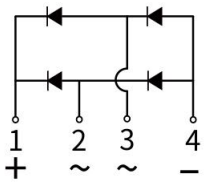
10.0A Single-Phase Silicon Bridge Rectifier

1 General Description

1.1 Features

- Ideal for printed circuit board mounting
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Built-in printed circuit board stand-offs
- High case dielectric strength
- 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
- Mounting Position: Any

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

PARAMETER		SYMBOL	KBJ10005	KBJ1001	KBJ1002	KBJ1004	KBJ1006	KBJ1008	KBJ1010	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 at T_C=100℃	(with heatsink Note3)	$I_{F(AV)}$	10.0							A
	(without heatsink)		2.5							A
Peak Forward Surge Current Single Sine-Wave Superimposed On Rated Load (JEDEC Method)		I_{FSM}	200							A
Operating Temperature Range		T_J	-55 to +150							℃
Storage Temperature Range		T_{STG}	-55 to +150							℃
Typical Thermal Resistance (Note3)		$R_{\theta JC}$	2.3							℃/W

Notes:1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Resistive or Inductive load, 60 Hz.For Capacitive load derate by 20 %.
3. Device mounted on 300mm*300mm*1.6mm cu plate heatsink.

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

PARAMETER		SYMBOL	KBJ10005	KBJ1001	KBJ1002	KBJ1004	KBJ1006	KBJ1008	KBJ1010	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_J=25℃	I_R	10							μA
	T_J=125℃		500							

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

FIG.1-FORWARD CURRENT DERATING CURVE

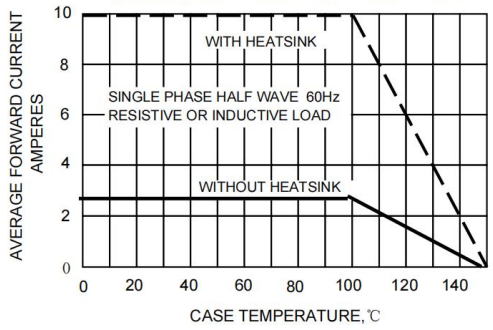


FIG.2-MAXMUN NON-REPETITIVE SURGE CURRENT

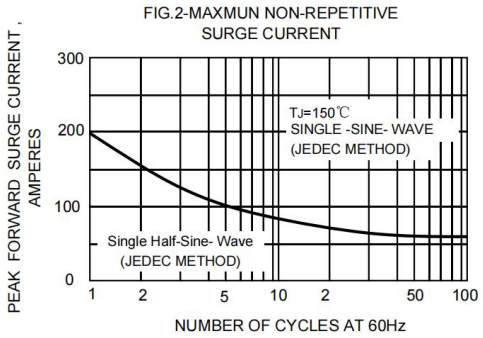


FIG.3-TYPICAL JUNCTION CAPACITANCE

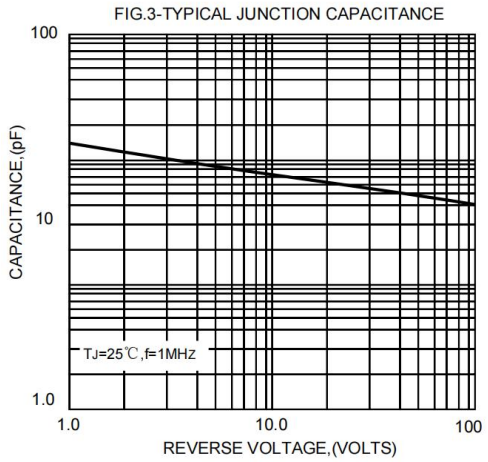


FIG.4-TYPICAL FORWARD CHARACTERISTICS

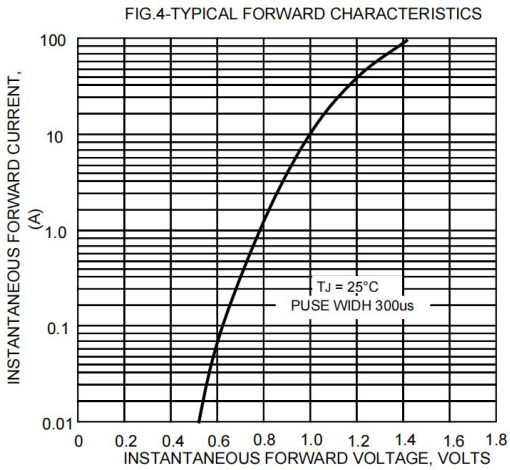
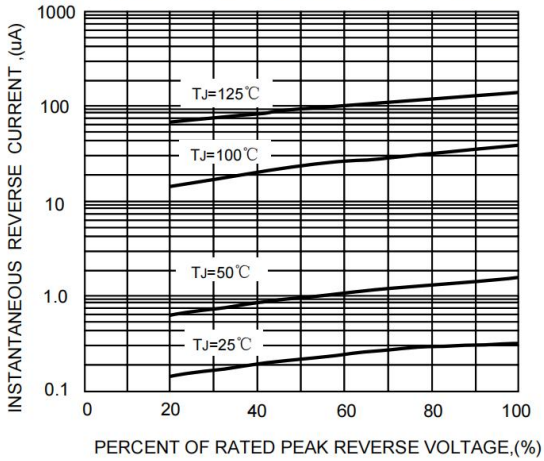
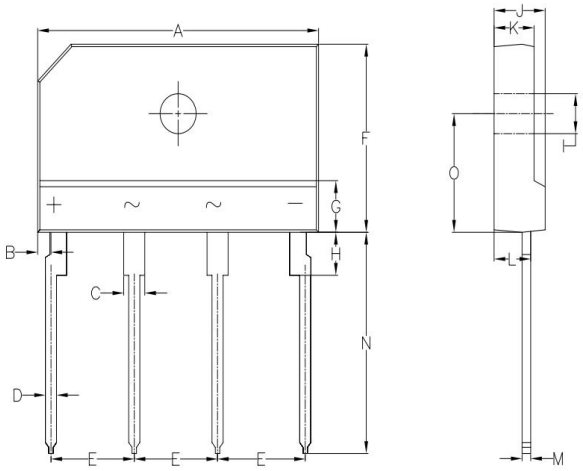


FIG.5-TYPICAL REVERSE CHARACTERISTICS



5 Package Outline Dimensions



Dimensions in millimeters

Symbol	UNIT(mm)	
	Min	Max
A	24.70	25.30
B	1.05	1.45
C	1.50	1.90
D	0.90	1.10
E	7.30	7.70
F	14.70	15.30
G	3.80	4.20
H	3.30	3.80
I	3.10	3.40
J	4.40	4.80
K	3.40	3.80
L	2.50	2.90
M	0.40	0.60
N	17.00	18.00
O	9.30	9.70

6 Ordering Information

PACKAGE	UNIT WEIGHT (g)	BOX (pcs)	CARTON (pcs)
KBJ	Approximate 4.1	250	2500

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