KBP2005K THRU KBP210K

SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts   Forward Current - 2.0 Amperes

KBP-K

0.581(14.75)
0.561(14.25)

0.043(1.1)
0.031(0.8)

0.144(3.65)
0.132(3.35)

0.417(10.6)
0.402(10.2)

0.087(2.2)
0.071(1.8)

0.056(1.42)
0.048(1.22)

0.583(14.8)
0.563(14.3)

0.022(0.55)
0.012(0.3)

0.16(4.06)
0.14(3.56)

0.034(0.86)
0.03(0.76)

Dimensions in inches and (millimeters)

### FEATURES

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-O

MECHANICAL DATA

Case: KBP-K Molded plastic body
Terminals: Plated leads solderable per
MIL-STD-202, Method 208
Polarity: As marked on case
Mounting Position: Any
Marking : Type number

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

MDD Catalog Number	SYMBOLS	KBP 2005K	KBP 201K	KBP 202K	KBP 204K	KBP 206K	KBP 208K	KBP 210K	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS
Maximum average forward output rectified current at T_A=50℃(Note 1)	$I_{(AV)}$	2.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50.0							Amps
Forward voltage per element @IF=2.0A	V_F	1.1							Volts
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage T_A=125℃	I_R	5.0							µA
		0.5							mA
Typical Thermal Resistance per leg(Note 2)	$R_{θJA}$	25							°C/W
	$R_{θJL}$	8							
Operating junction temperature range	T_J, T_{STG}	-55 to +150							°C

Note:1. Mounted on glass epoxy PC board with 1.3mm^2 solder pad.
    2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C..

RATINGS AND CHARACTERISTIC CURVES KBP2005K THRU KBP210K

Fig. 1 Forward Current Derating Curve
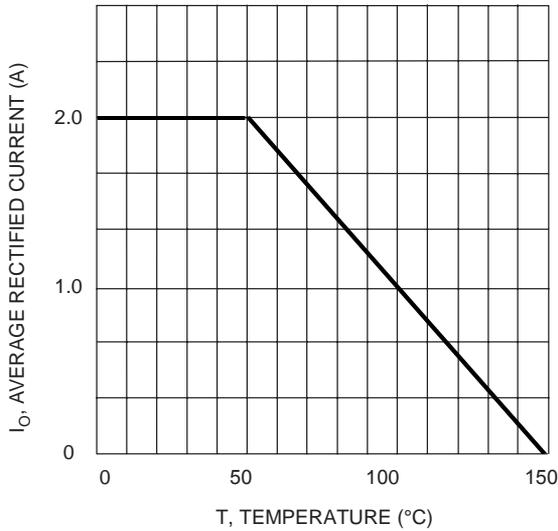
Fig. 2 Typical Fwd Characteristics

$T_A = 25°C$

Pulse Width = 300 μs

I_O, AVERAGE RECTIFIED CURRENT (A)

T, TEMPERATURE (°C)

I_F, INSTANTANEOUS FWD CURRENT (A)

V_F, INSTANTANEOUS FWD VOLTAGE(V)
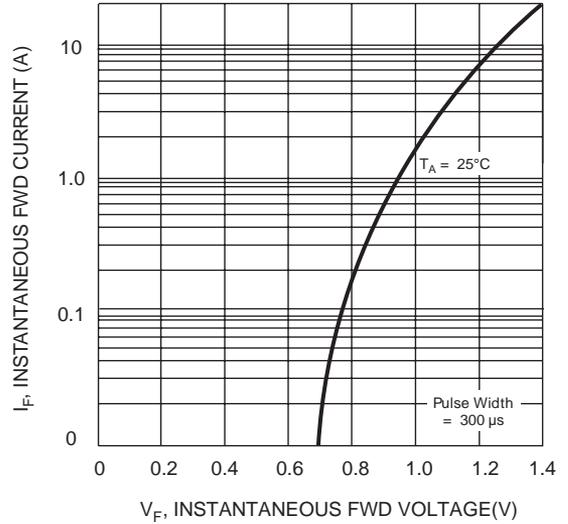
Fig. 3 Max Non-Repetitive Peak Fwd Surge Current
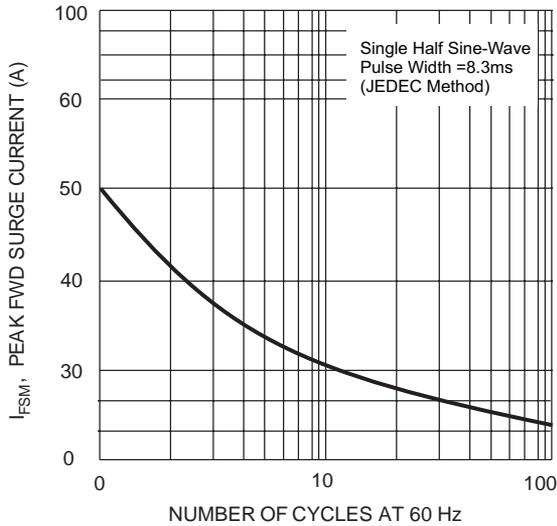
Fig. 4 Typical Junction Capacitance

Single Half Sine-Wave
Pulse Width =8.3ms
(JEDEC Method)

$T_J = 25°C$
f = 1MHz

I_{FSM}, PEAK FWD SURGE CURRENT (A)

NUMBER OF CYCLES AT 60 Hz

C_J, JUNCTION CAPACITANCE (pF)

V_R, REVERSE VOLTAGE (V)
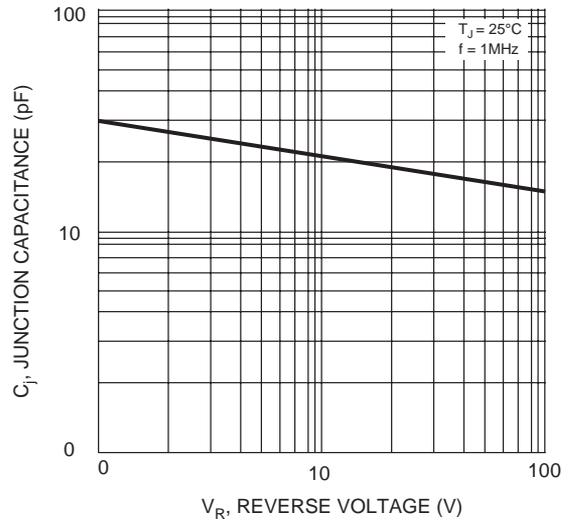
The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!