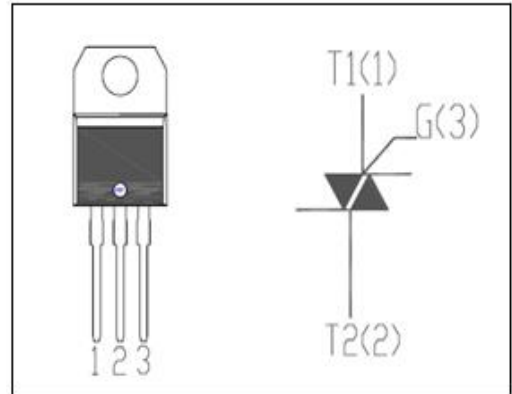


**isc Thyristors**
**BTA12-800BW**
**DESCRIPTION**

- With TO-220 packaging
- Operating in 3 quadrants
- High commutation capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Solid state relays; heating and cooking appliances
- Switching applications


**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)**

| SYMBOL              | PARAMETER  |                       | MAX        | UNIT |
|---------------------|--|-----------------------|------------|------|
| V <sub>DRM</sub>    | Repetitive peak off-state voltage                        |                       | 800        | V    |
| V <sub>RRM</sub>    | Repetitive peak reverse voltage                          |                       | 800        | V    |
| I <sub>T(RSM)</sub> | Average on-state current                                 | @T <sub>c</sub> =90°C | 12         | A    |
| I <sub>TSM</sub>    | Surge non-repetitive on-state current                    | 50HZ<br>60HZ          | 120<br>126 | A    |
| P <sub>G(AV)</sub>  | Average gate power dissipation ( over any 20 ms period ) |                       | 1.0        | W    |
| T <sub>j</sub>      | Operating junction temperature                           |                       | -40~125    | °C   |
| T <sub>stg</sub>    | Storage temperature                                      |                       | -40~150    | °C   |

**ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C unless otherwise specified)**

| SYMBOL               | PARAMETER                         | CONDITIONS   |   | MIN | MAX        | UNIT |
|----------------------|-----------------------------------|--|---|-----|------------|------|
| I <sub>RRM</sub>     | Repetitive peak reverse current   | V <sub>R</sub> =V <sub>RRM</sub> Rated;<br>V <sub>D</sub> =V <sub>DRM</sub> Rated; | T <sub>j</sub> =25°C<br>T <sub>j</sub> =125°C |     | 0.005<br>1 | mA   |
| I <sub>DRM</sub>     | Repetitive peak off-state current |  |   |     |            |      |
| V <sub>TM</sub>      | On-state voltage                  | I <sub>T</sub> =17A  |   |     | 1.55       | V    |
| I <sub>GT</sub>      | Gate-trigger current              | V <sub>D</sub> =12V;RG=30 Ω  | I   |     | 50         | mA   |
|                      |                                   |  | II  |     | 50         |      |
|                      |                                   |  | III   |     | 50         |      |
| V <sub>GT</sub>      | Gate-trigger voltage              | V <sub>D</sub> =12V;RG=30 Ω  |   |     | 1.3        | V    |
| R <sub>th(j-c)</sub> | Junction to case                  | Half cycle   |   |     | 2.3        | °C/W |

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