

# BR25005 THRU BR2510

## SINGLE-PHASE BRIDGE RECTIFIER

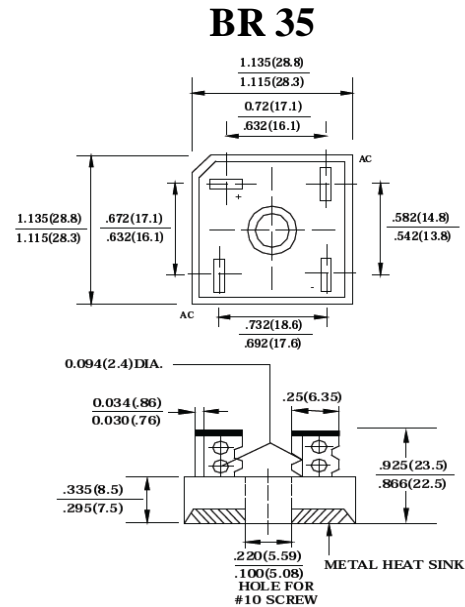
VOLTAGE RANGE 50 to 1000 Volts    CURRENT 25.0 Ampere

### FEATURES

- ◆ 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 plastic with Heatsink internally moun in the bridge encapsulation.
- ◆ 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:1.02 ounce, 29gram.



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

PARAMETER	SYMBOL	BR25005	BR2501	BR2502	BR2504	BR2506	BR2508	BR2510	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, at T <sub>c</sub> =55°C(Note 1, 2)	I <sub>(AV)</sub>	25							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	300							Amps
Rating for Fusing(t<8.3ms)	I <sup>2</sup> T	373							A <sup>2</sup> S
Maximum Instantaneous Forward Voltage at 12.5A	V <sub>F</sub>	1.1							Volts
Maximum DC Reverse Current at rated DC blocking voltage	T <sub>A</sub> = 25°C	5.0							μAmps
	T <sub>A</sub> = 150°C	0.5							mAmps
Isolation Voltage from case to lug	V <sub>ISO</sub>	2500							V <sub>AC</sub>
Typical Thermal Resistance (Note 1, 2)	R <sub>θJC</sub>	2.0							°C/W
Operating Temperature Range	T <sub>J</sub>	-65 to +150							°C
Storage Temperature Range	T <sub>stg</sub>	-65 to +150							°C

Note: 1. Unit mounted on 5" × 4" × 3" thick (12.8mm × 10.2mm × 7.3mm) Al. plate.

2. Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw.

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### RATING AND CHARACTERISTIC CURVES BR25005 THRU BR2510

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

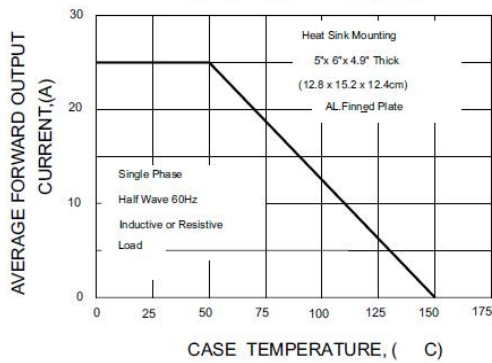


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER ELEMENT

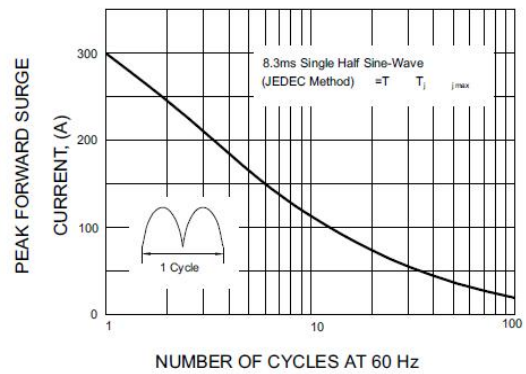


FIG.3-TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

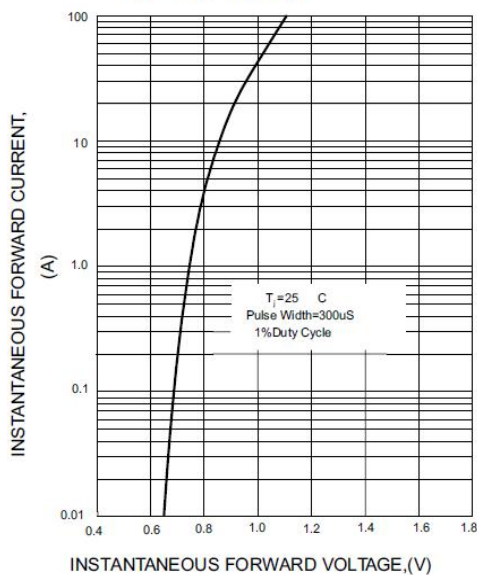


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

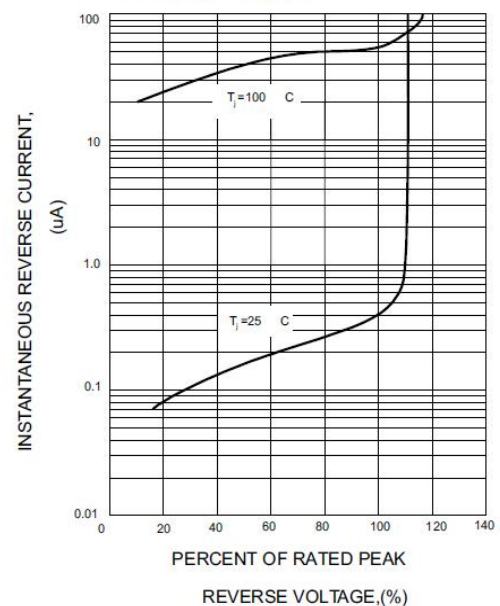


FIG.5-TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

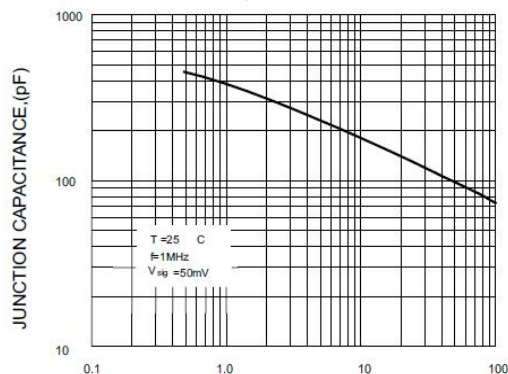
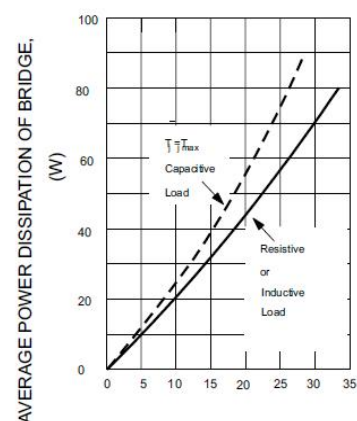


FIG.6-MAXIMUM POWER DISSIPATION



Note: Specifications are subject to change without notice. For more detail and update, please visit our website.