

ABR5000W - ABR5010W

PRV : 50 - 1000 Volts

Io : 50 Amperes

FEATURES :

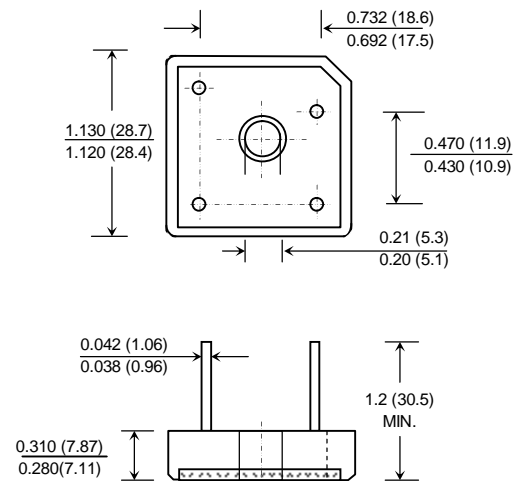
- * High case dielectric strength
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Ideal for printed circuit board
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : Molded plastic with heatsink integrally mounted in the bridge encapsulation
- * Epoxy : UL94V-O rate flame retardant
- * Terminals : Plated lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Polarity symbols marked on case
- * Mounting position : Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency
- * Weight : 15.95 grams

AVALANCHE BRIDGE RECTIFIERS

BR50W



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 5000W | ABR 5001W | ABR 5002W | ABR 5004W | ABR 5006W | ABR 5008W | ABR 5010W | UNIT |
|---|-----------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|----------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Minimum Avalanche Breakdown Voltage at 100 μ A | $V_{BO(min)}$ | 100 | 150 | 250 | 450 | 700 | 900 | 1100 | V |
| Maximum Avalanche Breakdown Voltage at 100 μ A | $V_{BO(max)}$ | 550 | 600 | 700 | 900 | 1150 | 1350 | 1550 | V |
| Maximum Average Forward Current $T_c = 50^\circ\text{C}$ | $I_{F(AV)}$ | 50 | | | | | | | A |
| Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method) | I_{FSM} | 400 | | | | | | | A |
| Rating for fusing at ($t < 8.3$ ms.) | I_t^2 | 660 | | | | | | | A^2S |
| Maximum Forward Voltage per Diode at $I_F = 25$ A | V_F | 1.1 | | | | | | | V |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 100^\circ\text{C}$ | I_R | 10 | | | | | | | μA |
| | $I_{R(H)}$ | 200 | | | | | | | μA |
| Typical Thermal Resistance (Note 1) | $R_{\theta JC}$ | 1 | | | | | | | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range | T_J | - 50 to + 150 | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | - 50 to + 150 | | | | | | | $^\circ\text{C}$ |

Note : 1) Thermal resistance from junction to case with units mounted on heatsink.

RATING AND CHARACTERISTIC CURVES (ABR5000W - ABR5010W)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

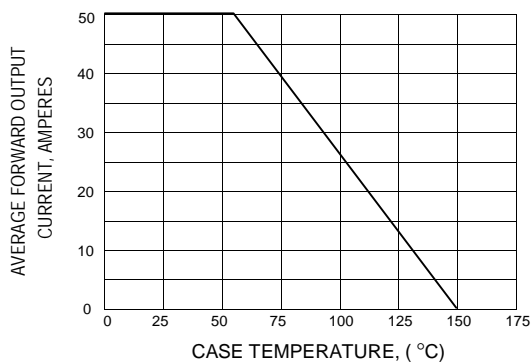


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

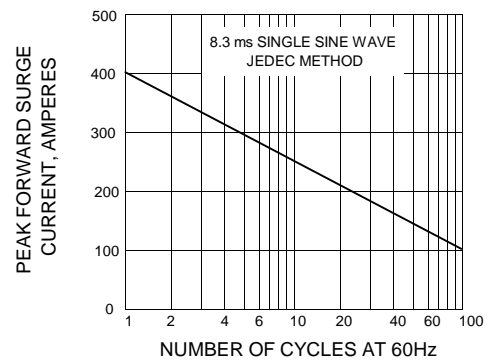


FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

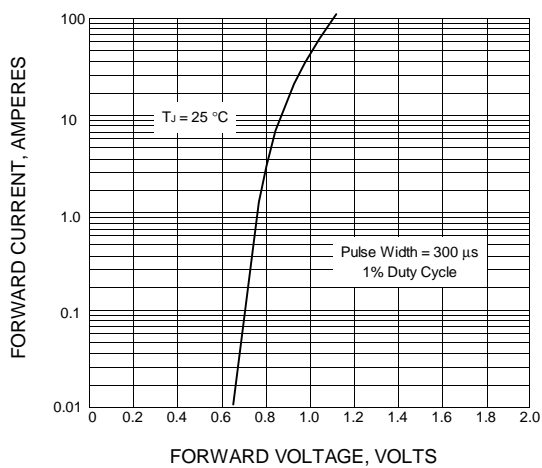


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

