

### FEATURES:

- Integrally molded heat sink provide low thermal resistance for max. heat dissipation
- High surge current capability
- Void-free junction soldering by using vacuum soldering
- Universal 3-way terminals : snap on, wire-around, or P.C. board mounting
- High temperature soldering guaranteed : 260° C/10 seconds at 5lbs. (2.3kg)tension
- AI plate plastic case

### MECHANICAL DATA

Case : Molded plastic with heat-sink integrally mounted in the bridge encapsulation

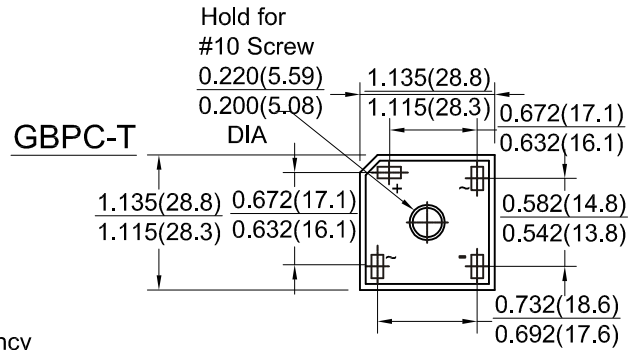
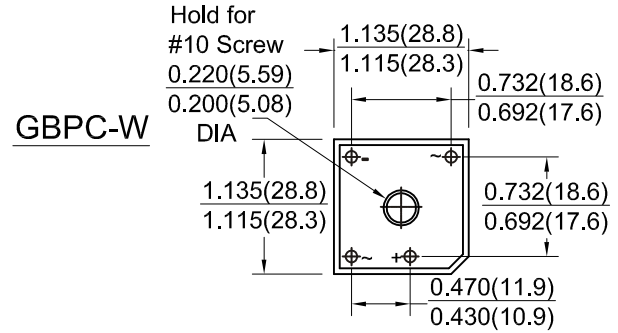
Terminals : Either nickel plated 0.25"(6.35mm). Faston lugs or plated copper leads 0.040"(1.02mm)diameter suffix letter"W" or "L" added to indicate lead

Polarity : Polarity symbols marked on body

Mounting Position : Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for max. heat transfer efficiency

Weight : 19 grams or 0.67 ounce

Mounting Torque : 20 in.-lb. max



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25° C ambient temp. unless otherwise specified.

Single phase, half sine wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20 %.

| Characteristic                                                                              | Symbol<br>Marking                 | GBPC                            |                               |                               |                               |                               |                               |                               | Units              |
|---------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------|
|                                                                                             |                                   | 50005<br>GT/W<br>GBPC<br>50005G | 5001<br>GT/W<br>GBPC<br>5001G | 5002<br>GT/W<br>GBPC<br>5002G | 5004<br>GT/W<br>GBPC<br>5004G | 5006<br>GT/W<br>GBPC<br>5006G | 5008<br>GT/W<br>GBPC<br>5008G | 5010<br>GT/W<br>GBPC<br>5010G |                    |
| 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 TC=50° C                                       | I <sub>O</sub>                    | 50.0                            |                               |                               |                               |                               |                               |                               | Amps               |
| Peak forward surge current, single sine-wave on rated load(JEDEC Method)                    | I <sub>FSM</sub>                  | 400.0                           |                               |                               |                               |                               |                               |                               | Amps               |
| Rating for fusing(1ms<tm<8.3ms)                                                             | I <sup>2</sup> t                  | 1200                            |                               |                               |                               |                               |                               |                               | A <sup>2</sup> sec |
| Maximum instantaneous forward voltage drop per leg at 25A                                   | V <sub>F</sub>                    | 1.2                             |                               |                               |                               |                               |                               |                               | Volts              |
| Maximum DC reverse current<br>at rated DC blocking voltage per leg<br>Ta=25° C<br>Ta=125° C | I <sub>R</sub>                    | 5.0<br>500                      |                               |                               |                               |                               |                               |                               | μ A                |
| RMS isolated voltage from case to leads                                                     | V <sub>ISO</sub>                  | 2500                            |                               |                               |                               |                               |                               |                               | Volts              |
| Typical junction capacitance                                                                | C <sub>j</sub>                    | 360                             |                               |                               |                               |                               |                               |                               | pF                 |
| Typical thermal resistance                                                                  | R <sub>th-JC</sub>                | 1.2                             |                               |                               |                               |                               |                               |                               | ° C/W              |
| Operating junction and storage temperature range                                            | T <sub>j</sub> , T <sub>stg</sub> | -55 to +150                     |                               |                               |                               |                               |                               |                               | ° C                |

