

# ABR2500W - ABR2510W

**PRV : 50 - 1000 Volts**

**Io : 25 Amperes**

**FEATURES :**

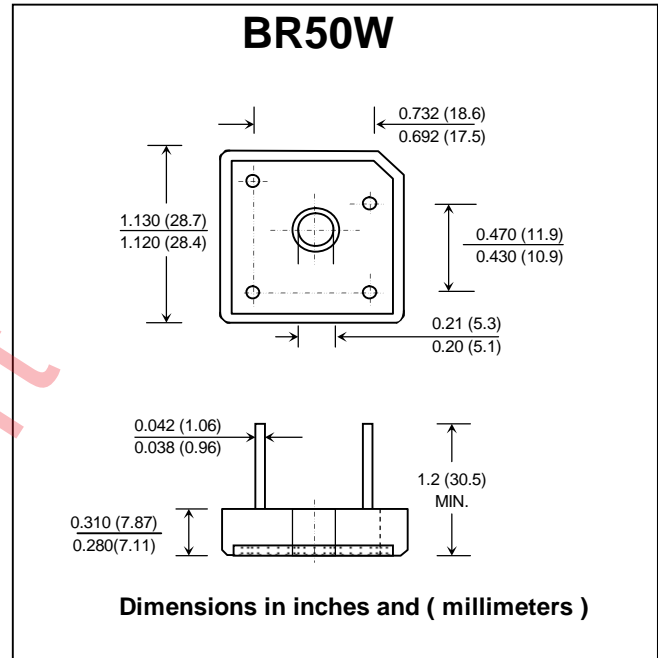
- \* High case dielectric strength
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ideal for printed circuit board
- \* **Pb / RoHS Free**

**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



### 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%.

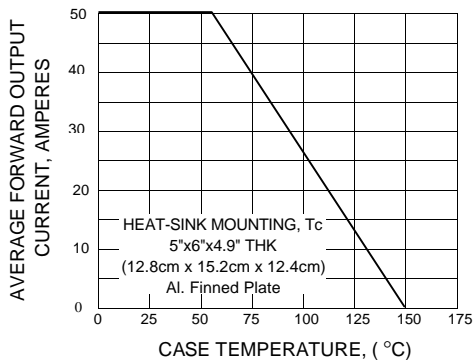
RATING	SYMBOL	ABR 2500W	ABR 2501W	ABR 2502W	ABR 2504W	ABR 2506W	ABR 2508W	ABR 2510W	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Minimum Avalanche Breakdown Voltage at 100 $\mu$ A	$V_{BO(min)}$	100	150	250	450	700	900	1100	V
Maximum Avalanche Breakdown Voltage at 100 $\mu$ A	$V_{BO(max)}$	550	600	700	900	1150	1350	1550	V
Maximum Average Forward Current $T_c = 50^\circ C$	$I_{F(AV)}$				25				A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$				300				A
Rating for fusing at ( $t < 8.3$ ms. )	$I^2 t$				375				A <sup>2</sup> S
Maximum Forward Voltage per Diode at $I_F = 12.5$ A	$V_F$				1.1				V
Maximum DC Reverse Current $T_a = 25^\circ C$ at Rated DC Blocking Voltage $T_a = 100^\circ C$	$I_R$				10				$\mu$ A
	$I_{R(H)}$				200				$\mu$ A
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$				1.45				$^\circ C/W$
Operating Junction Temperature Range	$T_J$				- 50 to + 150				$^\circ C$
Storage Temperature Range	$T_{STG}$				- 50 to + 150				$^\circ C$

**Note :**

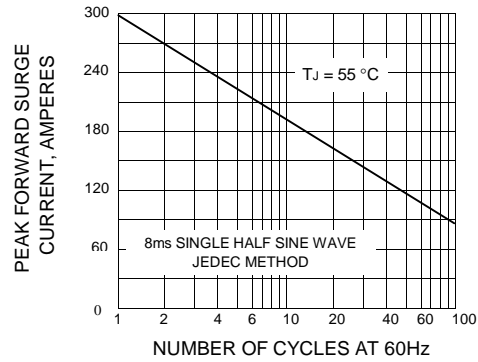
1) Thermal resistance from Junction to case with units mounted on a 5" x 6" x 4.9" (12.8cm x 15.2cm x 12.4 cm) Al. plate.

## RATING AND CHARACTERISTIC CURVES ( ABR2500W - ABR2510W )

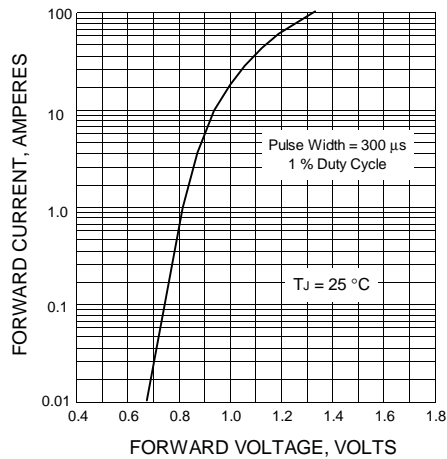
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

