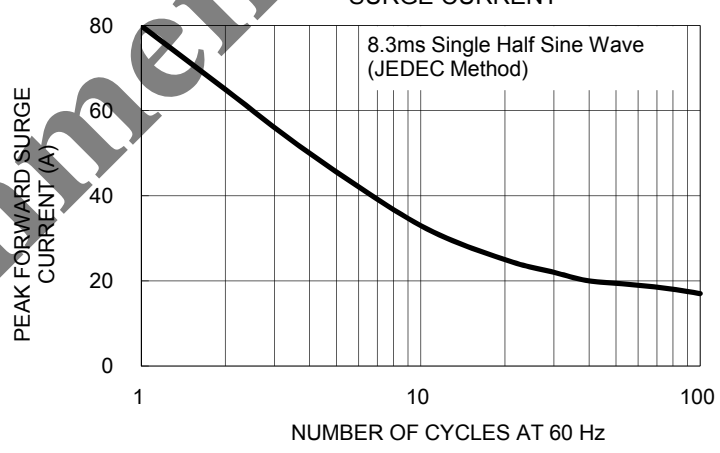


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

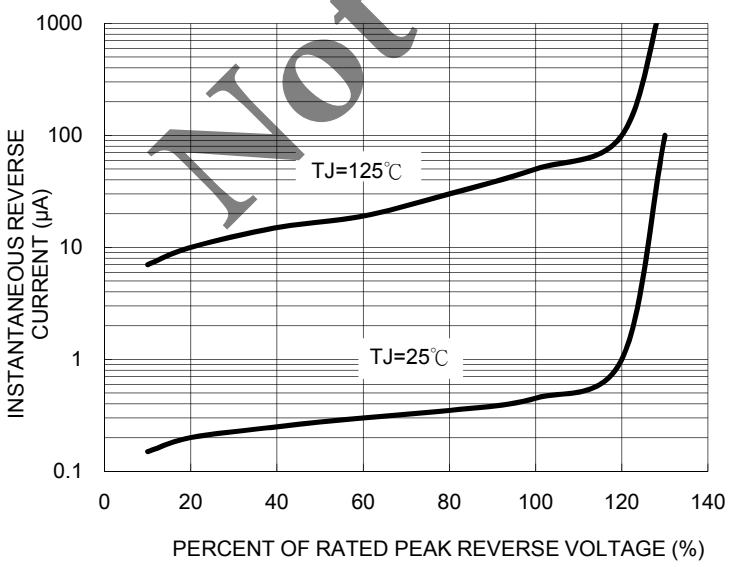


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

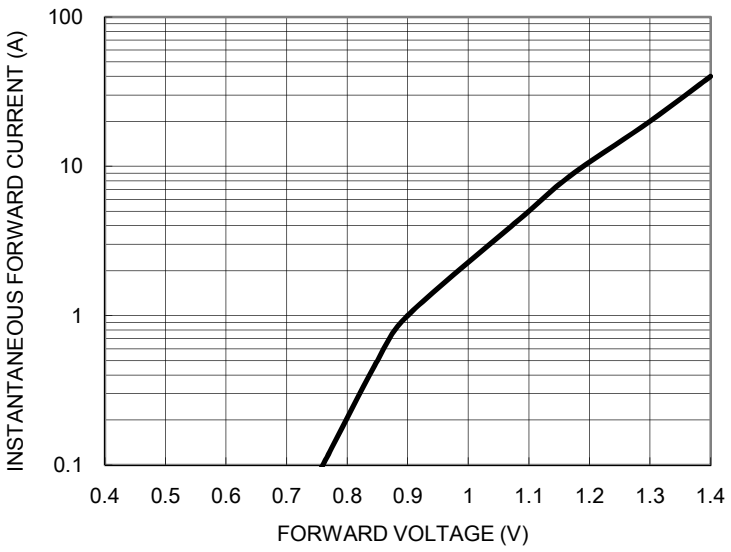
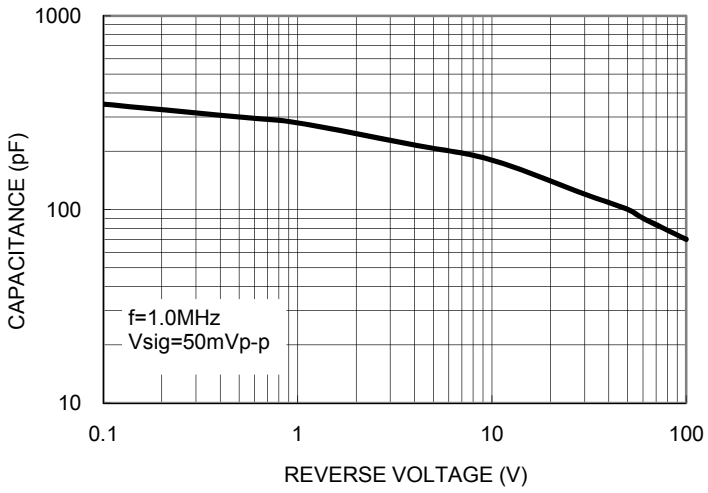
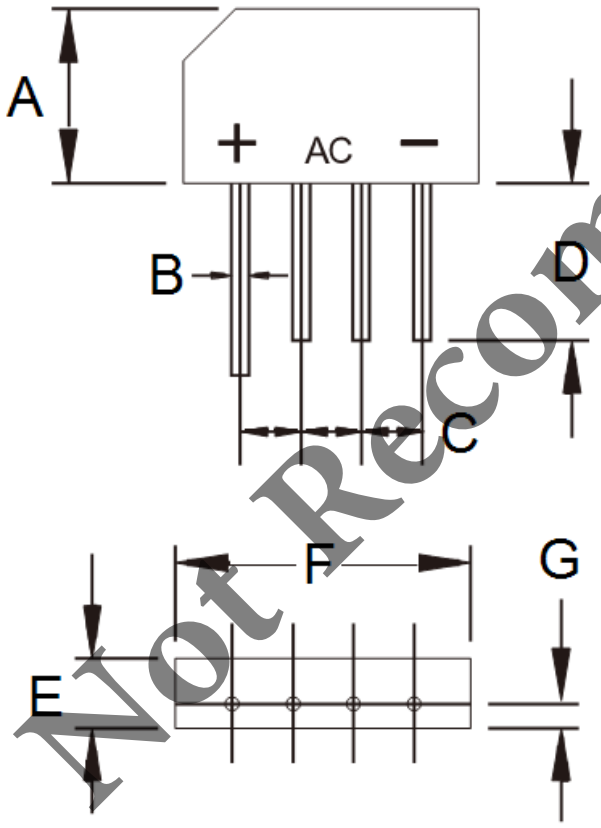


FIG. 5 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	10.60	11.68	0.417	0.460
B	0.70	0.90	0.028	0.035
C	3.60	4.10	0.142	0.161
D	12.70	-	0.500	-
E	3.70	3.90	0.146	0.154
F	14.22	15.24	0.560	0.600
G	1.27	-	0.050	-

MARKING DIAGRAM

P/N = Specific Device Code
G = Green Compound
YW = Date Code
F = Factory Code

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