



## SINGLE PHASE BRIDGE RECTIFIER

**BR5005 THRU BR5010**

**VOLTAGE RANGE  
CURRENT**

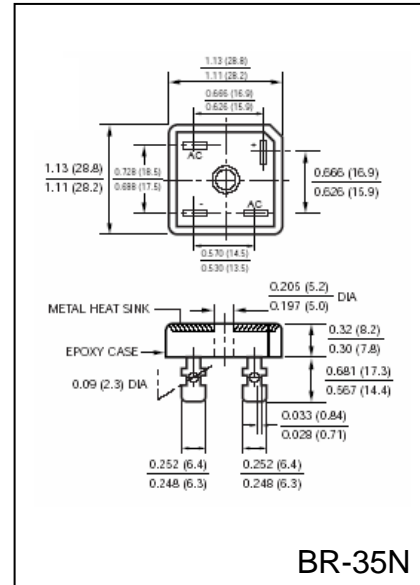
**50 to 1000 Volts  
50.0 Ampere**

### FEATURES

- UL recognized
- High forward surge current capability
- Integrally molded heatsink provides very low Thermal resistance
- High isolation voltage from case to lugs
- High temperature soldering guaranteed: 260°C / 10 seconds

### MECHANICAL DATA

- Case: Molded plastic body
- Terminal: Plated 0.25" (6.35mm) lug
- Polarity: Polarity symbols marked on case
- Mounting: Thru hole for #10 screw, 20 in-lbs Torque max.
- Weight: 0.66 ounce, 18.7 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	BR 5005	BR 501	BR 502	BR 504	BR 506	BR 508	BR 5010	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS 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 Current, At $T_C = 55^\circ\text{C}$ (Note 1 and 2)	$I_{(AV)}$	50							Amps
Peak Forward Surge Current									
8.3mS single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	400							Amps
Rating for Fusing ( $t < 8.3\text{mS}$ )	$I^2t$	664							$\text{A}^2\text{s}$
Maximum Instantaneous Forward Voltage drop per Bridge element 25.0A	$V_F$	1.1							Volts
Maximum DC Reverse Current at Rated $T_A = 25^\circ\text{C}$	$I_R$	10							$\mu\text{A}$
DC Blocking Voltage per element $T_A = 100^\circ\text{C}$		1.0							mA
Isolation Voltage from case to lug	$V_{ISO}$	2500							Volts
Typical Thermal Resistance (Note 1 and 2)	$R_{\theta Jc}$	2.0							$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_J$	(-65 to +150)							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	(-65 to +150)							$^\circ\text{C}$

### Notes:

1. Unit mounted on 9" x 3.5" x 4.6 (23cm x 9cm x 11.8cm) AL finned plate
2. Bolt down on heat-sink with silicon thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw



# RATINGS AND CHARACTERISTIC CURVES BR5005 THRU BR5010

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

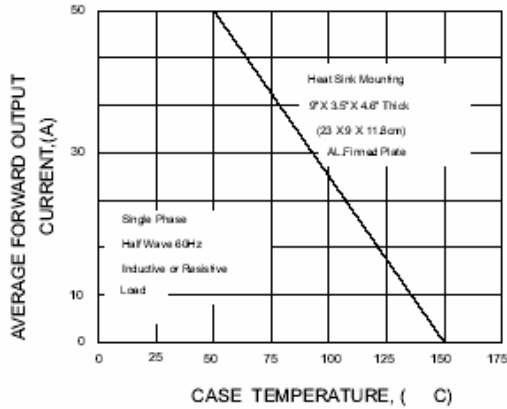


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER ELEMENT

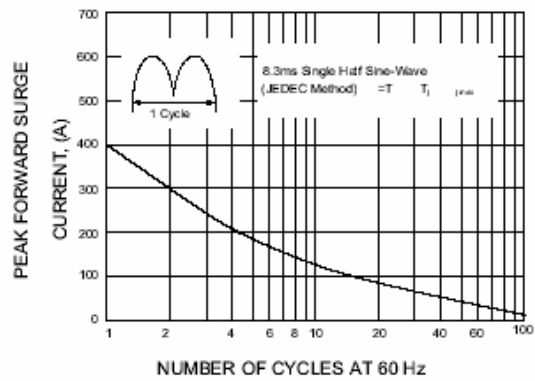


FIG.3-TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

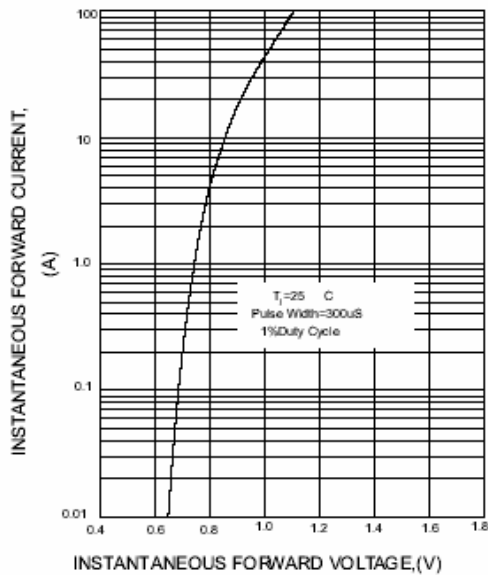


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

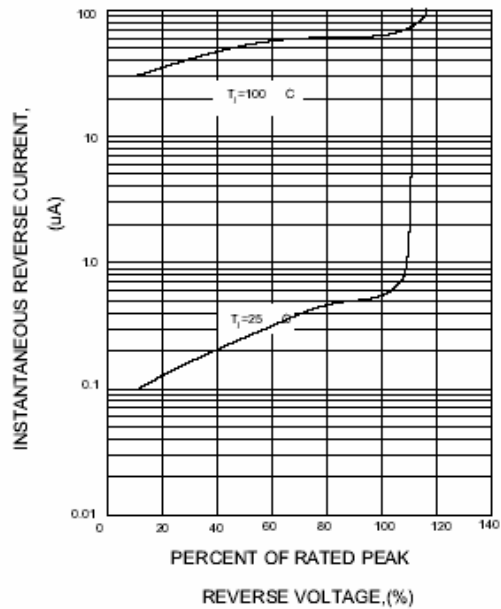


FIG.5-MAXIMUM POWER DISSIPATION

