



# KBL404~KBL410

## Glass Passivated Bridge Rectifiers

**VOLTAGE** 400 to 1000 Volt **CURRENT** 4 Ampere

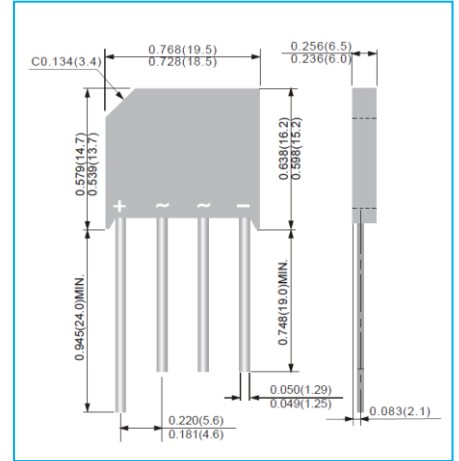
**FL/KBL** **Unit: Inch(mm)**

### FEATURES

- UL Recognized File #E228882
- Plastic material has Underwriters Laboratory Flammability Classification 94V-O
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique.
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Glass passivated chip junction

### MECHANICAL DATA

- Case: FL/KBL
- Terminals: Leads solderable per MIL-STD-750, Method 2026
- Polarity: As marked on body
- Weight: 5.4g



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	KBL 404	KBL 406	KBL 408	KBL 410	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	400	600	800	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	4				A
Peak forward surge current, 8.3 ms single half sine-wave	$I_{FSM}$	150				A
Rating of fusing ( $t < 8.3ms$ )(Note 1)	$I^2t$	93				$A^2s$
Maximum instantaneous forward voltage per diode $I_F = 2 A$ $I_F = 4 A$	$V_F$	1 1.1				V
Maximum reverse current @ rated $V_R$ $T_J = 25^\circ C$ $T_J = 125^\circ C$	$I_R$	5 500				$\mu A$
Typical junction capacitance (Note 2)	$C_J$	40				pF
Typical thermal resistance (Note 3) (Note 4)	$R_{\theta JA}$ $R_{\theta JL}$	19 2.4				$^\circ C/W$
Operating junction temperature range	$T_J$	- 55 to +150				$^\circ C$
Storage temperature range	$T_{STG}$	- 55 to +150				$^\circ C$

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

Note 2: Measured at 1MHz and applied Reverse bias of 4V DC

Note 3: Thermal resistance from junction to ambient with units mounted on aluminum plate heatsink

Note 4: Thermal resistance from junction to lead with units mounted on PCB



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## TYPICAL CHARACTERISTIC CURVES

