



## ABR800 - ABR810

PRV : 50 - 1000 Volts

Io : 8.0 Amperes

### FEATURES :

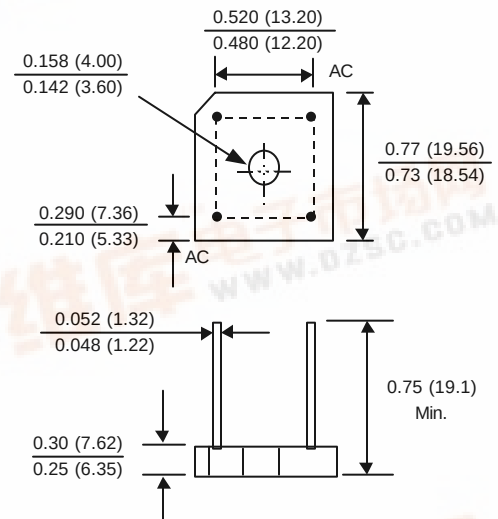
- \* High case dielectric strength
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ideal for printed circuit board

### 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 : 6.1 grams

## AVALANCHE BRIDGE RECTIFIERS

### BR10



Dimensions in inches and ( millimeters )

### 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%.

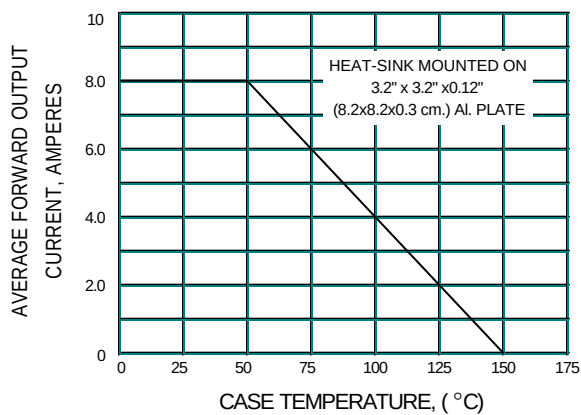
| RATING                                                                                     | SYMBOL          | ABR 800       | ABR 801 | ABR 802 | ABR 804 | ABR 806 | ABR 808 | ABR 810 | UNITS              |
|--------------------------------------------------------------------------------------------|-----------------|---------------|---------|---------|---------|---------|---------|---------|--------------------|
| 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 $\mu$ A                                         | $V_{BO(min.)}$  | 100           | 150     | 250     | 450     | 700     | 900     | 1100    | Volts              |
| Maximum Avalanche Breakdown Voltage at 100 $\mu$ A                                         | $V_{BO(max.)}$  | 550           | 600     | 700     | 900     | 1150    | 1350    | 1550    | Volts              |
| Maximum Average Forward Current $T_c = 50^\circ\text{C}$                                   | $I_{F(AV)}$     | 8.0           |         |         |         |         |         |         | Amp.               |
| Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 300           |         |         |         |         |         |         | Amps.              |
| Rating for fusing at ( $t < 8.3$ ms. )                                                     | $I_t^2$         | 160           |         |         |         |         |         |         | $A^2S$             |
| Maximum Forward Voltage per Diode at $I_F = 4.0$ Amps.                                     | $V_F$           | 1.0           |         |         |         |         |         |         | Volts              |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$                                        | $I_R$           | 10            |         |         |         |         |         |         | $\mu$ A            |
| at Rated DC Blocking Voltage $T_a = 100^\circ\text{C}$                                     | $I_{R(H)}$      | 10.0          |         |         |         |         |         |         | mA                 |
| Typical Thermal Resistance ( Note 1 )                                                      | $R_{\theta JC}$ | 2.5           |         |         |         |         |         |         | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range                                                       | $T_J$           | - 50 to + 150 |         |         |         |         |         |         | $^\circ\text{C}$   |
| Storage Temperature Range                                                                  | $T_{STG}$       | - 50 to + 150 |         |         |         |         |         |         | $^\circ\text{C}$   |

Notes : 1 ) Thermal resistance from Junction to case with units mounted on a 3.2" x 3.2" x 0.12" ( 8.2 x 8.2 x 0.3 cm ) Al. plate. heatsink.

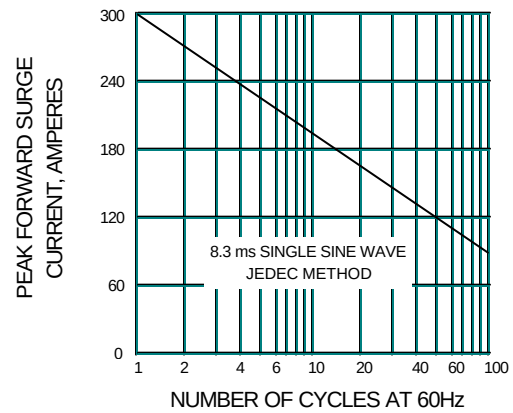


## RATING AND CHARACTERISTIC CURVES ( ABR800 - ABR810)

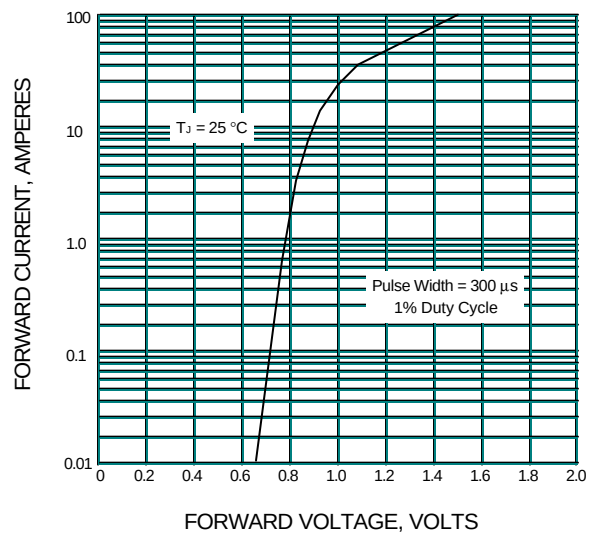
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

