



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**BR5005W  
THRU  
BR5010W**

**TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER**  
**VOLTAGE RANGE - 50 to 1000 Volts**      **CURRENT - 50 Amperes**

**FEATURES**

- \* Plastic case with heatsink for Maximum Heat Dissipation
- \* Surge overload ratings - 400 Amperes
- \* Low forward voltage drop

**MECHANICAL DATA**

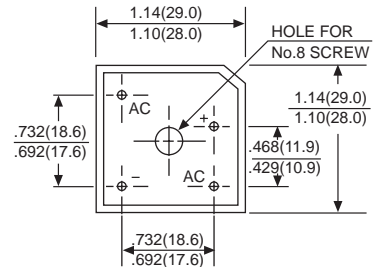
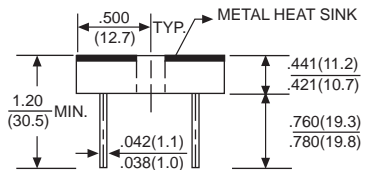
- \* Case: Molded plastic with heatsink
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 30 grams

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings 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%.



BR-25W



Dimensions in inches and (millimeters)

	SYMBOL	BR5005W	BR5010W	BR5020W	BR5040W	BR5060W	BR5080W	BR50100W	UNITS	
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	Volts	
Maximum RMS Bridge Input 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 Rectified Output Current at TA = 55°C	Io	50							Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	500							Amps	
Maximum Forward Voltage Drop per element at 25 A DC	Vf	1.1							Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	IR	@ TA = 25°C	10							μAmps
		@ TA = 100°C	500							
I <sup>2</sup> t Rating for Fusing (t<8.3ms)	I <sup>2</sup> t	664							A <sup>2</sup> Sec	
Typical Junction Capacitance (Note1)	Cj	300							pF	
Typical Thermal Resistance (Note 2)	RθJC	2.0							°C/W	
Operating and Storage Temperature Range	TJ, TSTG	-55 to +175							°C	

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts  
 2. Thermal Resistance from Junction to Case per leg.

# RATING AND CHARACTERISTIC CURVES (BR5005W THRU BR5010W)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

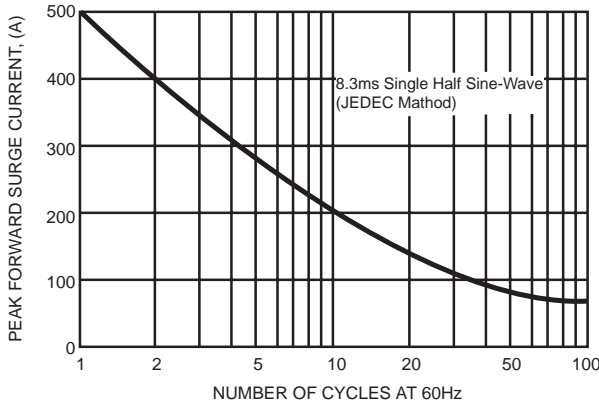


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

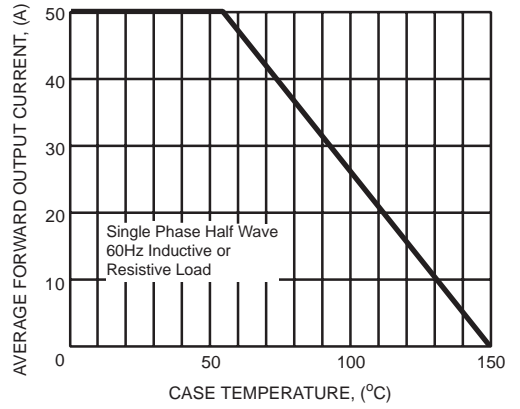


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

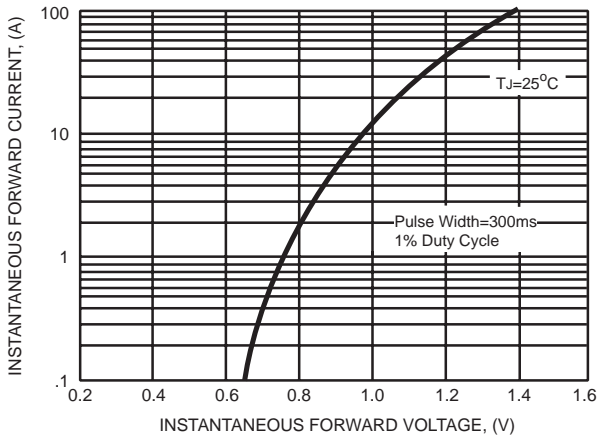
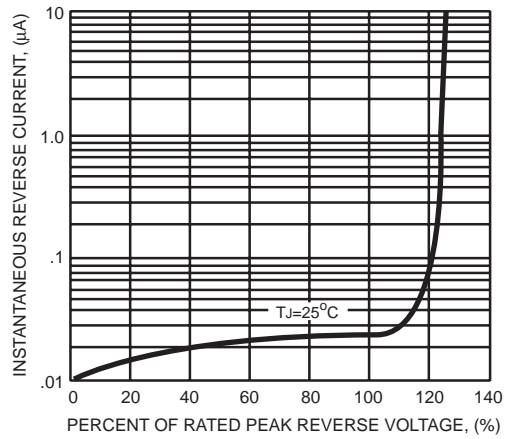


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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