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Certificate Number: Q10561



Certificate Number: E17276

## BR5000W - BR5010W

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

### FEATURES :

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

### 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%.

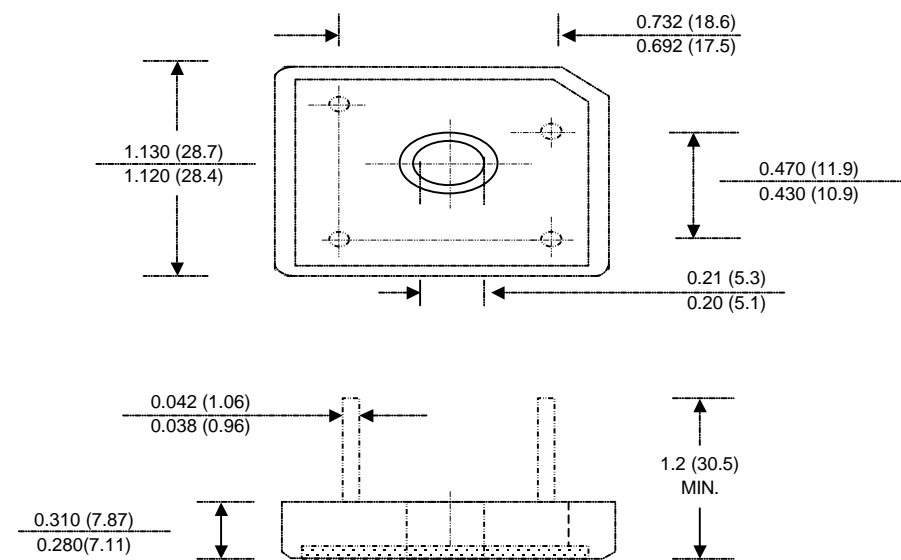
RATING	SYMBOL	BR 5000W	BR 5001W	BR 5002W	BR 5004W	BR 5006W	BR 5008W	BR 5010W	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Current Tc=55°C	IF(AV)	50							Amps.
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	IFSM	400							Amps.
Current Squared Time at t < 8.3 ms.	I <sup>2</sup> t	664							A <sup>2</sup> S
Maximum Forward Voltage per Diode at If = 25 Amps.	VF	1.1							Volts
Maximum DC Reverse Current Ta = 25 °C	IR	10							μA
at Rated DC Blocking Voltage Ta = 100 °C	IR(H)	200							μA
Typical Thermal Resistance at Junction to Case ( Note 1 )	RθJC	1.0							°C/W
Operating Junction Temperature Range	TJ	- 40 to + 150							°C
Storage Temperature Range	TSTG	- 40 to + 150							°C

### Notes :

- 1) Thermal resistance from Junction to Case with units mounted on heat sink.

## SILICON BRIDGE RECTIFIERS

### BR50W

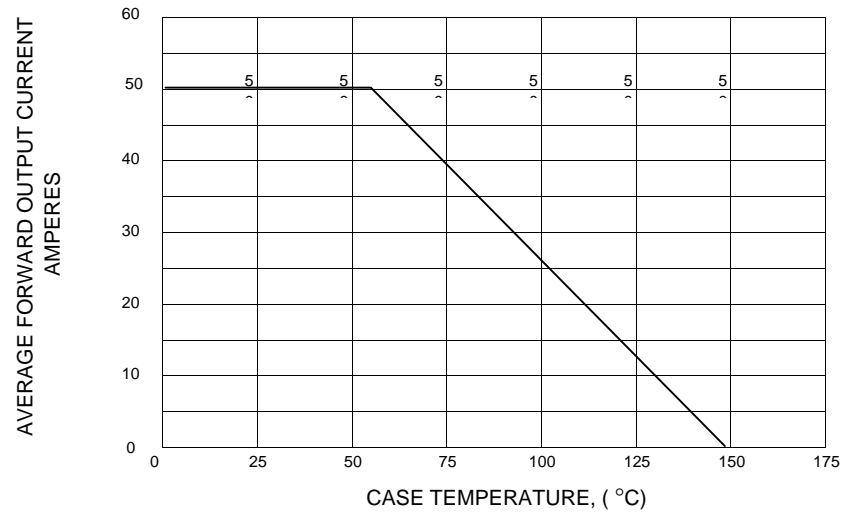


Dimensions in inches and ( millimeters )

