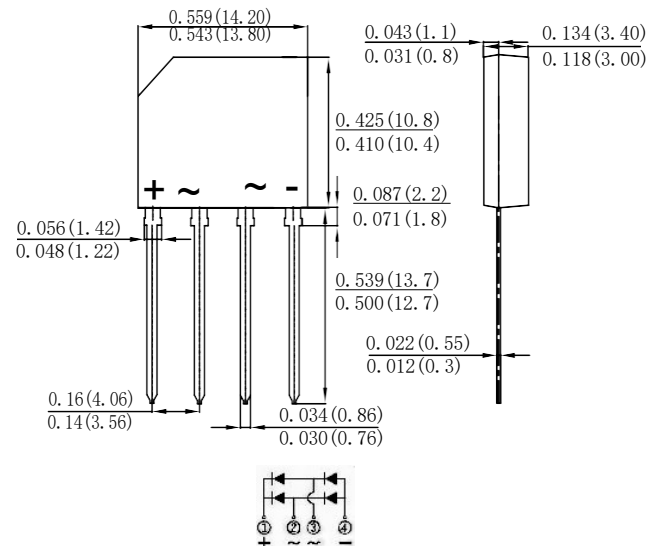


SINGLE BRIDGE RECTIFIERS

Features

- ◆ Glass Passivated Chip Junction
- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260° C/10 seconds

KBP



Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	KBP3005	KBP301	KBP302	KBP304	KBP307	KBP308	KBP310	UNITS
Marking Code									
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 output rectified current at Tc=100°C	I _(AV)	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	60							A
Maximum instantaneous forward voltage drop per birdge element at 3.0A	V _F	1.1							V
Maximum DC reverse current T _A =25°C	I _R	10							μA
at rated DC blocking voltage T _A =125°C		1							mA
I ² t Rating for fusing (3ms≤t ≤8.3ms)	I ² t	14.91							A ² S
Typical Junction Capacitance per element (Note 1)	C _J	40							pF
Typical Thermal Resistance (Note 2)	R _{θJA}	55							°C/W
	R _{θJC}	10							
	R _{θJL}	18							
Operating junction temperature range	T _J	-55 to +150							°C
Storage temperature range	T _{STG}	-55 to +150							°C

Note: (1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

(2) Thermal Resistance Junction to Case, Lead and Ambient.

Ratings And Characteristic Curves

Fig. 1 Derating Curve for Output Rectified Current

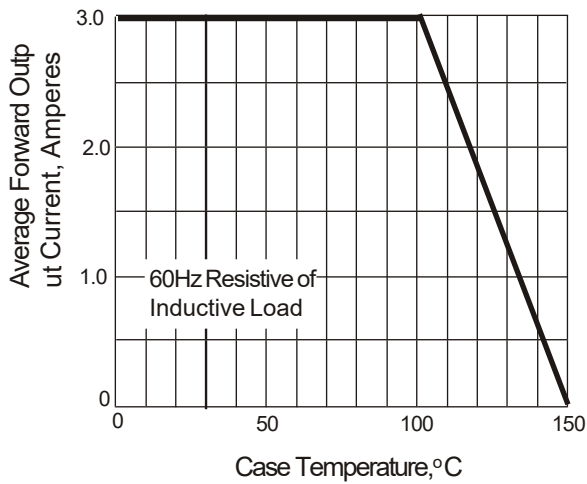


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

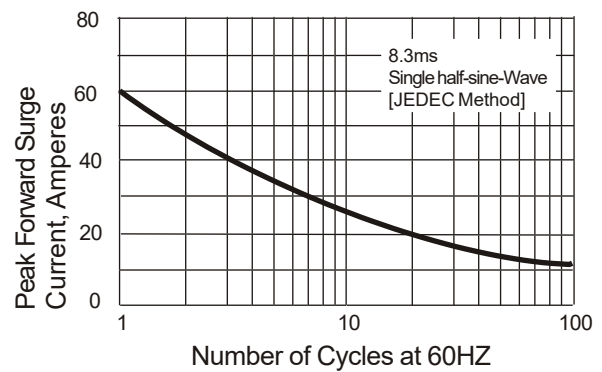


Fig. 3 Typical Instantaneous Forward Characteristics

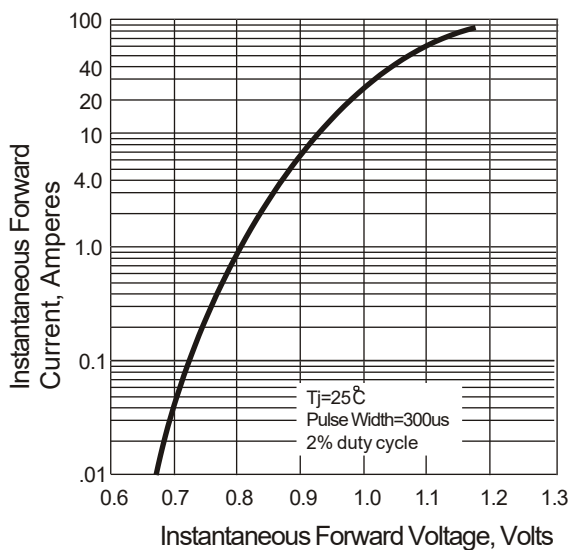


Fig. 4 Typical Reverse Characteristics

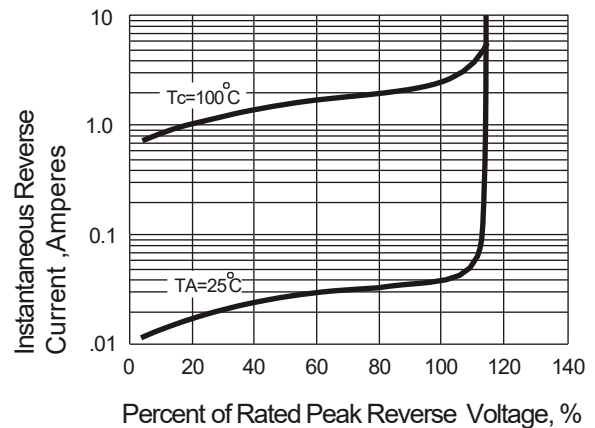
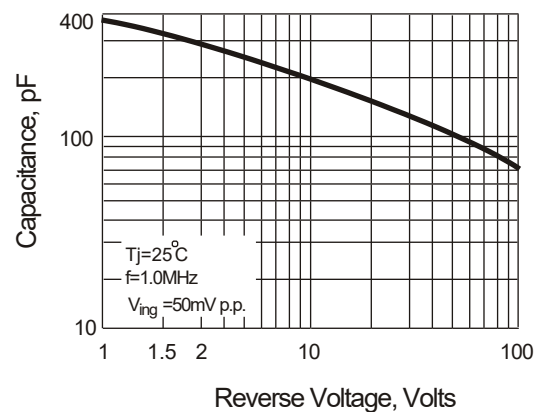


Fig. 5 Typical Junction Capacitance



The curve above is for reference only.