10.0A Single-Phase Silicon Bridge Rectifier

1 General Description

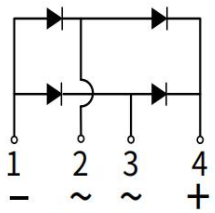
1.1 Features

- Ideal for printed circuit board mounting
- High surge current capability
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- High temperature soldering guaranteed 260 ℃ /5 seconds at 5 lbs (2.3kg) tension

REVERSE VOLTAGE
50-1000V
FORWARD CURRENT
10Amperes

1.2 Typical Applications

- General-purpose bridge rectifiers, Rectification for SMPS, PD fast chargers, small household appliance control boards, and other bridge rectification applications.



1.3 Mechanical Data

- Case: Reliable low cost construction utilizing molded plastic technique
- Terminals: Plated leads solderable per MIL-STD-202, Method 208
- Polarity: Polarity symbols molded on body
- Mounting Position: Any
- Mounting Torque: 5 in-lbs max

2 Maximum Ratings(TA=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	KBU10005	KBU1001	KBU1002	KBU1004	KBU1006	KBU1008	KBU1010	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Bridge Input 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 Output Current Tc=100℃	$I_{F(AV)}$	10.0							A
Peak Forward Surge Current Single Sine-Wave Superimposed On Rated Load (JEDEC Method)	I_{FSM}	200							A
Rating for fusing (t<8.3ms)	I^2t	166							A^2sec
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +150							℃
Typical Thermal Resistance per leg (Note1)	$R_{\theta JC}$	4.2							℃/W

Notes:1.Thermal resistance from Junction to Ambemt on P.C.board mounting.

2.Resistive or Inductive load, 60 Hz.For Capacitive load derate by 20 %.

3 Electrical Characteristics(TA=25℃ Unless otherwise specified)

PARAMETER		SYMBOL	KBU10005	KBU1001	KBU1002	KBU1004	KBU1006	KBU1008	KBU1010	UNIT
Maximum instantaneous Forward Voltage drop per leg at 5.0A		V_F	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_A=25℃	I_R	10							μA
	T_A=125℃		500							

4 Characteristics Curves(TA=25℃ Unless otherwise specified)

Fig. 1 Derating Curve for Output Rectified Current

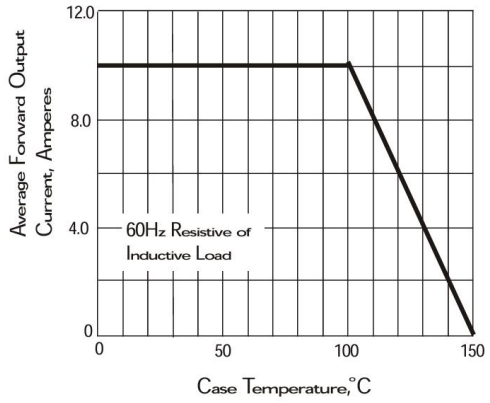


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

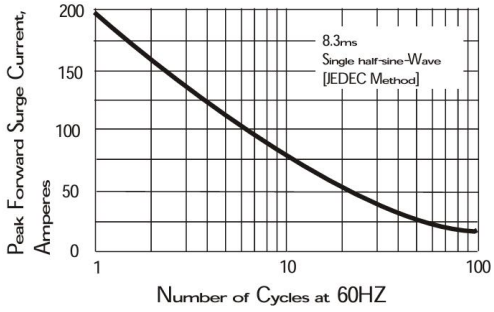


Fig. 3 Typical Instantaneous Forward Characteristics

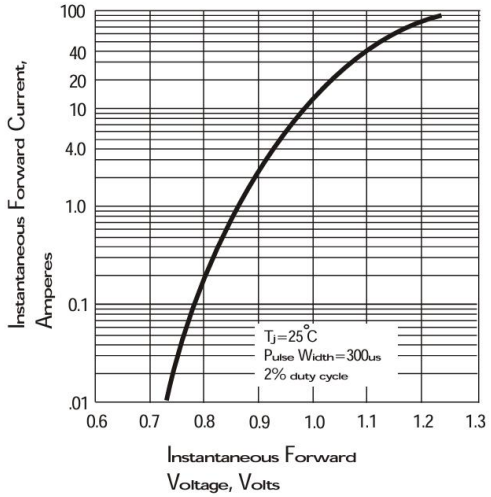


Fig. 4 Typical Reverse Characteristics

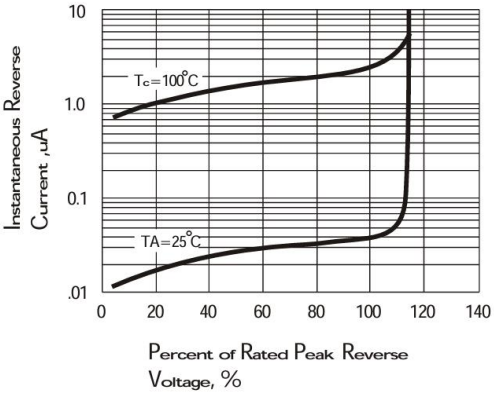
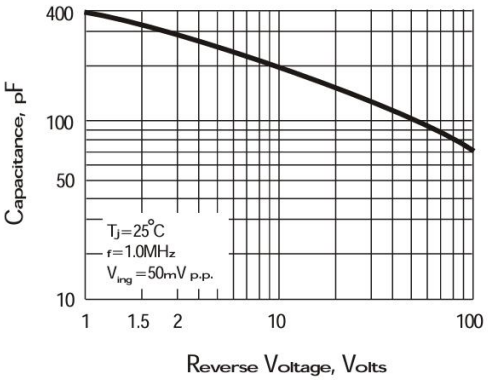
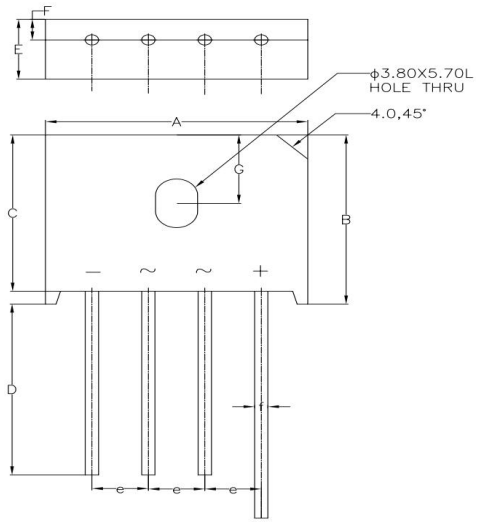


Fig. 5 Typical Junction Capacitance



5 Package Outline Dimensions



Dimensions in millimeters

Symbol	UNIT(mm)	
	Min	Max
A	22.70	23.70
B	18.30	19.30
C	17.30	18.30
D	20.00	/
E	6.50	7.00
F	2.00	2.60
G	7.50	8.20
e	4.60	5.60
f	1.20	1.30

6 Ordering Information

PACKAGE	UNIT WEIGHT (g)	BOX (pcs)	CARTON (pcs)
KBU	Approximate 8.0	400	2400

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