

**KBL4005 THRU KBL410
GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER**

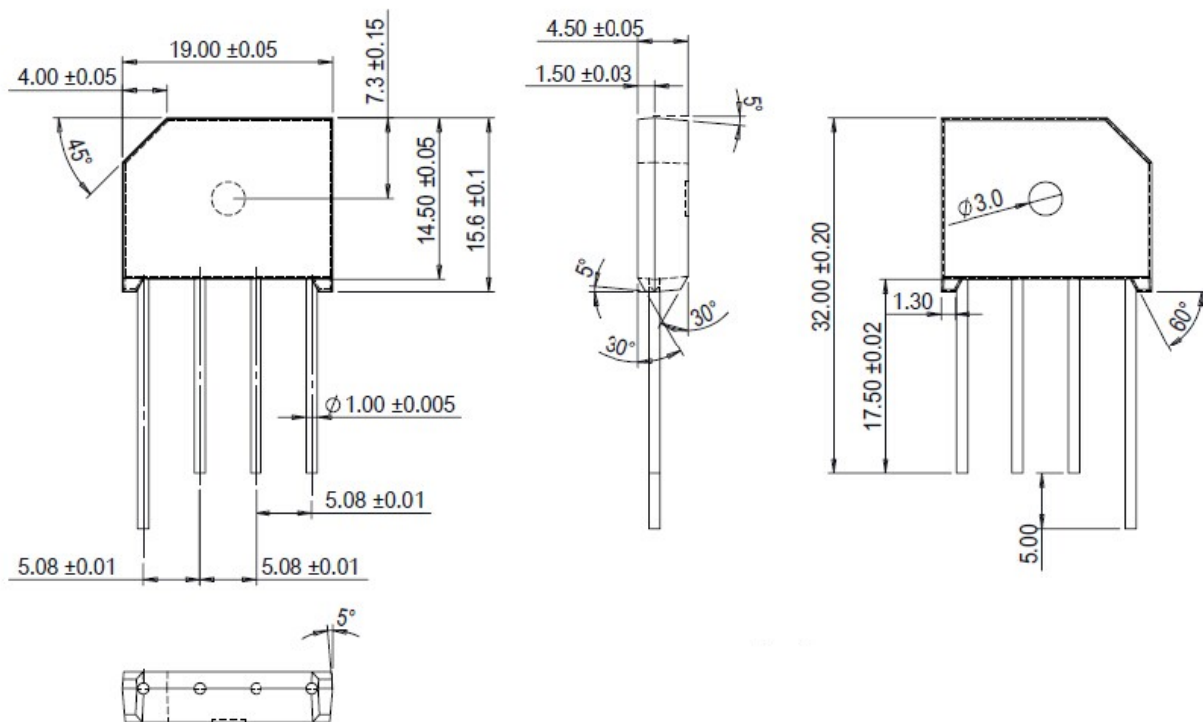
Features:

- Reliable low cost construction utilizing molded plastic technique
- Ideal for printed circuit board
- Low forward voltage drop
- Low reverse leakage current
- High surge current capability

Mechanical Data:

- Case: Molded plastic, KBL
- Epoxy: UL 94V-O rate flame retardant
- Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed
- Mounting position: Any
- Weight: 0.2ounce, 5.6gram

Mechanical Dimensions: In mm



KBL

MARKING, MOLDING RESIN

Marking for Type Number, 1st row SSG YYWWL, 2nd row Type Number
Where YY is the manufacture year
WW is the manufacture week code
L is the wafer's Lot Number



Technical Data

Green Products

Data Sheet N1843 Rev. -

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings:

Type Number	Symbol	KBL 4005	KBL 401	KBL 402	KBL 404	KBL 406	KBL 408	KBL 410	Unit
Maximum Recurrent Peak Reverse Voltage Maximum DC Blocking Voltage	V_{RRM} V_{DC}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum Average Forward Rectified Current at $T_C=110^\circ\text{C}$	I_O	4.0							A
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200							A

Electrical Characteristics:

Type Number	Symbol	KBL 4005	KBL 401	KBL 402	KBL 404	KBL 406	KBL 408	KBL 410	Unit
Maximum Forward Voltage at 3.0A DC and 25°C	V_F	1.1							V
Maximum Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	I_{RM}	10 500							μA
Typical Junction Capacitance (Note 1)	C_J	40							pF

Thermal-Mechanical Specifications:

Type Number	Symbol	KBL 4005	KBL 401	KBL 402	KBL 404	KBL 406	KBL 408	KBL 410	Unit
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	19							$^\circ\text{C/W}$
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	2.4							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +125							$^\circ\text{C}$
Case Style		KBL							

NOTES:

1- Measured at 1 MHZ and applied reverse voltage of 4.0 VDC.

