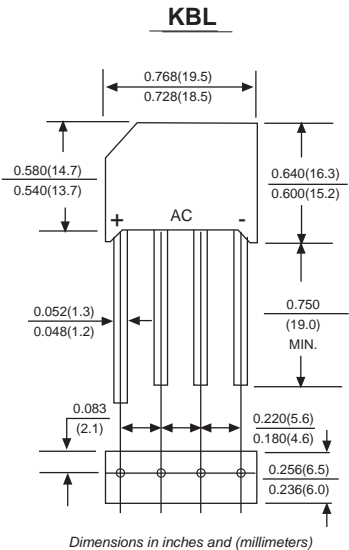




KBL6005 THRU KBL610

SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 6.0 Amperes



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: Molded plastic body
Terminals: Plated leads solderable per MIL-STD-750, Method 2026
Polarity: Polarity symbols marked on case
Mounting Position: Any
Weight: 0.22 ounce, 6.21 grams

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%.

TWGMC Catalog Number	SYMBOLS	KBL 6005	KBL 601	KBL 602	KBL 604	KBL 606	KBL 608	KBL 610	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 $T_c=50^\circ\text{C}$ (Note 2) $T_A=50^\circ\text{C}$ (Note 3)	I_{AV}	6.0 3.8						Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	125						Amps	
Maximum instantaneous forward voltage drop per bridge element at 6.0A	V_F	1.1						Volts	
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	-55 to +150						$^\circ\text{C}$	
storage temperature range	T_{STG}	-55 to +150						$^\circ\text{C}$	

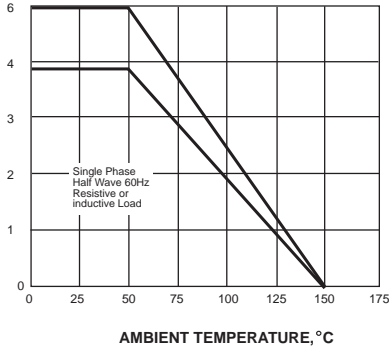
NOTES:

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.

RATINGS AND CHARACTERISTIC CURVES KBL6005 THRU KBL610

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

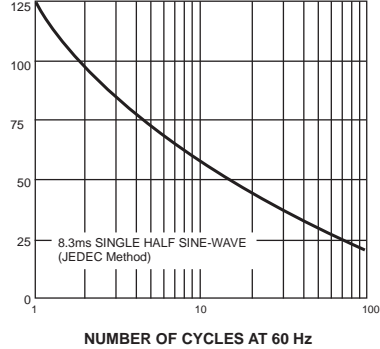


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

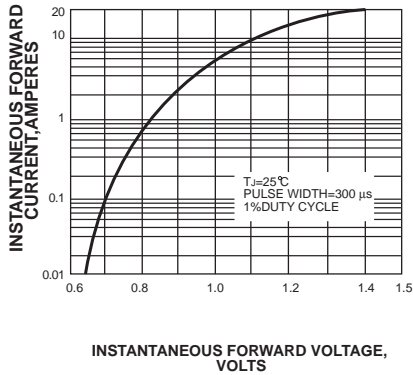


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

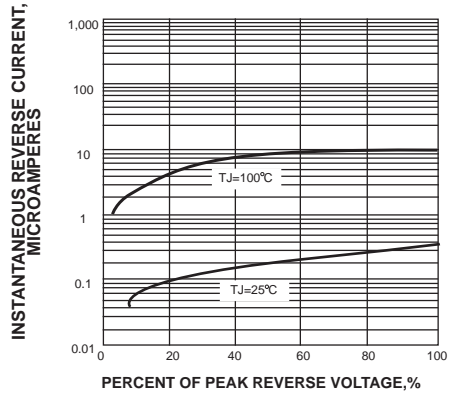
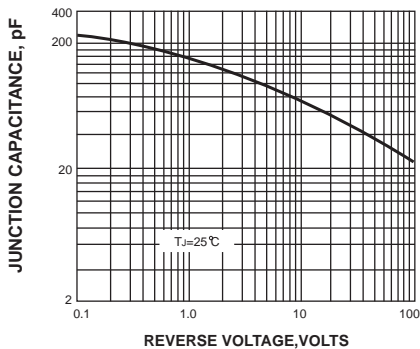


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