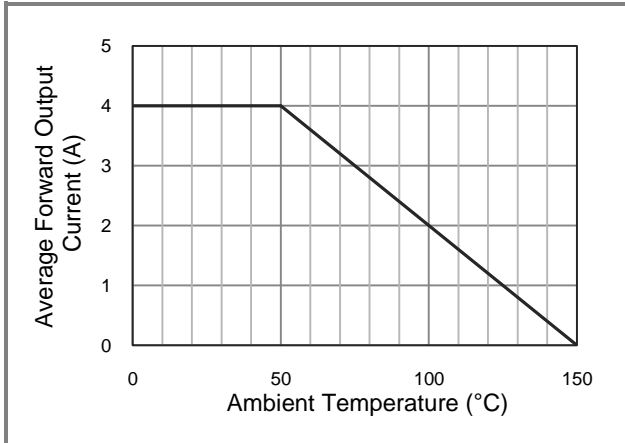


Fig.1 Forward Current Derating Curve

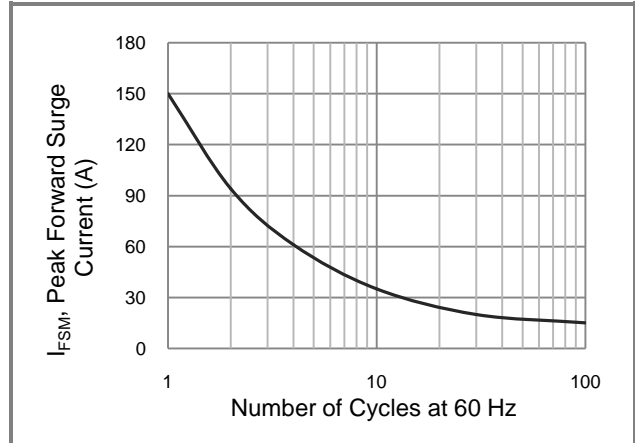


Fig.2 Maximum Forward Surge Current

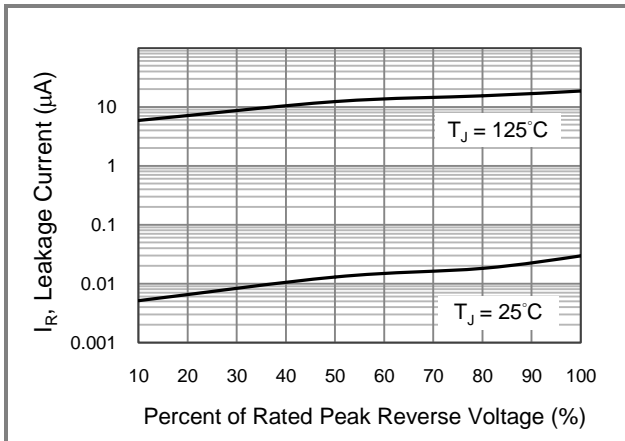


Fig.3 Typical Reverse Characteristics

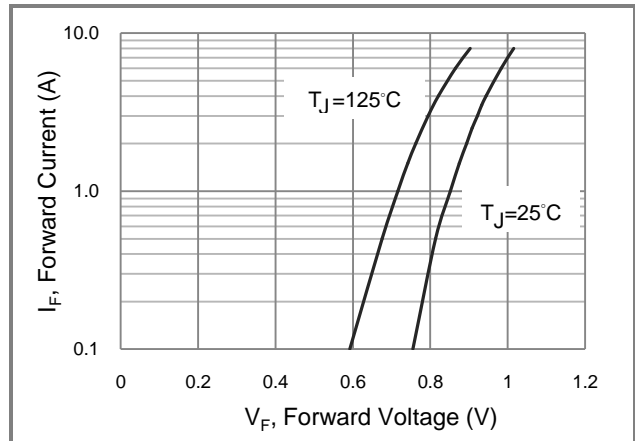


Fig.4 Typical Forward Characteristics

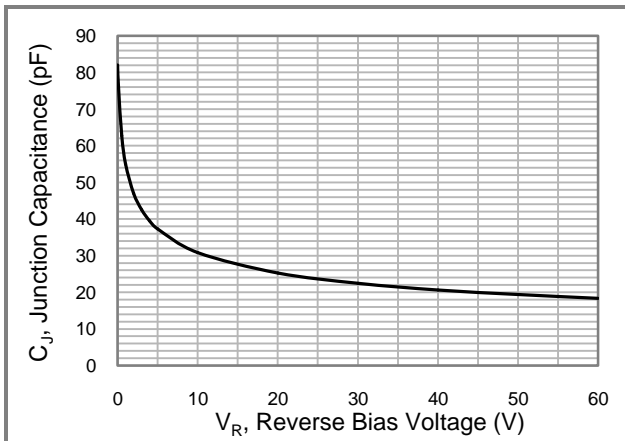


Fig.5 Typical Junction Capacitance



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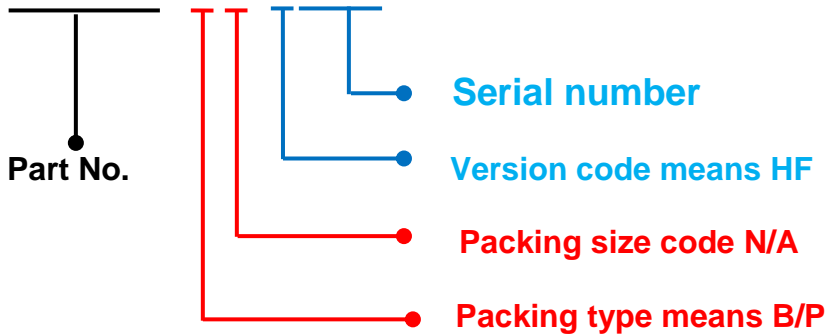
### Part No\_packing code\_Version

KBL404\_B0\_00001

KBL404\_B0\_10001

For example :

**KBL404\_B0\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>st</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>st</sup> ~5 <sup>st</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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