

# ABR1500 - ABR1510

**PRV : 50 - 1000 Volts**

**Io : 15 Amperes**

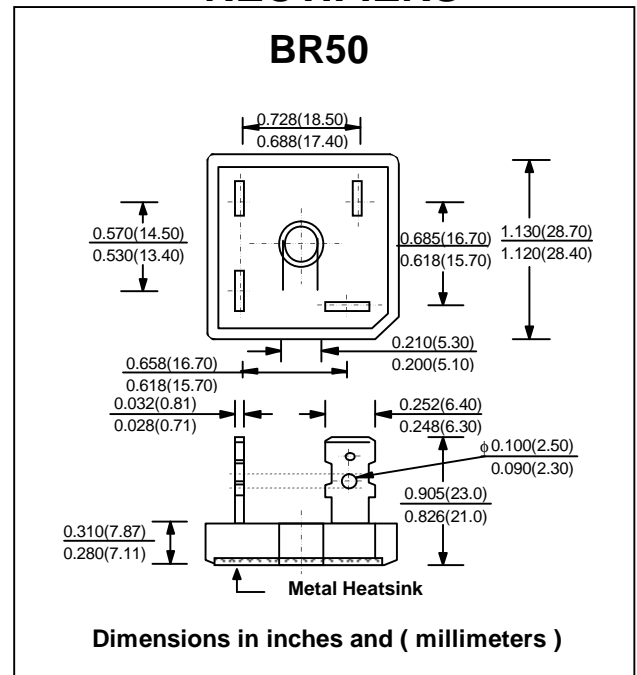
**FEATURES :**

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

**MECHANICAL DATA :**

- \* Case : Molded plastic with heatsink integrally mounted in the bridge encapsulation
- \* Epoxy : UL94V-O rate flame retardant
- \* Terminals : plated .25" (6.35 mm). Faston
- \* 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 : 17.1 grams

# AVALANCHE BRIDGE RECTIFIERS



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

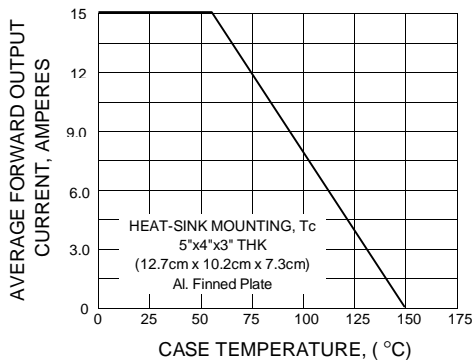
Rating at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

RATING	SYMBOL	ABR 1500	ABR 1501	ABR 1502	ABR 1504	ABR 1506	ABR 1508	ABR 1510	UNIT	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V	
Minimum Avalanche Breakdown Voltage at 100 μA	V <sub>BO(min.)</sub>	100	150	250	450	700	900	1100	V	
Maximum Avalanche Breakdown Voltage at 100 μA	V <sub>BO(max.)</sub>	550	600	700	900	1150	1350	1550	V	
Maximum Average Forward Current Tc = 50°C	I <sub>F(AV)</sub>	15								A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	300								A
Rating for fusing at ( t < 8.3 ms. )	I <sup>2</sup> t	375								A <sup>2</sup> S
Maximum Forward Voltage per Diode at I <sub>F</sub> = 7.5 A	V <sub>F</sub>	1.1								V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C	I <sub>R</sub>	10								μA
	I <sub>R(H)</sub>	200								μA
Typical Thermal Resistance (Note 1)	RθJC	1.9								°C/W
Operating Junction Temperature Range	T <sub>J</sub>	- 50 to + 150								°C
Storage Temperature Range	T <sub>STG</sub>	- 50 to + 150								°C

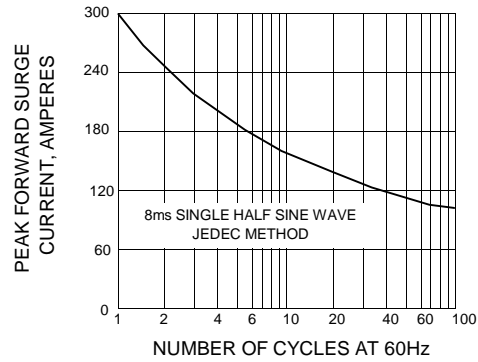
**Note :** 1 ) Thermal resistance from Junction to case with units mounted on a 5" x 4" x 3" (12.7cm x 10.2cm x 7.3 cm) Al.-Finned plate.

## RATING AND CHARACTERISTIC CURVES ( ABR1500 - ABR1510 )

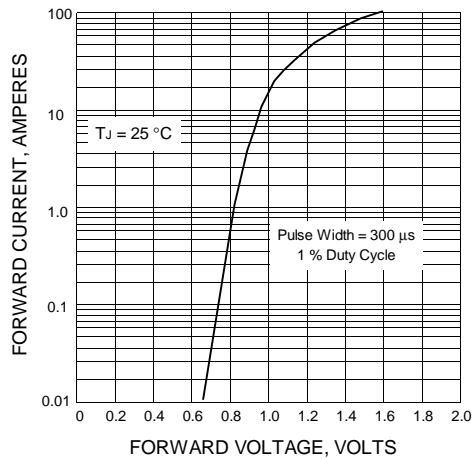
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