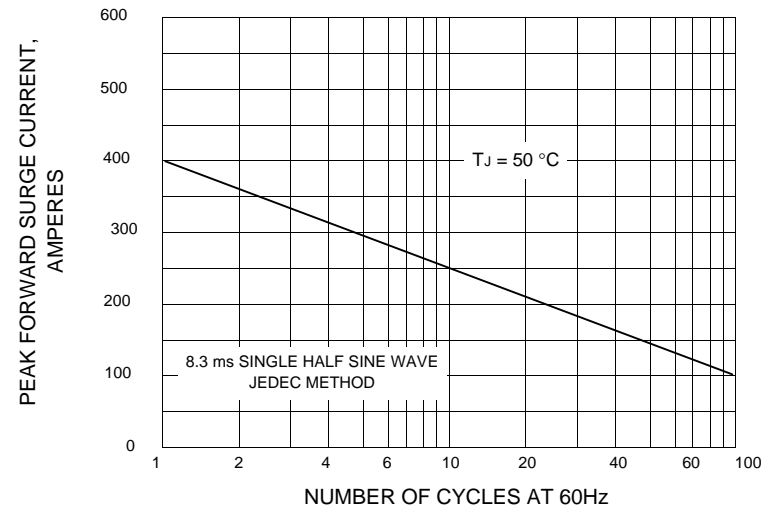


**RATING AND CHARACTERISTIC CURVES ( BR5000W - BR5010W )**

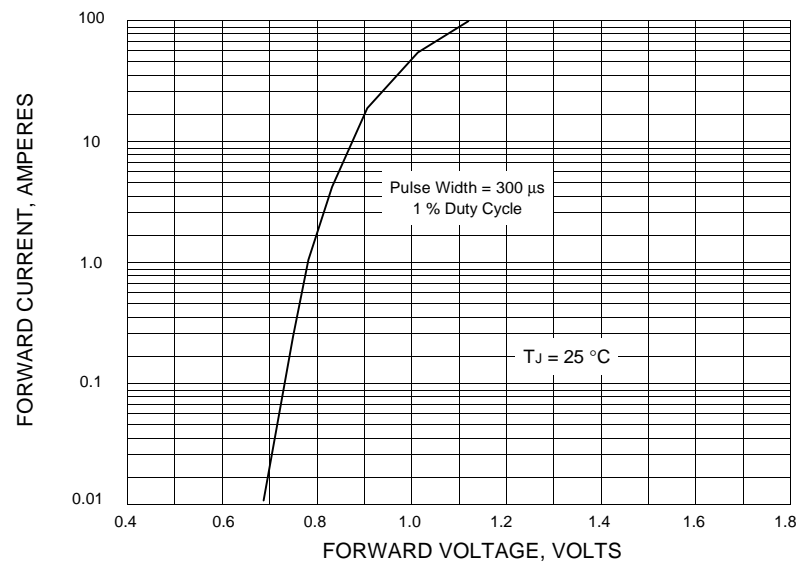
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



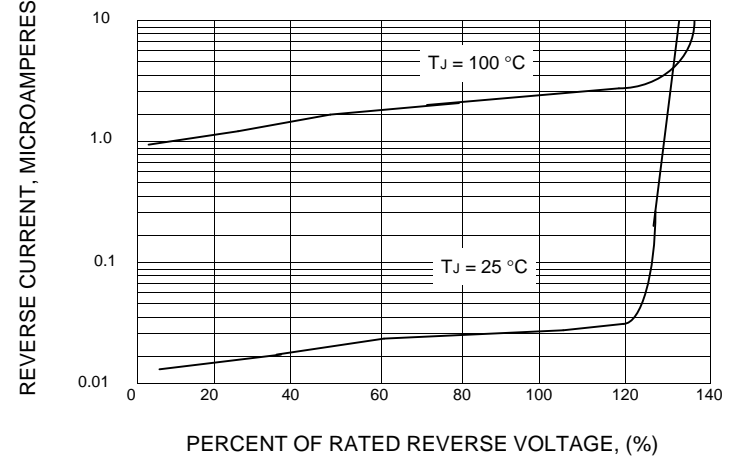
**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



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



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



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