

# BR3500 - BR3512

# SILICON BRIDGE RECTIFIERS

**PRV : 50 - 1200 Volts**

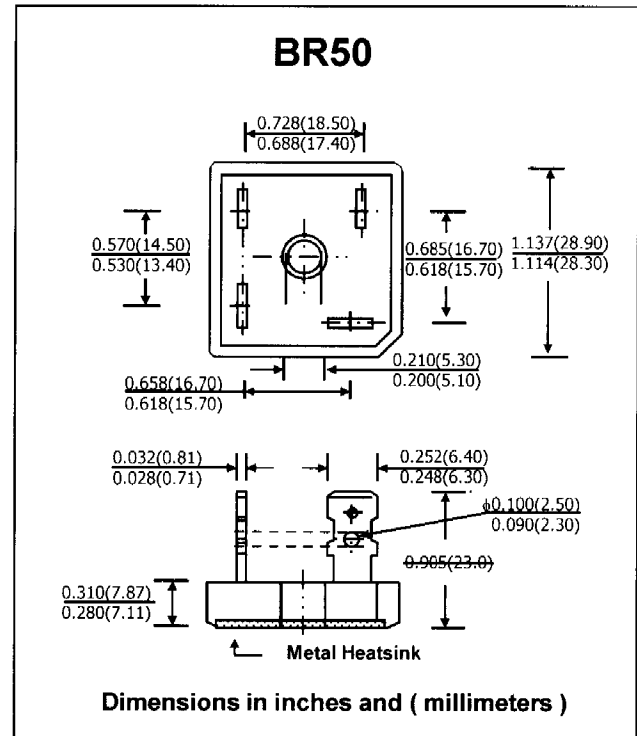
**Io : 35 Amperes**

**FEATURES :**

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Rated isolation-voltage 2000 V<sub>AC</sub>
- \* Pb / RoHS Free

**MECHANICAL DATA :**

- \* Case : Molded plastic with heatsink integrally mounted in the bridge encapsulation
- \* Epoxy : UL94V-0 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%.

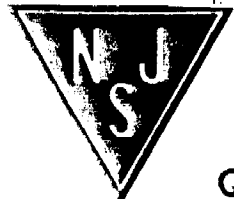
RATING	SYMBOL	BR 3500	BR 3501	BR 3502	BR 3504	BR 3506	BR 3508	BR 3510	BR 3512	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	1200	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	840	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	1200	V
Maximum Average Forward Current T <sub>c</sub> = 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 at Rated DC Blocking Voltage	T <sub>a</sub> = 25 °C	10								μA
	T <sub>a</sub> = 100 °C	200								μA
Typical Thermal Resistance (Note 1)	R <sub>θJC</sub>	1.5								°C/W
Typical Thermal Resistance at Junction to Ambient	R <sub>θJA</sub>	10								°C
Operating Junction Temperature Range	T <sub>J</sub>	- 40 to + 150								°C
Storage Temperature Range	T <sub>STG</sub>	- 40 to + 150								°C

**Note :**

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

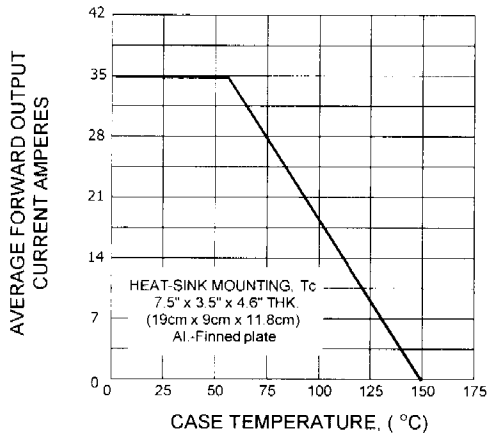
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**Quality Semi-Conductors**

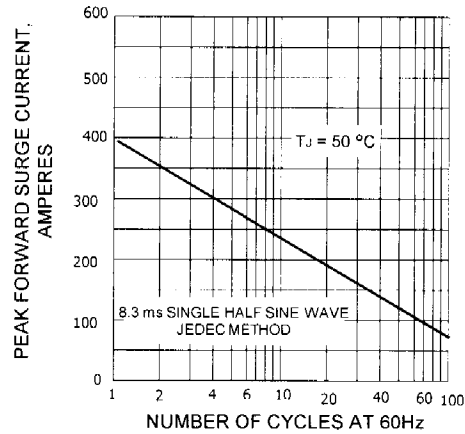


## RATING AND CHARACTERISTIC CURVES ( BR3500 - BR3512 )

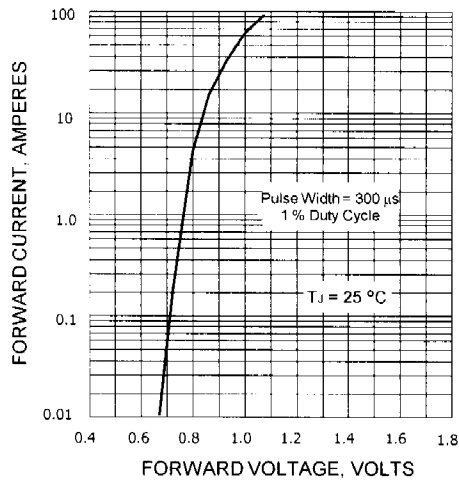
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



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

