# AKBL400 - AKBL410

# AVALANCHE BRIDGE RECTIFIERS

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

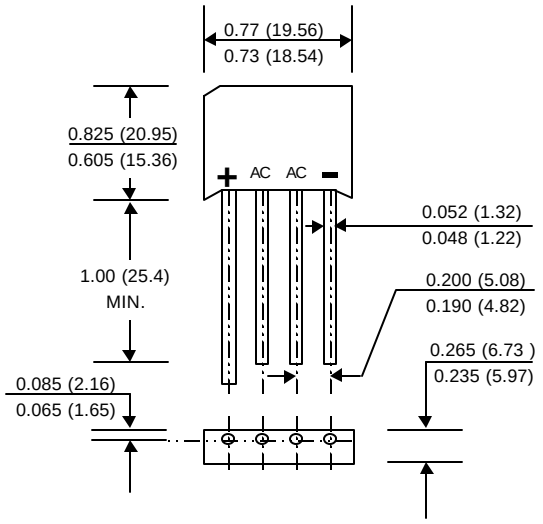
### FEATURES :

* High case dielectric strength
* High surge current capability
* High reliability
* Low reverse current
* Low forward voltage drop
* Ideal for printed circuit board

### 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

**KBL**




**Dimensions in inches and ( millimeter )**

### 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 | UNITS |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent 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 |
| Minimum Avalanche Breakdown Voltage at 100 µA | $V_{BO(min.)}$ | 100 | 150 | 250 | 450 | 700 | 900 | 1100 | Volts |
| Maximum Avalanche Breakdown Voltage at 100 µA | $V_{BO(max.)}$ | 550 | 600 | 700 | 900 | 1150 | 1350 | 1550 | Volts |
| Maximum Average Forward Current Tc = 50°C | $I_{F(AV)}$ | 4.0 | | | | | | | Amp. |
| Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 200 | | | | | | | Amps. |
| Rating for fusing at ( t < 8.3 ms. ) | $I^2t$ | 166 | | | | | | | $A^2S$ |
| Maximum Forward Voltage per Diode at $I_F$ = 4.0 Amps. | $V_F$ | 1.1 | | | | | | | Volts |
| Maximum DC Reverse Current Ta = 25 °C | $I_R$ | 10 | | | | | | | µA |
| at Rated DC Blocking Voltage Ta = 100 °C | $I_{R(H)}$ | 1.0 | | | | | | | mA |
| Typical Thermal Resistance (Note1) | RθJA | 10 | | | | | | | °C/W |
| Operating Junction Temperature Range | $T_J$ | - 50 to + 150 | | | | | | | °C |
| Storage Temperature Range | $T_{STG}$ | - 50 to + 150 | | | | | | | °C |

**Notes :** 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.

**UPDATE : APRIL 21, 1998**

## RATING AND CHARACTERISTIC CURVES ( AKBL400 - AKBL410)

**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**

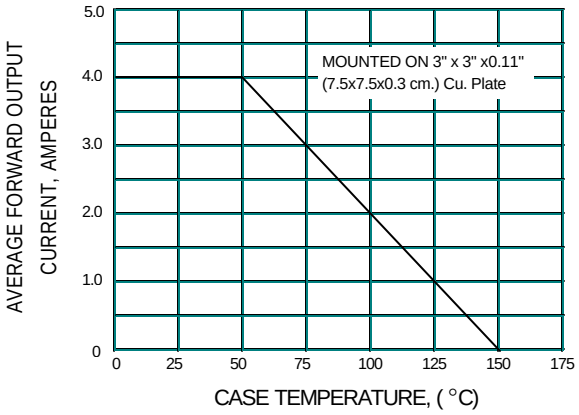



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

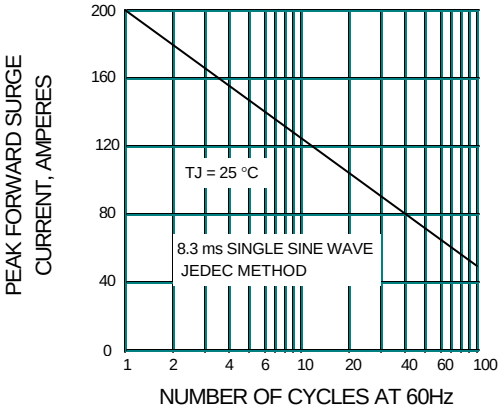



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE**

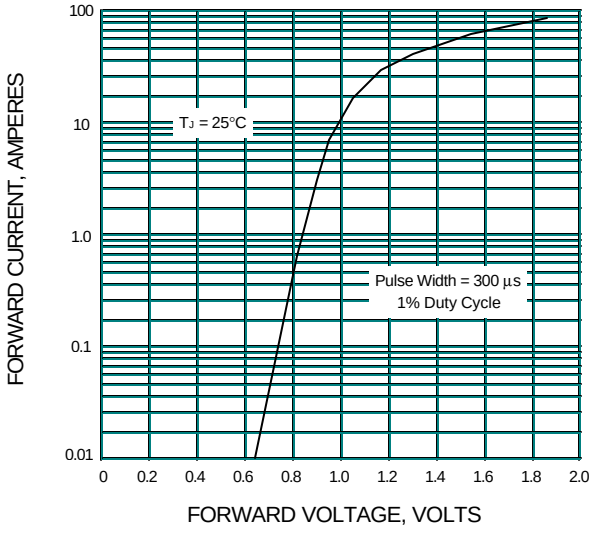



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**