



Certificate Number: Q10561

Certificate Number: E17276

## ABR1000 - ABR1010

**PRV : 50 - 1000 Volts**

**Io : 10 Amperes**

### FEATURES :

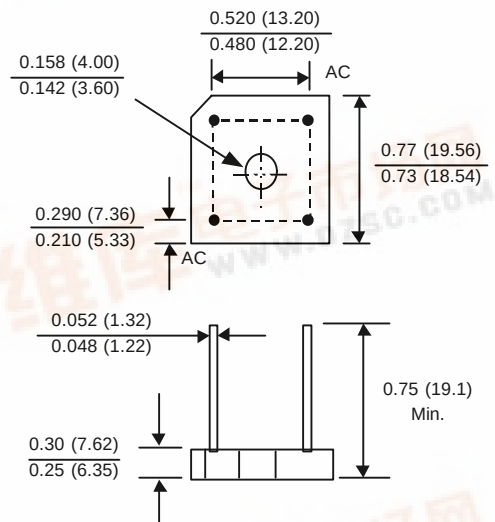
- \* High case dielectric strength
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ideal for printed circuit board

### 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 1000      | ABR 1001 | ABR 1002 | ABR 1004 | ABR 1006 | ABR 1008 | ABR 1010 | 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 $T_c = 50^\circ\text{C}$                                   | $I_{F(AV)}$     | 10.0          |          |          |          |          |          |          | 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. )                                                     | $I^2t$          | 160           |          |          |          |          |          |          | $A^2S$             |
| Maximum Forward Voltage per Diode at $I_F = 5.0$ Amps.                                     | $V_F$           | 1.0           |          |          |          |          |          |          | Volts              |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$                                        | $I_R$           | 10            |          |          |          |          |          |          | $\mu\text{A}$      |
| at Rated DC Blocking Voltage $T_a = 100^\circ\text{C}$                                     | $I_{R(H)}$      | 200           |          |          |          |          |          |          | $\mu\text{A}$      |
| 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 |          |          |          |          |          |          | $^\circ\text{C}$   |



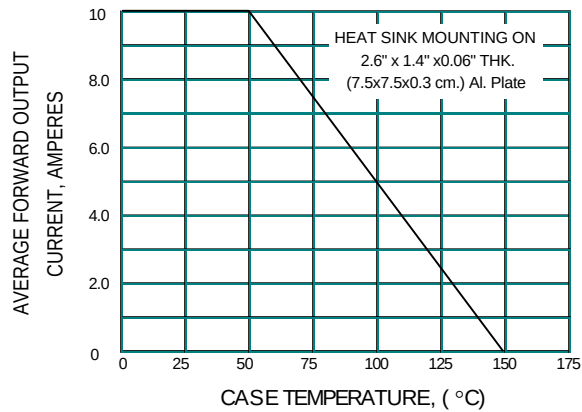
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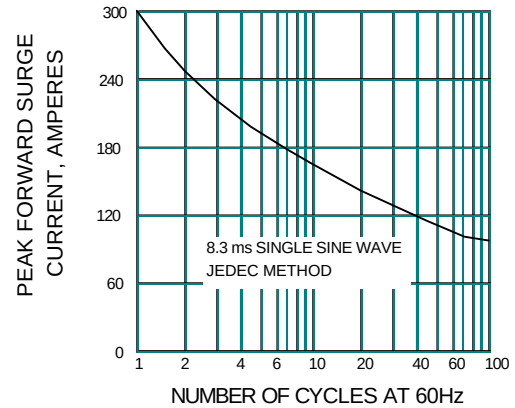
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## RATING AND CHARACTERISTIC CURVES ( ABR1000 - ABR1010 )

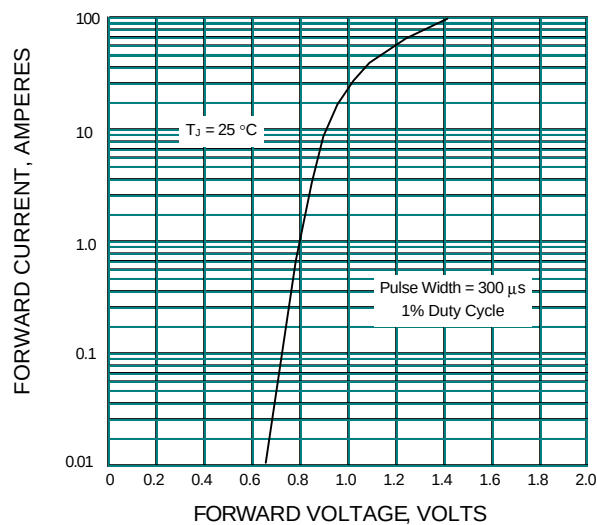
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