Notes : 1. Measured 1MHz and applied reverse voltage of 4.0V DC

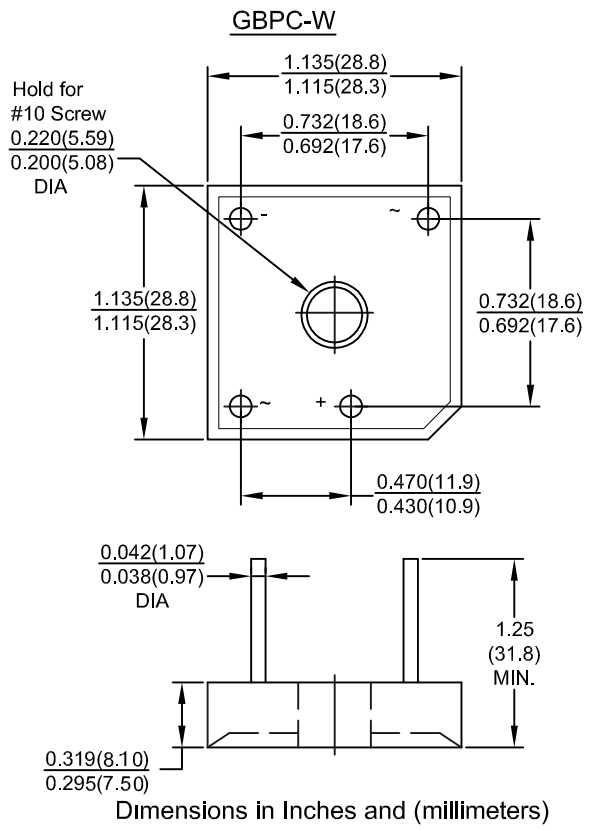
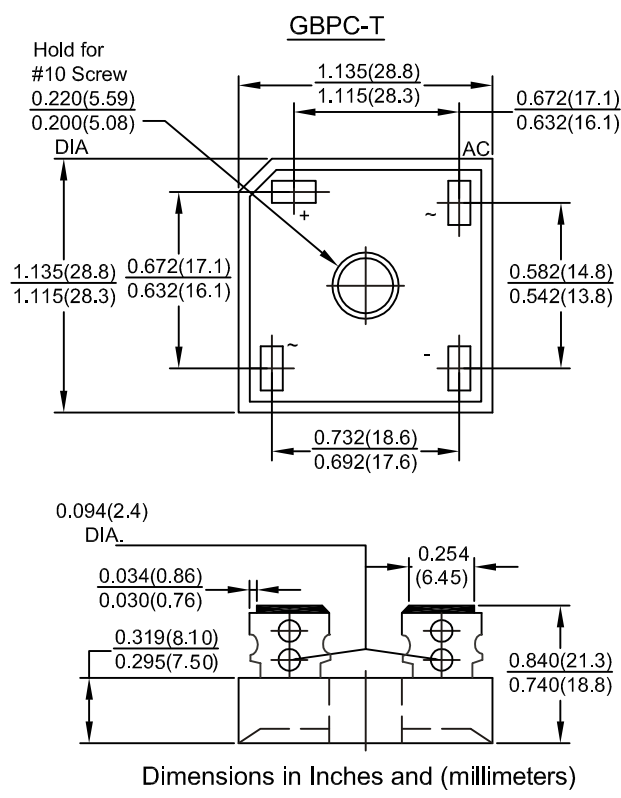


