



*DC COMPONENTS CO., LTD.*

RECTIFIER SPECIALISTS

BR5005  
THRU  
BR5010

**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**

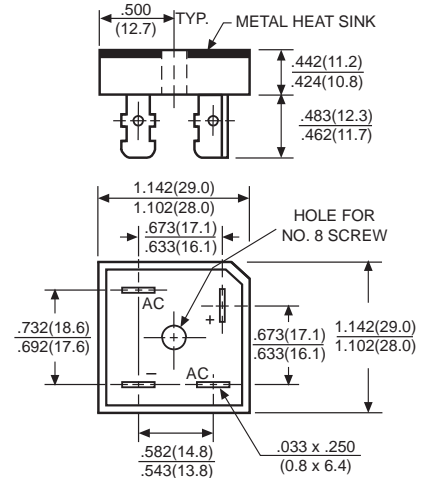
- \* Case: Molded plastic with heatsink
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Plated .25"(6.35mm) Faston lugs, Solderable per MIL-STD-202E, Method 208 guaranteed
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 30 grams

**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-25



Dimensions in inches and (millimeters)

	SYMBOL	BR5005	BR501	BR502	BR504	BR506	BR508	BR5010	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 = 50°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 7 .5A DC	Vf	1.1							Volts
Maximum DC Reverse Current at Rated	IR	@TA = 25°C							μAmps
DC Blocking Voltage per element		@TA = 100°C							
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 (BR5005 THRU BR5010)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

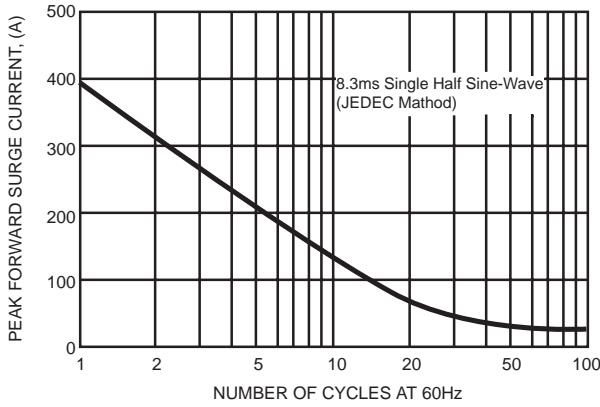


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

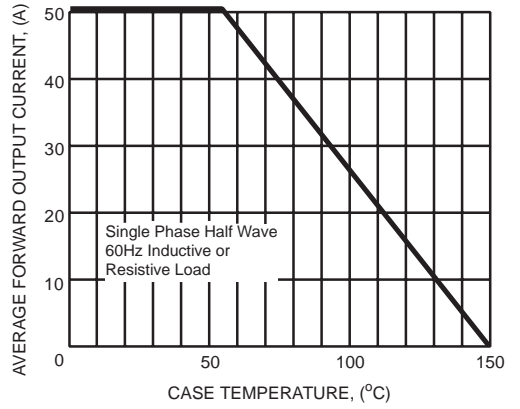


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

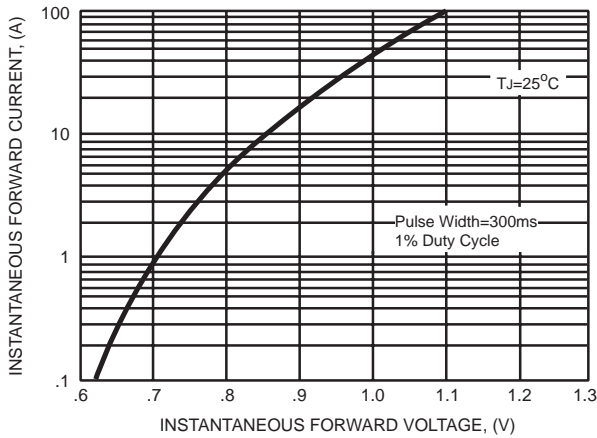
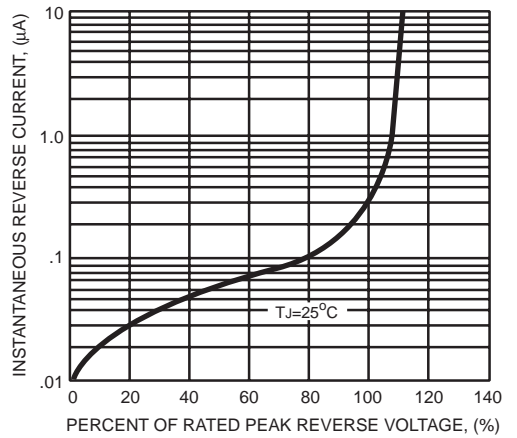


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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