

SINGLE-PHASE BRIDGE RECTIFIER

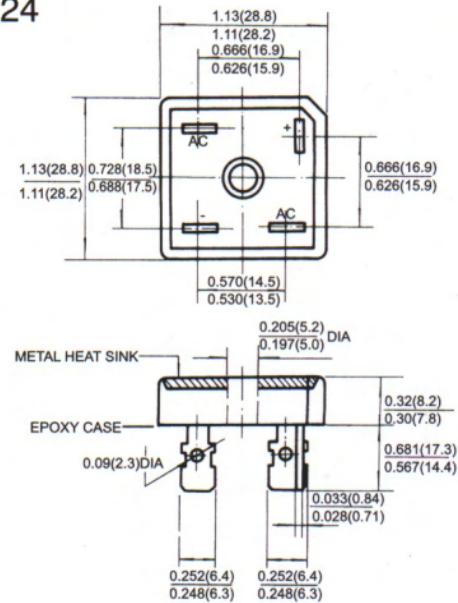
FEATURES

- Low cost
- This series is UL recognized under component index, file number E127707
- High forward surge current capability low thermal resistance.
- High isolation voltage from case to lugs.
- High temperature soldering guaranteed:
260°C/10 second, at 5 lbs. (2.3kg) tension.

MECHANICAL DATA

- Case: Molded 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: 0.62ounce, 17.5gram(BR40)

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BR15N/25N/35N/40/50

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	BR5005	BR501	BR502	BR504	BR506	BR508	BR5010	
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 Output Current, at $T_C = 50^\circ\text{C}$ (Note1,2)	$I_{(AV)}$	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							A^2s
Maximum Instantaneous Forward Voltage Drop per bridge element at 25A	V_F	1.1							Volts
Maximum DC Reverse Current at rated DC blocking voltage per element	I_R	10							μAmp
		1.0							mAmp
Isolation Voltage from case to lugs	V_{ISO}	2500							V_{AC}
Typical Thermal Resistance (Note 1, 2)	R_{JC}	2.0							$^\circ\text{C/W}$
Operating Temperature Range	T_J	(-65 to +150)							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-65 to +150)							$^\circ\text{C}$

1. Unit Mounted on 9" X 3.5" X 4.6" (23 X 9 X 11.8cm) Al. finned plate.

2. Bolt down on heatsink with silicon thermal compound between bridge and mounting surface for maximum heat transfer efficiency with

#10 screw.

FIG.1-DERATING CURVE FOR

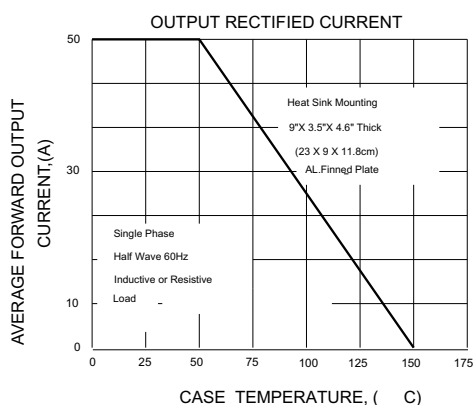


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER ELEMENT

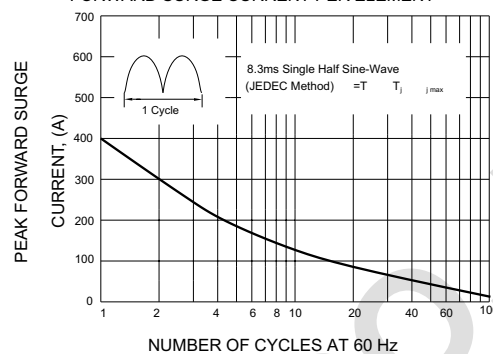


FIG.3-TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

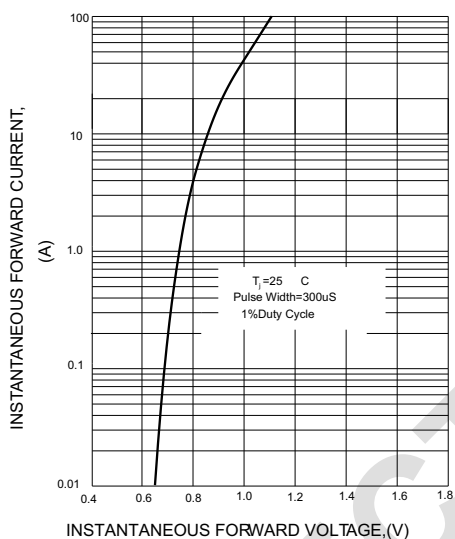


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

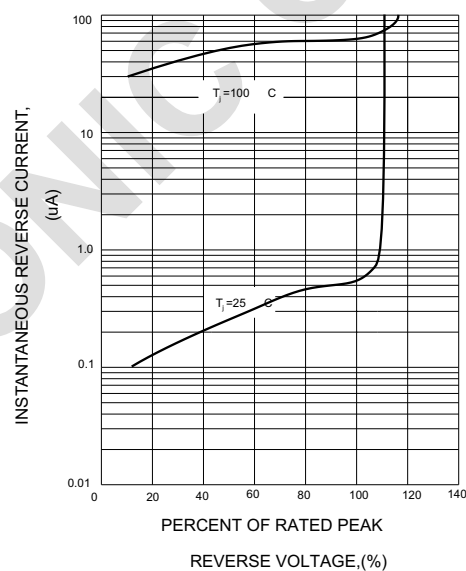


FIG.5-MAXIMUM POWER DISSIPATION

