



KBL4005 - KBL410(3.5-4MM)

Single Phase 4.0Amp Glass passivated Bridge Rectifiers

KBL

RoHS
COMPLIANT

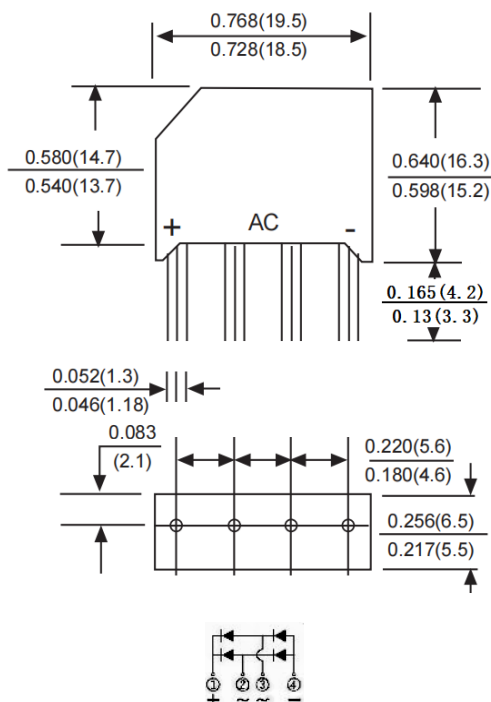


Features

- 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, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

Mechanical data

- **Case** : JEDEC KBL Molded plastic body
- **Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity** : Polarity symbol marking on body
- **Mounting Position** : Any
- **Weight** : 0.22 ounce , 6.21 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	KBL4005	KBL401	KBL402	KBL404	KBL406	KBL408	KBL410	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 $T_c=50^\circ\text{C}$ (Note 2) $T_A=50^\circ\text{C}$ (Note 3)	I_{AV}					4.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}					125			A
Rating for Fusing($t<8.3\text{ms}$)	I^2t					166			A^2s
Maximum instantaneous forward voltage drop per bridge element at 4.0A	V_F					1.0			V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R					10			μA
						1.0			mA
Typical Junction Capacitance (Note 1)	C_J					105			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$					20			$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J					-65 to +150			$^\circ\text{C}$
storage temperature range	T_{STG}					-55 to +150			$^\circ\text{C}$

NOTES:

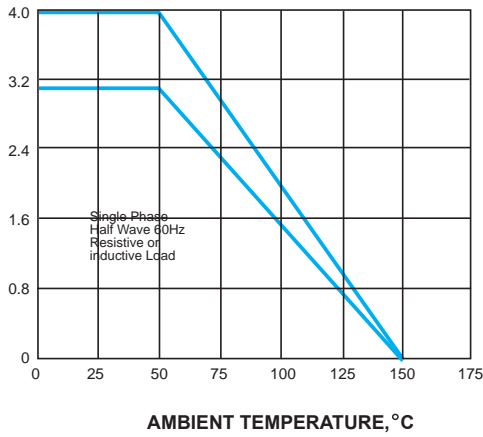
1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Unit mounted on 3.0" x 3.0" x 0.11" thick (7.5x7.5x0.3cm) Al. plate.
3. P.C. Board mounted with 0.5" x 0.5" (12x12mm) copper pads, 0.375" (9.5mm) lead length.



Rating and characteristic curves

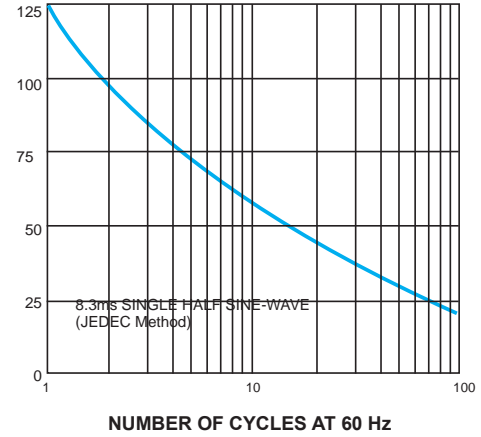
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



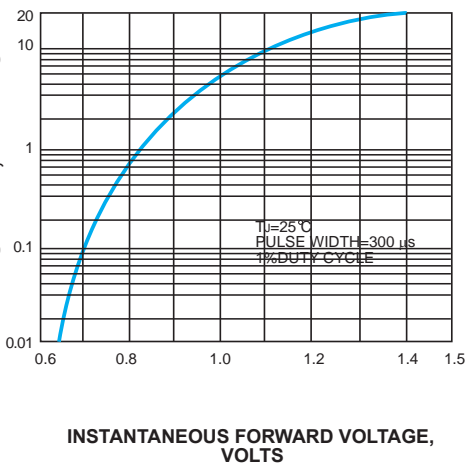
PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



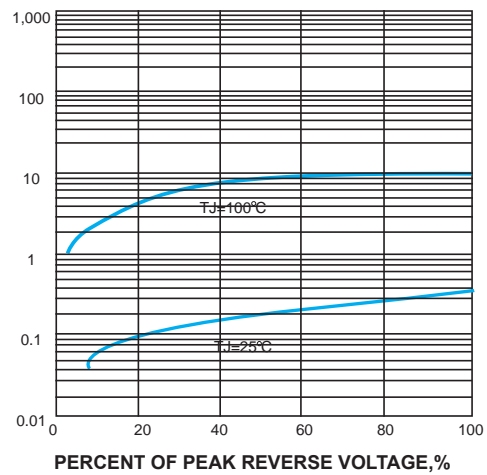
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



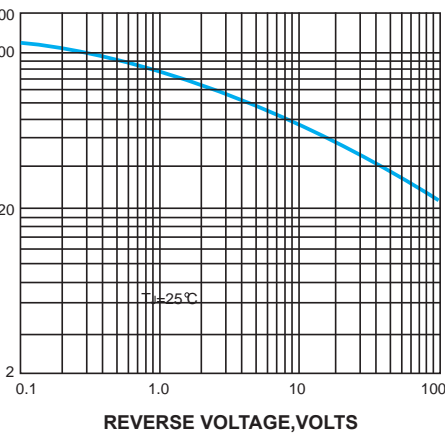
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

