

# BR3500 - BR3510

# SILICON BRIDGE RECTIFIERS

**PRV : 50 - 1000 Volts**

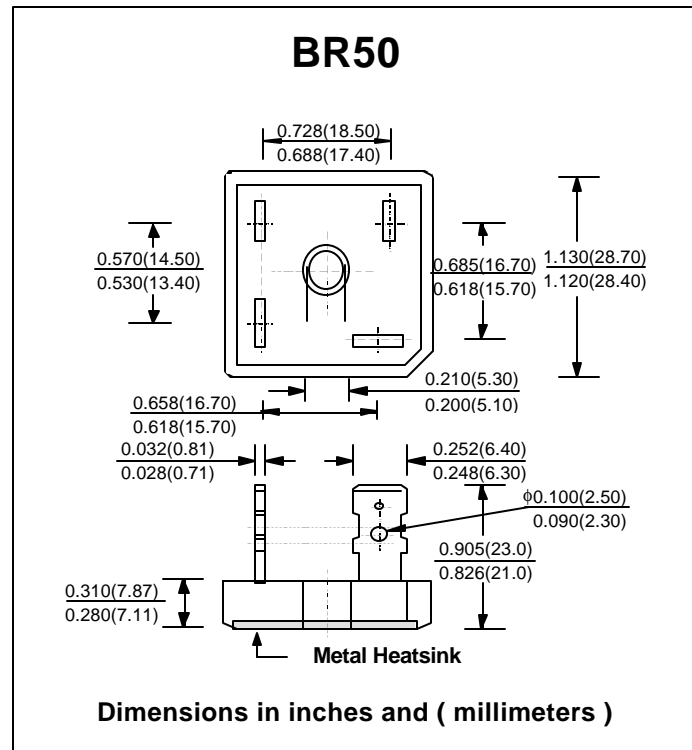
**Io : 35 Amperes**

### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ideal for printed circuit board

### 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



## 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	BR3500	BR3501	BR3502	BR3504	BR3506	BR3508	BR3510	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
Maximum Average Forward Current $T_c = 55^\circ C$	$I_{F(AV)}$	35							Amps.
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	400							Amps.
Current Squared Time at $t < 8.3$ ms.	$I^2 t$	660							$A^2 S$
Maximum Forward Voltage per Diode at $I_F = 17.5$ Amp.	$V_F$	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)	$R_{\theta JC}$	1.5							$^\circ C/W$
Typical Thermal Resistance at Junction to Ambient	$R_{\theta JA}$	10							$^\circ C$
Operating Junction Temperature Range	$T_J$	- 40 to + 150							$^\circ C$
Storage Temperature Range	$T_{STG}$	- 40 to + 150							$^\circ C$

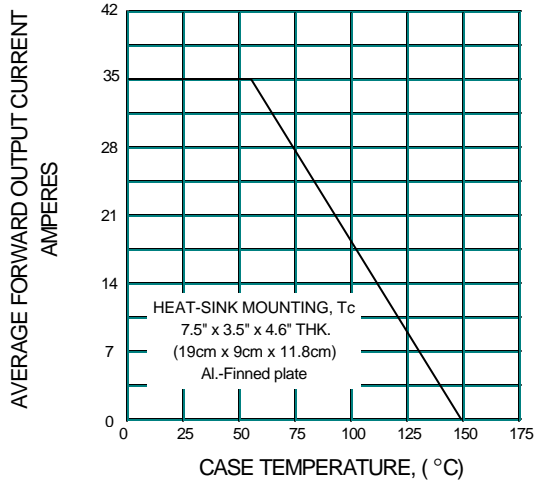
### Notes :

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

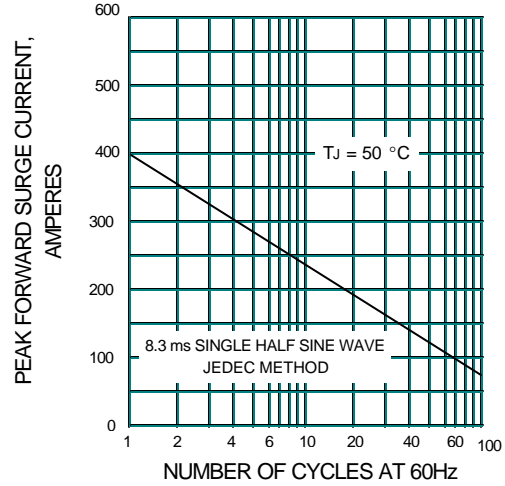
**UPDATE : APRIL 23, 1998**

## RATING AND CHARACTERISTIC CURVES ( BR3500 - BR3510 )

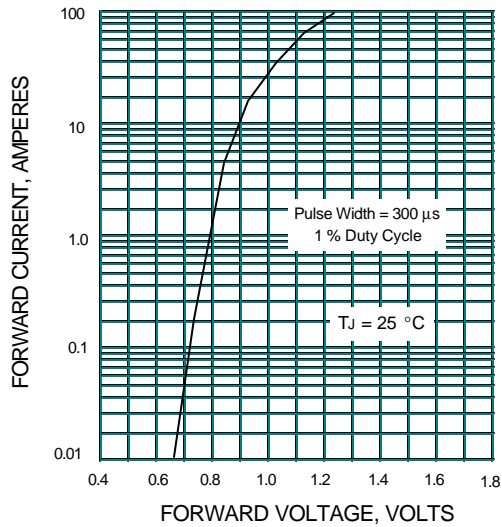
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



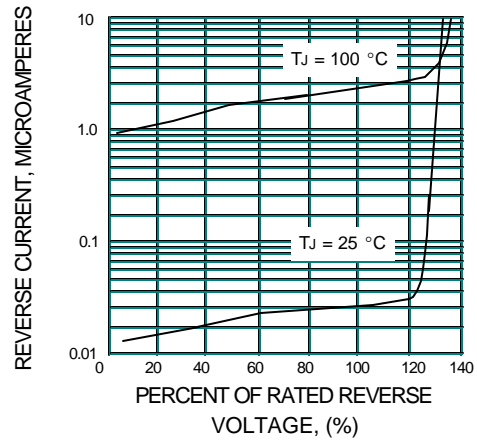
**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



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



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





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