

# ABR1000 - ABR1010

# AVALANCHE BRIDGE RECTIFIERS

**PRV : 50 - 1000 Volts**

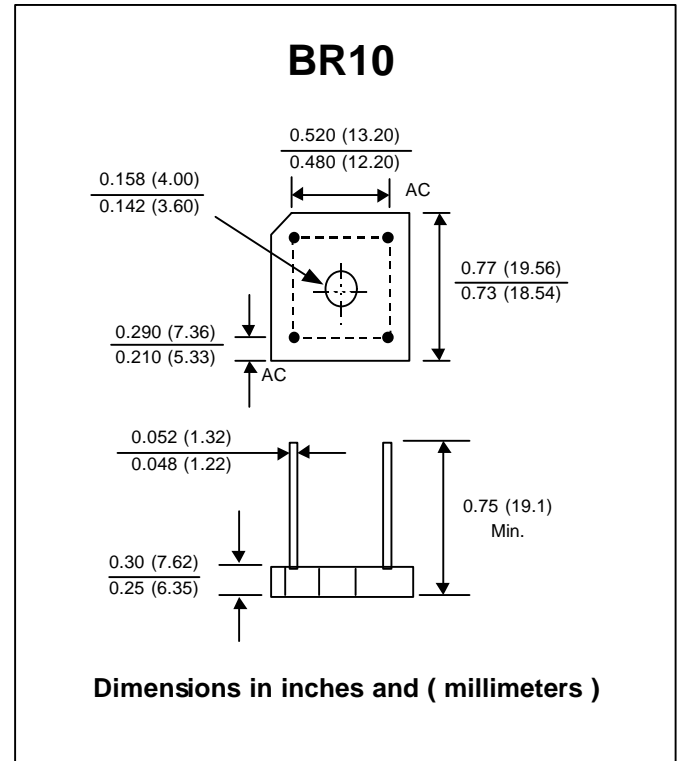
**Io : 10 Amperes**

**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



**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%.

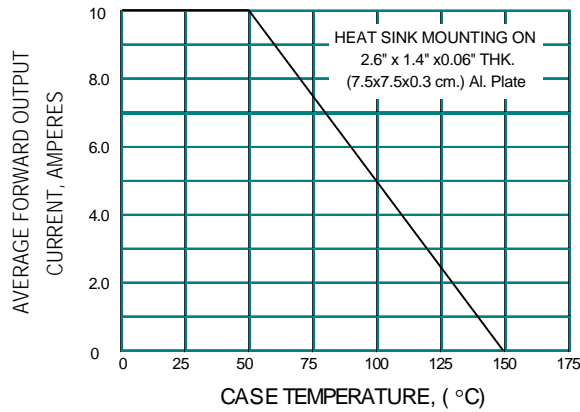
RATING	SYMBOL	ABR 1000	ABR 1001	ABR 1002	ABR 1004	ABR 1006	ABR 1008	ABR 1010	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Minimum 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 $T_c = 50^\circ C$	$I_{F(AV)}$	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 <sup>2</sup> S
Maximum Forward Voltage per Diode at $I_F = 5.0$ Amps.	$V_F$	1.0							Volts
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 )	$R_{\theta JC}$	2.5							$^\circ C/W$
Operating Junction Temperature Range	$T_J$	- 50 to + 150							$^\circ C$
Storage Temperature Range	$T_{STG}$	- 50 to + 150							$^\circ C$

**Notes :**

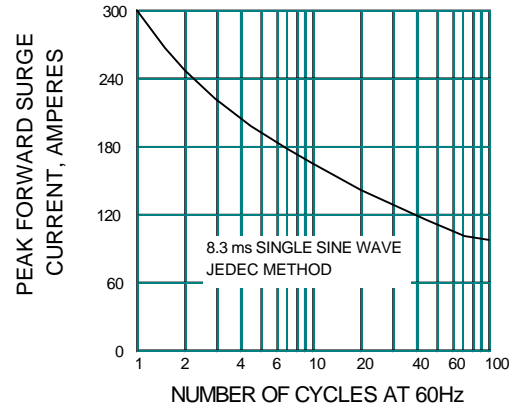
1 ) Thermal resistance from Junction to case with units mounted on a 3.2" x 3.2" x 0.12" (8.2cm.x 8.2cm.x 0.3cm.) Al.-Finned Plate.

## RATING AND CHARACTERISTIC CURVES ( ABR1000 - ABR1010 )

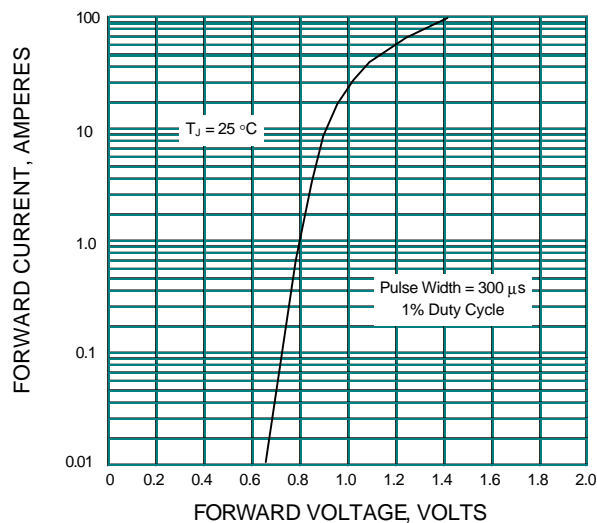
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