2- Thermal resistance from junction to ambient with units mounted on 3.0 x 3.0 x 0.11" thick (7.5 x 7.5 x 0.3cm) Al. plate

3- Thermal resistance from junction to lead with units mounted on P.C.B. at 0.375" (9.5mm) lead length and 0.5 x 0.5" (12 x 12mm) copper pads

FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

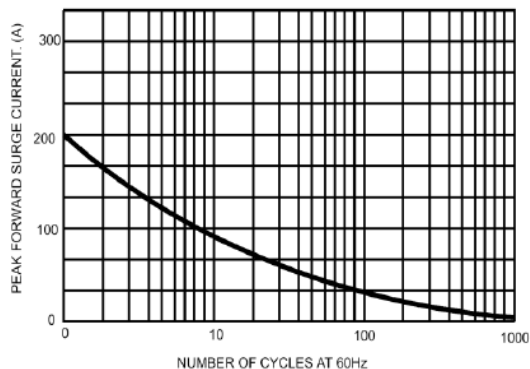


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

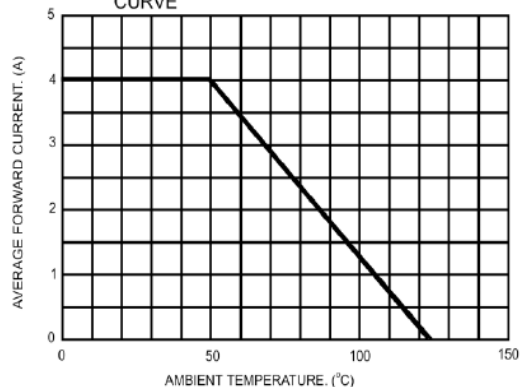


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

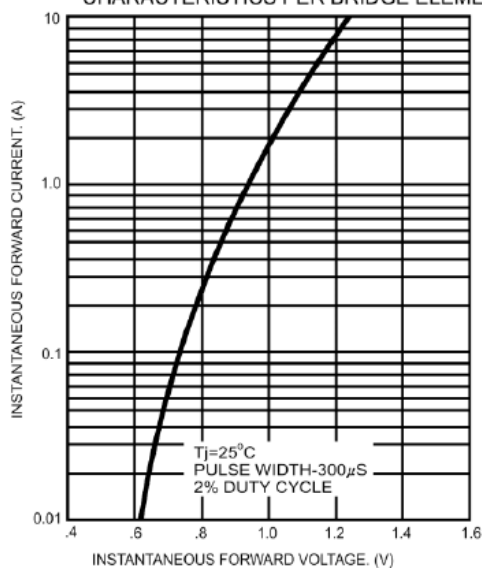
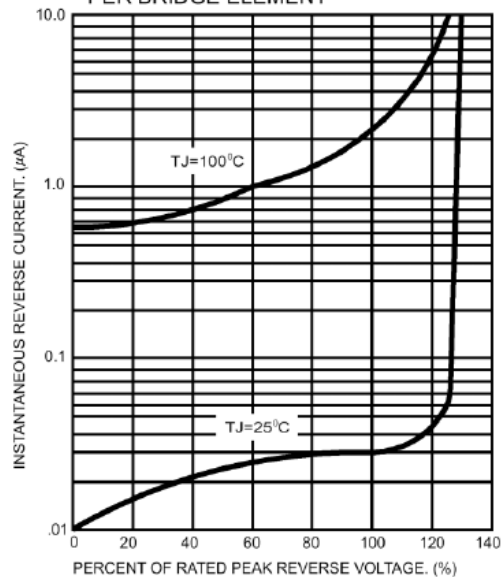


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT





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