FIG.1-MAXIMUM OUTPUT RECTIFIED CURRENT

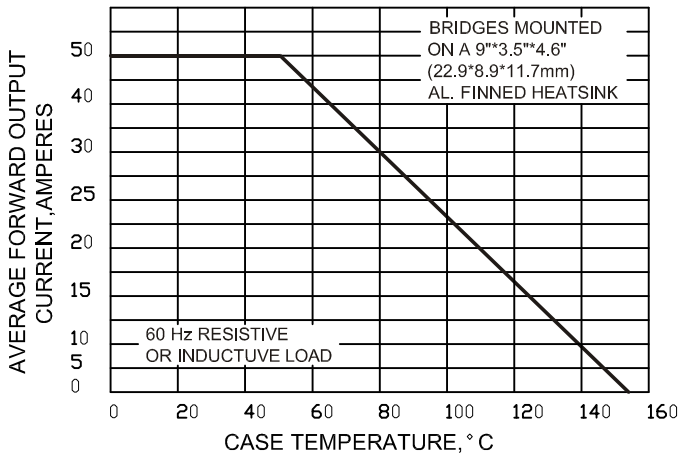


FIG.2-MAXIMUM OUTPUT RECTIFIED CURRENT

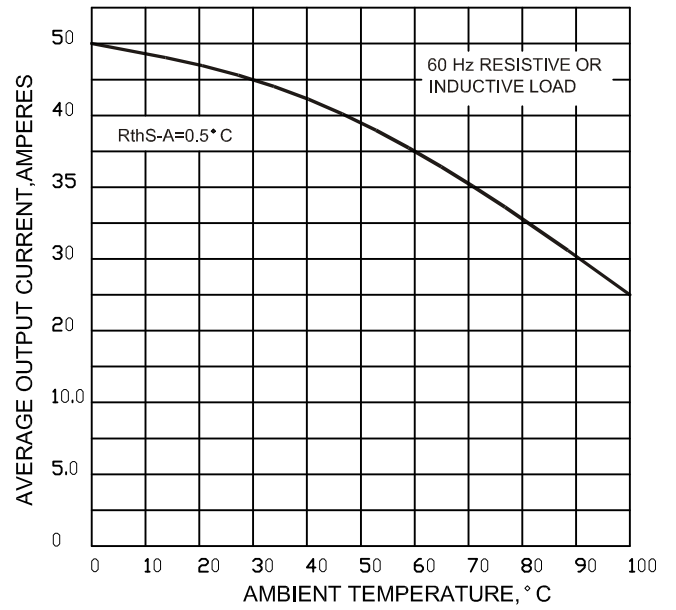


FIG.3-MAXIMUM POWER DISSIPATION

