

# Silicon Bridge Rectifiers



## KBL400 Thru KBL410

Reverse Voltage: 50 - 1000 Volts  
Forward Current: 4.0 Amp

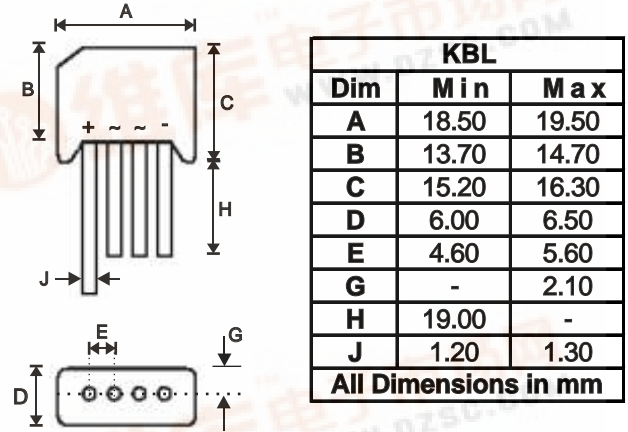
### Features

- Diffused Junction
- Low Forward Voltage Drop
- High Reliability
- High Current Capability
- High Surge Current Capability
- Ideal for Printed Circuit Boards

### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL STD-202, Method 208
- Weight: 5.6 grams (approx.)
- Mounting Position: Any

### KBL



## Maximum Ratings and Electrical Characteristics

Rating at 25°C unless otherwise specified.

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

CHARACTERISTICS	Symbol	KBL 400	KBL 401	KBL 402	KBL 404	KBL 406	KBL 408	KBL 410	UNIT	
Peak Repetitive Reverse Voltage	$V_{RRM}$									
Working Peak Reverse Voltage	$V_{RWM}$	50	100	200	400	600	800	1000	V	
DC Blocking Voltage	$V_R$									
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V	
Average Rectified Output Current (Note1) @ $T_A = 75^\circ C$	$I_O$	4								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150								A
Forward Voltage (per element) @ $I_F = 2.0A$	$V_{FM}$	1.1								V
Peak Reverse Current @ $T_C = 25^\circ C$	$I_R$	10								$\mu A$
At Rated DC Blocking Voltage @ $T_C = 100^\circ C$		1.0								mA
$I^2t$ Rating for Fusing (t < 8.3ms) (Note1)	$I^2t$	166								$A^2s$
Typical Thermal Resistance (Note2)	$R_{JC}$	19								K/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +125								$^\circ C$

**Note:** 1. Non-repetitive for t > 1ms and < 8.3ms.

2. Thermal resistance junction to ambient mounted on PC board with 13.0 x 13.0 x 0.03mm thick land areas.



## Rating and Characteristic Curves (KBL400 thru 410)

FIG.1- MAXIMUM NON-REPETITIVE PEAK Fwd SURGE CURRENT

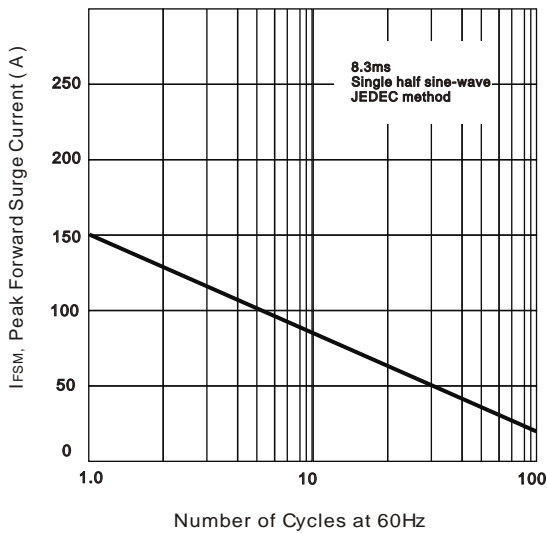


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

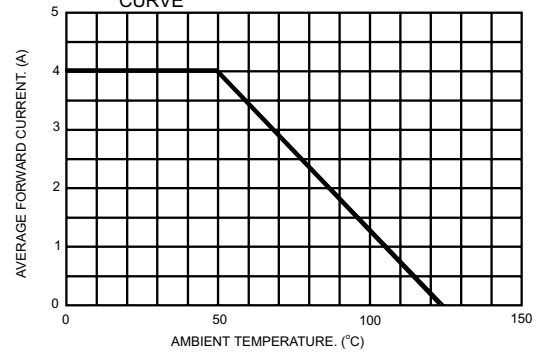


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

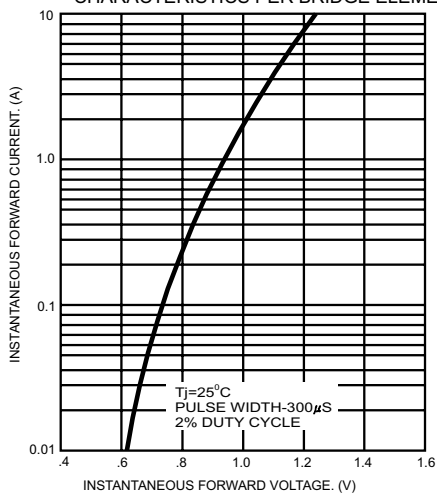


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

