

SINGLE BRIDGE RECTIFIERS

Features

- ◆ Glass Passivated Chip Junction
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High surge current capability
- ◆ The Plastic material-has UL flammability 94V-0

Mechanical Data

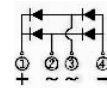
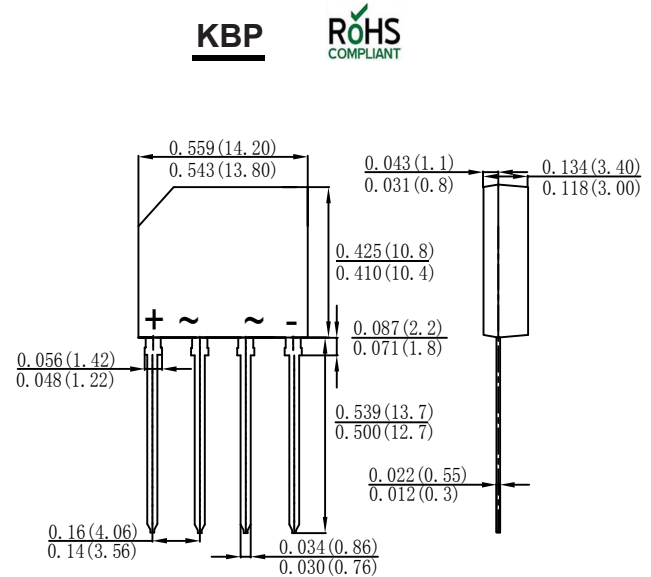
Case : JEDEC KBP Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.050 ounce, 1.52 grams



Dimensions in inches and (millimeters)

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	MDD KBP4005	MDD KBP401	MDD KBP402	MDD KBP404	MDD KBP406	MDD KBP408	MDD KBP410	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 (With heatsink) rectified current at Tc=100°C (Without heatsink)	I _{AV}	4.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	90							A
Maximum instantaneous forward voltage drop per birdge element at 4.0A	V _F	1.1							V
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =125°C	I _R	10							µA
		1							mA
I ² t Rating for fusing (3ms≤t ≤8.3ms)	I ² t	35							A ² S
Typical Junction Capacitance per element (Note 2)	C _J	50							pF
Typical Thermal Resistance (Note 2)	R _{θJA}	55							°C/W
	R _{θJC}	14							
	R _{θJL}	20							
Operating junction temperature range	T _J	-55 to +150							°C
Storage temperature range	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 DC.

Ratings And Characteristic Curves

Fig. 1 Derating Curve for Output Rectified Current

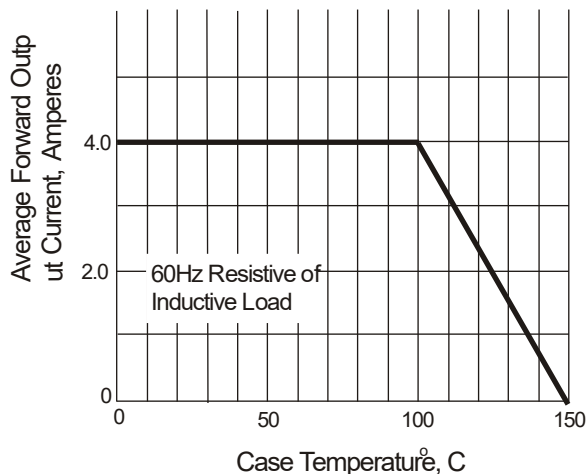


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

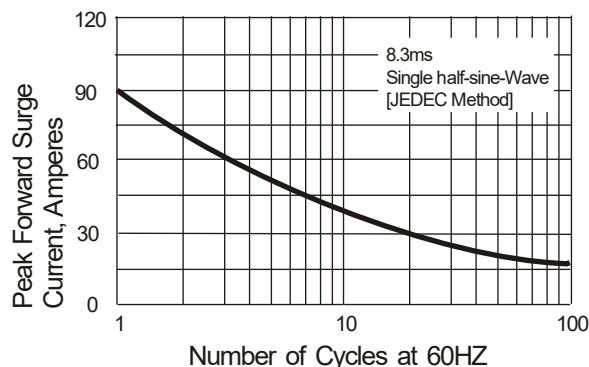


Fig. 3 Typical Instantaneous Forward Characteristics

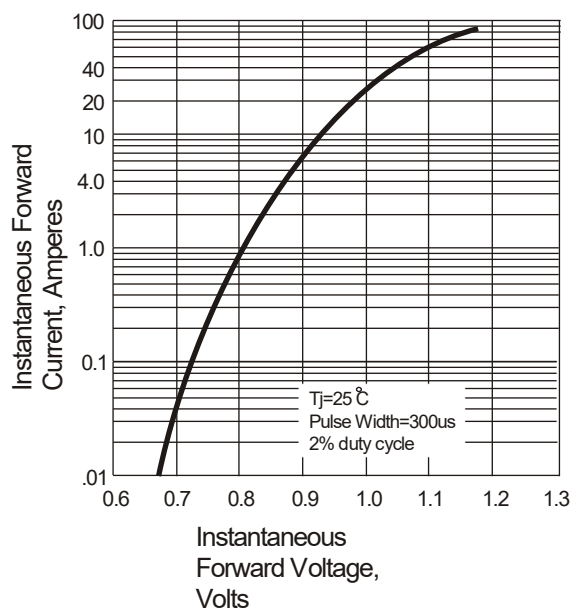


Fig. 4 Typical Reverse Characteristics

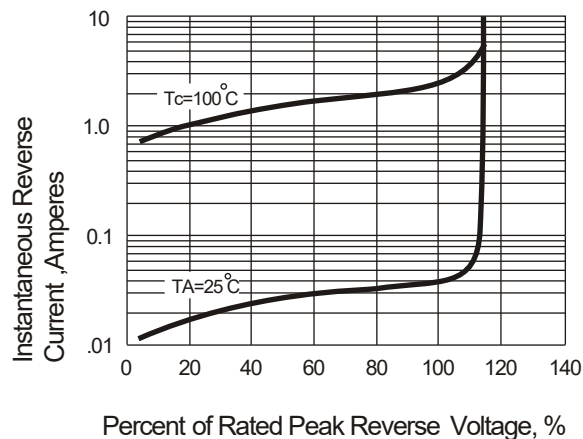
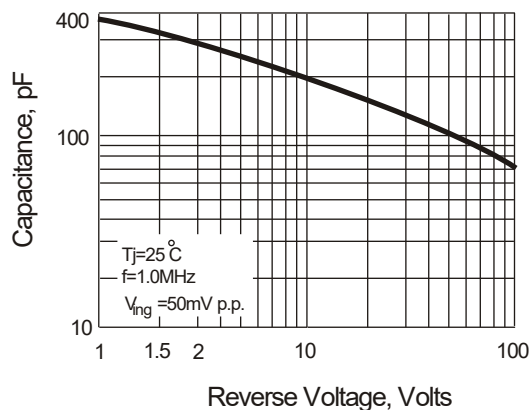


Fig. 5 Typical Junction Capacitance



The curve above is for reference only.