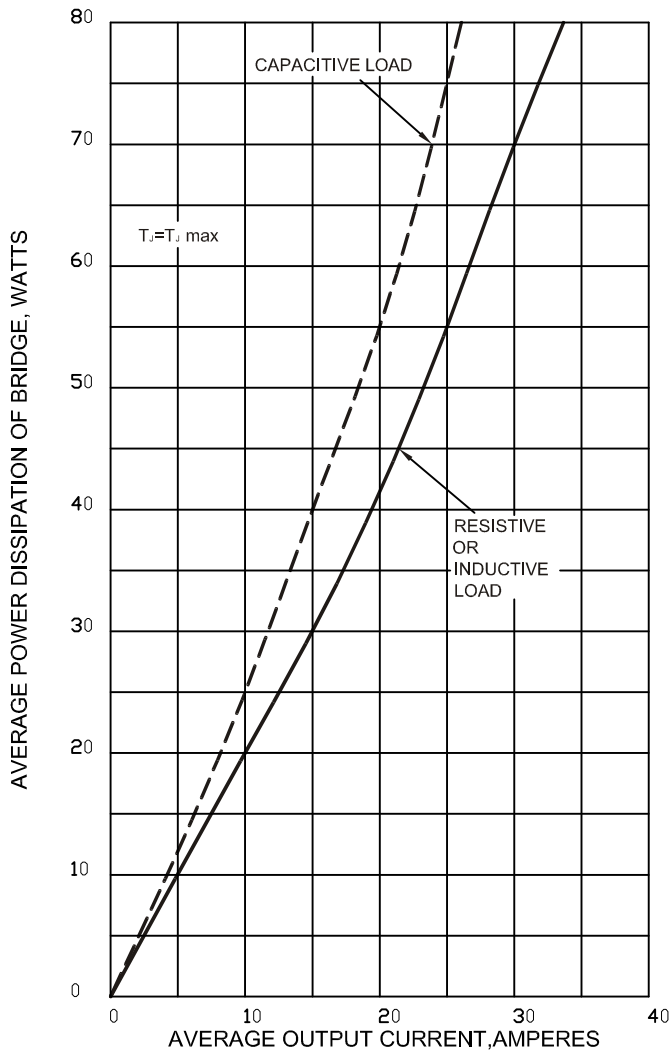


FIG.4-MAXIMUM NON-REPEITIVE PEAK FORWARD

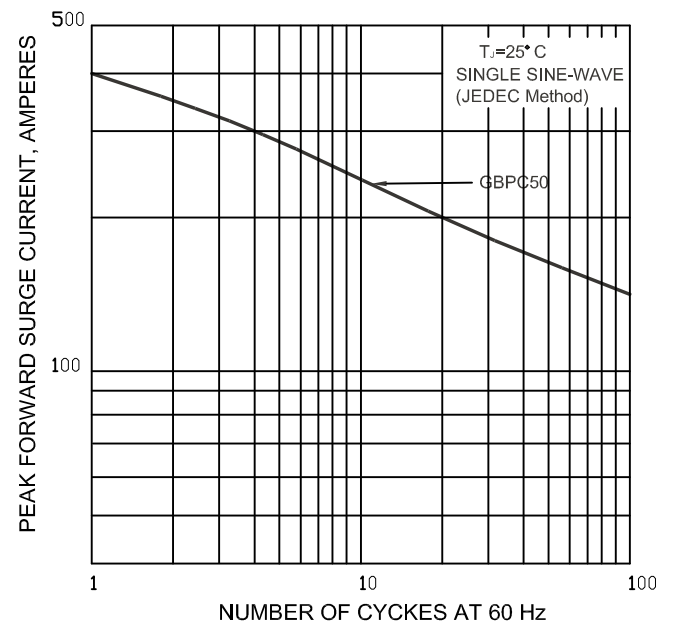


FIG.5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

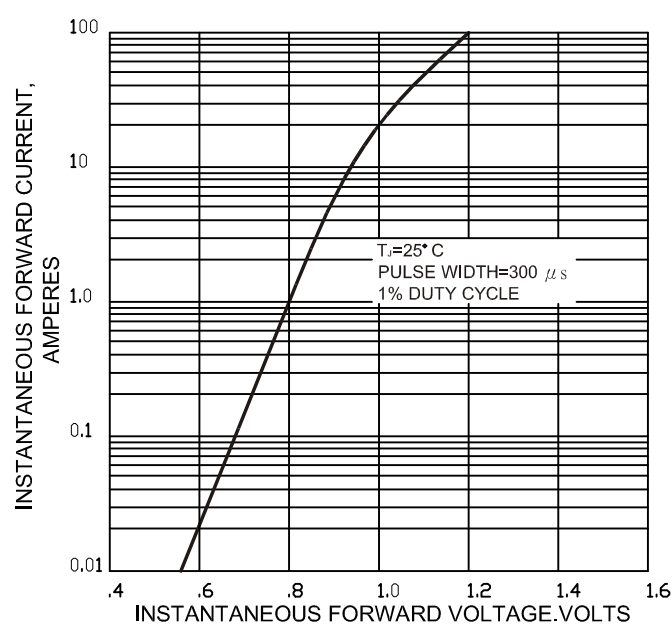


