

# BR3500W - BR3510W SILICON BRIDGE RECTIFIERS

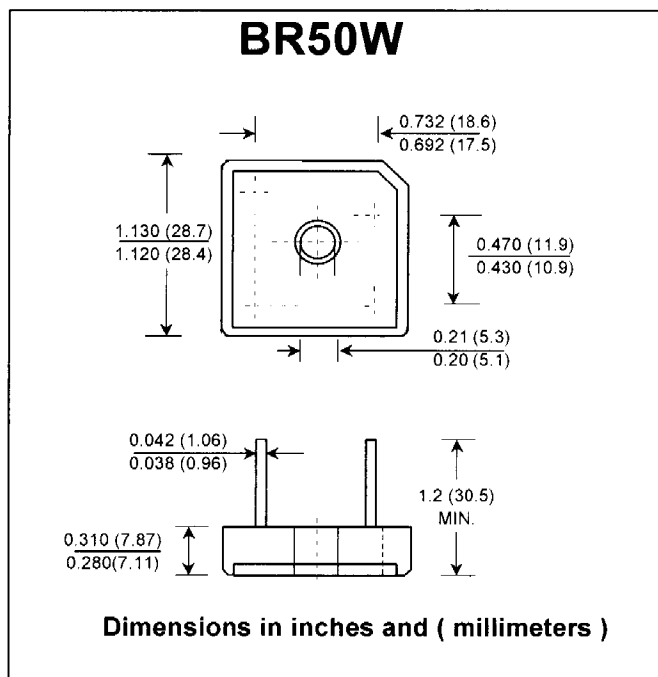
**PRV : 50 - 1000 Volts**  
**Io : 35 Amperes**

**FEATURES :**

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



**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 3500W	BR 3501W	BR 3502W	BR 3504W	BR 3506W	BR 3508W	BR 3510W	UNITS
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
Maximum Average Forward Current Tc = 55°C	I <sub>F(AV)</sub>					35			A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>					400			A
Current Squared Time at t < 8.3 ms.	I <sup>2</sup> t					660			A <sup>2</sup> S
Maximum Forward Voltage per Diode at I <sub>F</sub> = 17.5 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			mA
Typical Thermal Resistance at Junction to Case ( Note 1 )	R <sub>θJC</sub>					1.5			°C/W
Typical Thermal Resistance at Junction to Ambient	R <sub>θJA</sub>					10			°C/W
Operating Junction Temperature Range	T <sub>J</sub>					- 40 to + 150			°C
Storage Temperature Range	T <sub>STG</sub>					- 40 to + 150			°C

**Notes :**

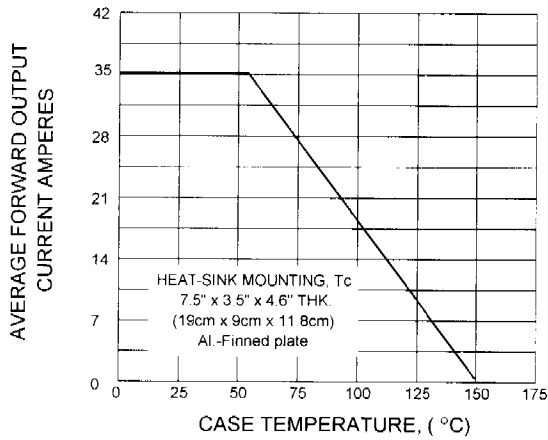
1. Thermal Resistance from junction to case with units mounted on a 7.5" x 3.5" x 4.6" (19cm.x 9cm.x 11.8cm.) Al-Finned Plate

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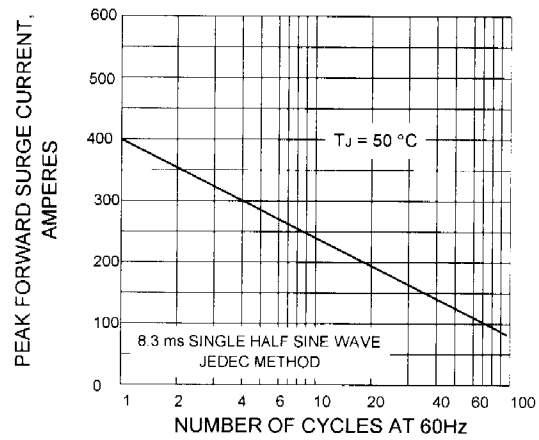
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## RATING AND CHARACTERISTIC CURVES ( BR3500W THRU BR3510W )

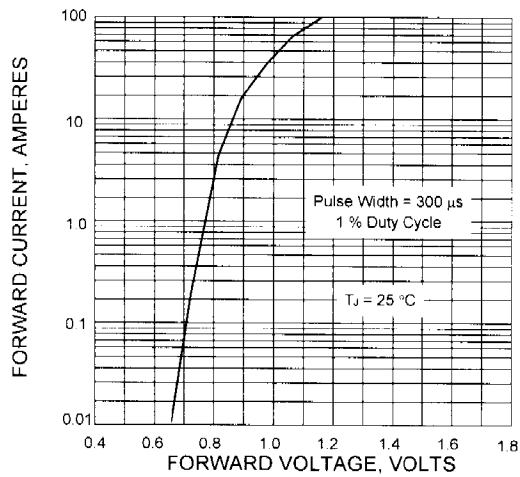
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



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

