

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

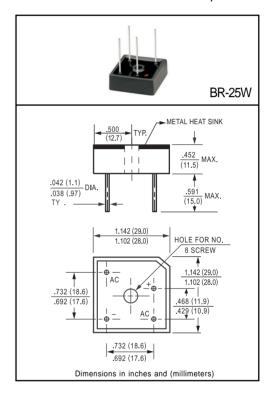
* Lead: MIL-STD-202E, Method 208 guaranteed

* 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%.



		SYMBOL	BR5005W	BR501W	BR502W	BR504W	BR506W	BR508W	BR5010W	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 Tc = 55°C		lo	50						Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		IFSM	400						Amps	
Maximum Forward Voltage Drop per element at 25A DC		VF	1.1						Volts	
Maximum DC Reverse Current at Rated	@Ta = 25°C	IR 10								uAmps
DC Blocking Voltage per element	@Ta = 100°C	IK IK	500							
I ² t Rating for Fusing (t<8.3ms)		I ² t	664						A ² Sec	
Typical Junction Capacitance (Note1)		Cı	300						pF	
Typical Thermal Resistance (Note 2)		RøJC	2.0						°C/W	
Operating and Storage Temperature Range		TJ,TSTG	-55 to + 150						۰C	

NOTES: 1.Measured at 1 MHz and applied reverse voltage of 4.0 volts

Thermal Resistance from Junction to Case per leg.

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT 500 PEAK FORWARD SURGE CURRENT, (A) 8.3ms Single Half Sine-Wave (JEDEC Method) 400 300 200 100 0 2 8 10 20 60 80 100 1 4 6 NUMBER OF CYCLES AT 60Hz

FIG. 2 - TYPICAL FORWARD CURRENT **DERATING CURVE** 50 AVERAGE FORWARD CURRENT, (A) 40 30 20 Single Phase Half Wave 10 60Hz Indutive or Resistive Load 0 0 50 100 150 175 CASE TEMPERATURE, ($^{\circ}\!$ C)