FIG.6-TYPICAL REVERSE CHARACTERISTICS

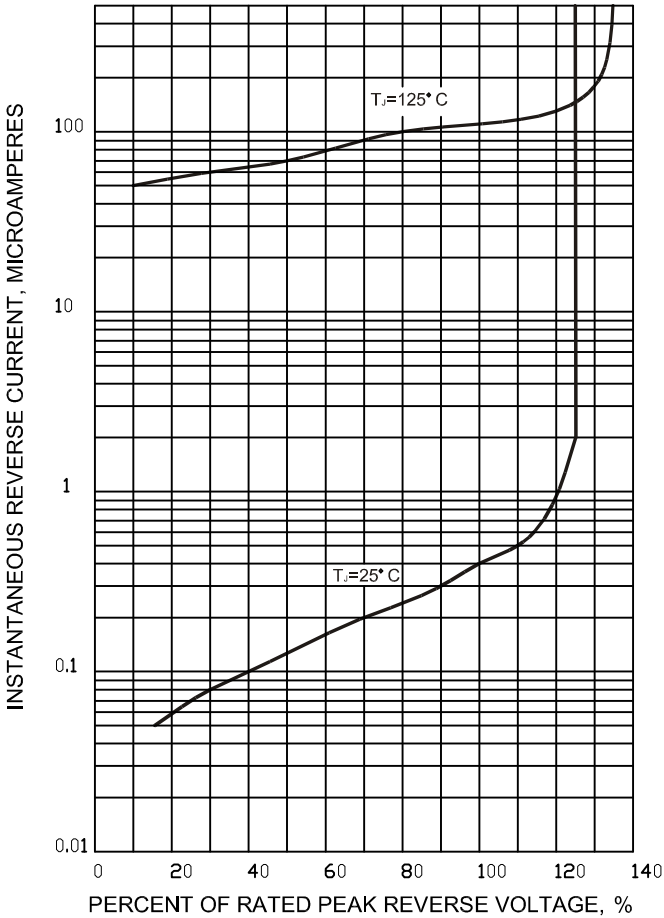


FIG.7-TYPICAL JUNCTION CAPACITANCE PER LEG

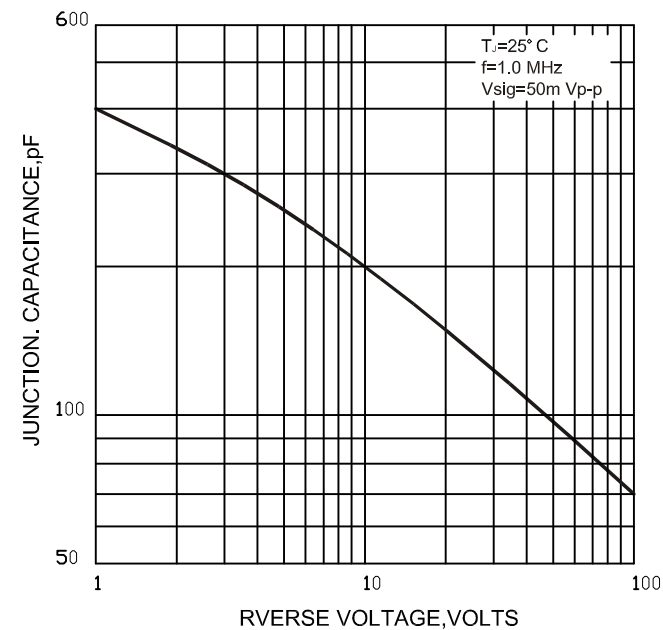


FIG.8-TYPICAL TRANSIENT THERMAL IMPEDANCE

