

## BR3500 - BR3512

**PRV : 50 - 1200 Volts**

**Io : 35 Amperes**

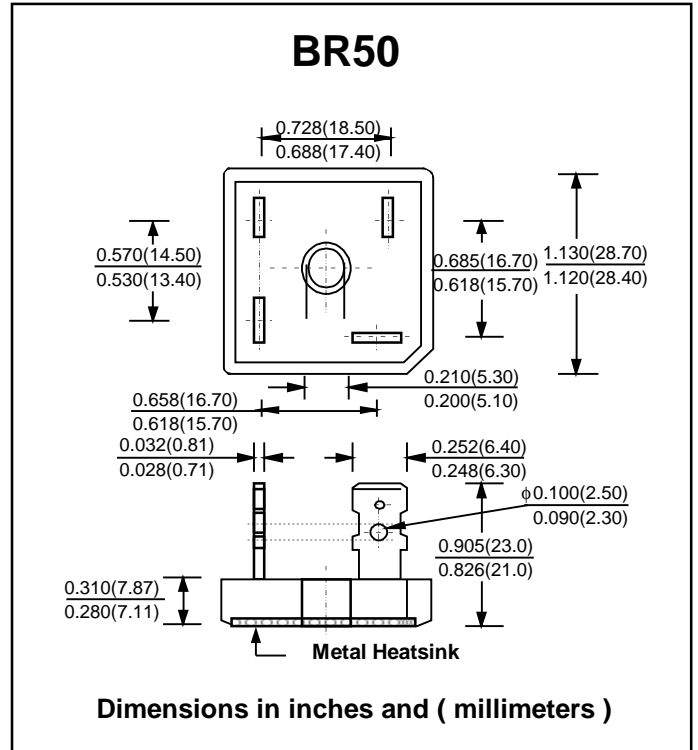
### FEATURES :

- \* High current capability
- \* 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

## SILICON 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%.

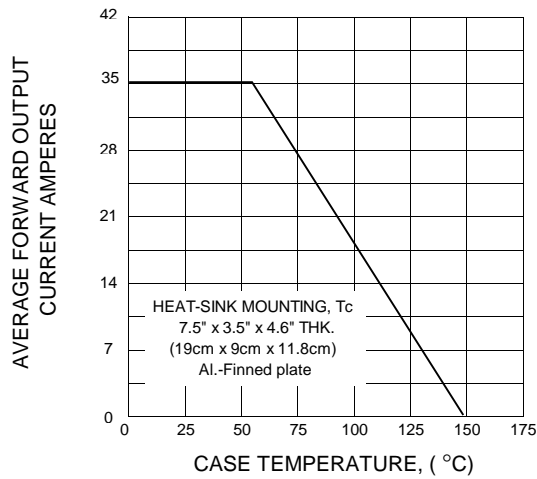
RATING	SYMBOL	BR 3500	BR 3501	BR 3502	BR 3504	BR 3506	BR 3508	BR 3510	BR 3512	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	1200	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	840	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	1200	V
Maximum Average Forward Current $T_c = 55^\circ\text{C}$	$I_{F(AV)}$	35								A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	400								A
Current Squared Time at $t < 8.3$ ms.	$I^2t$	660								A <sup>2</sup> S
Maximum Forward Voltage per Diode at $I_F = 17.5$ 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								$\mu\text{A}$
	$I_{R(H)}$	200								$\mu\text{A}$
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	1.5								$^\circ\text{C/W}$
Typical Thermal Resistance at Junction to Ambient	$R_{\theta JA}$	10								$^\circ\text{C}$
Operating Junction Temperature Range	$T_J$	- 40 to + 150								$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 40 to + 150								$^\circ\text{C}$

### Notes :

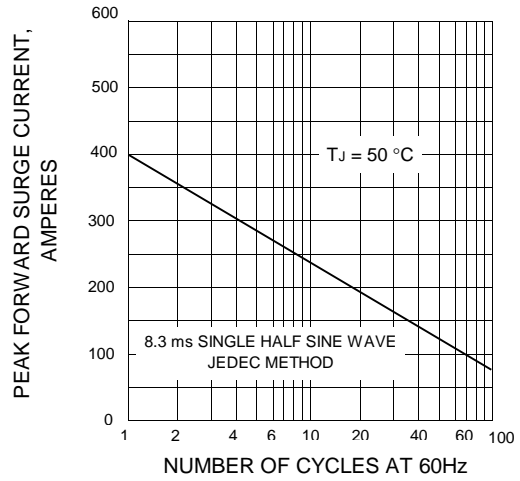
1. Thermal Resistance from junction to case with units mounted on a 7.5" x 3.5" x 4.6" (19cm.x 9cm.x 11.8cm.) Al.-Finned Plate

## RATING AND CHARACTERISTIC CURVES ( BR3500 - BR3512 )

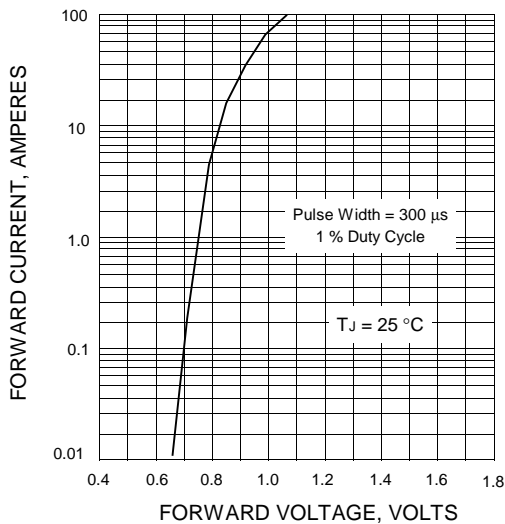
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE**

