

# AKBL400 - AKBL410

**PRV : 50 - 1000 Volts**  
**Io : 4.0 Amperes**

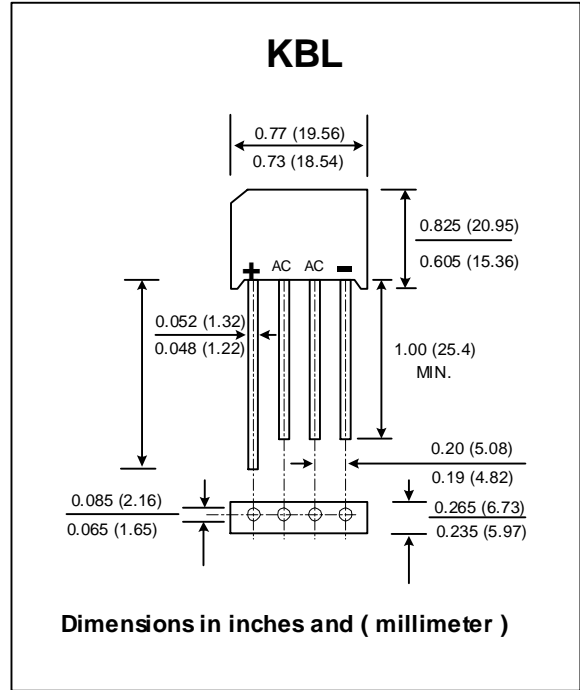
**FEATURES :**

- \* High case dielectric strength
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ideal for printed circuit board
- \* **Pb / RoHS Free**

**MECHANICAL DATA :**

- \* Case : Reliable low cost construction utilizing molded plastic technique
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL - STD 202 , Method 208 guaranteed
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Any
- \* Weight : 5.15 grams

# AVALANCHE BRIDGE RECTIFIERS



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Rating at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

RATING	SYMBOL	AKBL 400	AKBL 401	AKBL 402	AKBL 404	AKBL 406	AKBL 408	AKBL 410	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Minimum Avalanche Breakdown Voltage at 100 μA	V <sub>BO(min.)</sub>	100	150	250	450	700	900	1100	V
Maximum Avalanche Breakdown Voltage at 100 μA	V <sub>BO(max.)</sub>	550	600	700	900	1150	1350	1550	V
Maximum Average Forward Current Tc = 50°C	I <sub>F(AV)</sub>	4.0							A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	200							A
Rating for fusing at ( t < 8.3 ms. )	I <sup>2</sup> t	166							A <sup>2</sup> S
Maximum Forward Voltage per Diode at I <sub>F</sub> = 4.0 A	V <sub>F</sub>	1.1							V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C	I <sub>R</sub>	10							μA
	I <sub>R(H)</sub>	1.0							mA
Typical Thermal Resistance (Note1)	RθJA	10							°C/W
Operating Junction Temperature Range	T <sub>J</sub>	- 50 to + 150							°C
Storage Temperature Range	T <sub>STG</sub>	- 50 to + 150							°C

**Note :**

1 ) Thermal resistance from Junction to ambient with units mounted on a 3" x 3" x 0.11" ( 7.5 x 7.5 x 0.3 cm ) Cu. plate.

RATING AND CHARACTERISTIC CURVES ( AKBL400 - AKBL410)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

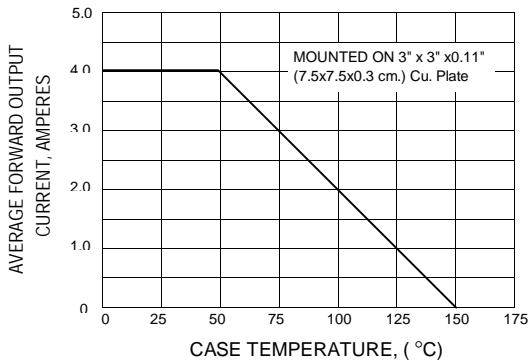


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

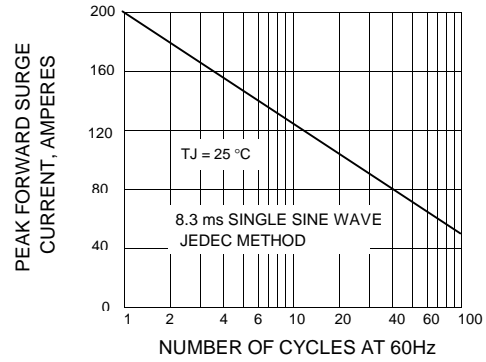


FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

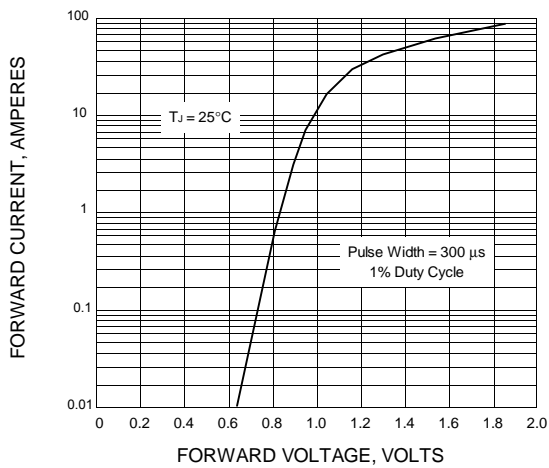


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

