



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

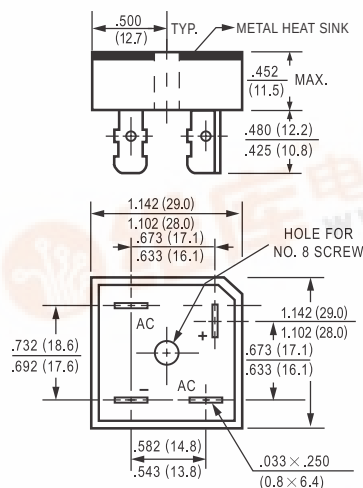
FEATURES

- * 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

BR-25



Dimensions in inches and (millimeters)

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	BR5005	BR501	BR502	BR504	BR506	BR508	BR5010	UNITS
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage		V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current at T _C = 55°C		I _O	50							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I _{FSM}	400							Amps
Maximum Forward Voltage Drop per element at 25A DC		V _F	1.1							Volts
Maximum DC Reverse Current at Rated	@ T _A = 25°C	I _R	10							uAmps
DC Blocking Voltage per element	@ T _A = 100°C		500							
I ² t Rating for Fusing (t<8.3ms)		I ² t	664							A ² Sec
Typical Junction Capacitance (Note1)		C _J	300							pF
Typical Thermal Resistance (Note 2)		R _{θJC}	2.0							°C/W
Operating and Storage Temperature Range		T _J ,T _{STG}	-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

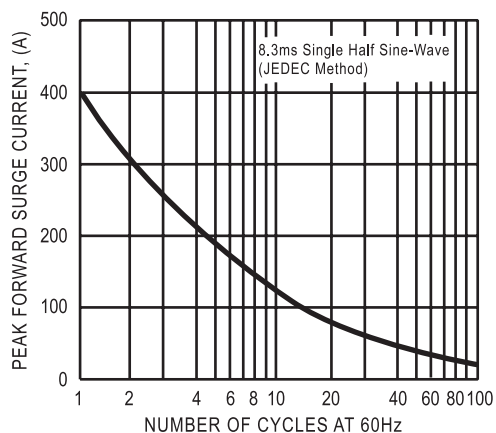


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

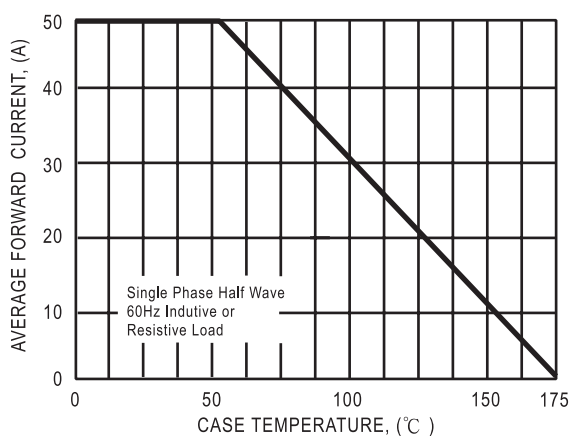


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

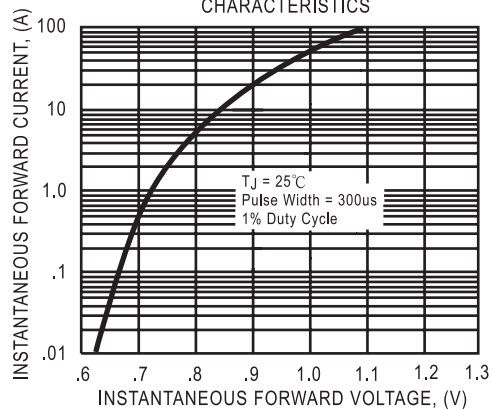


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

