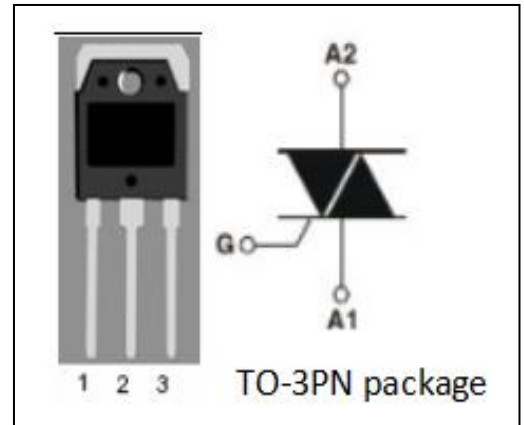


**isc Thyristors**
**BTA41-600BW**
**DESCRIPTION**

- With TO-3PN packaging
- Can be operated in 3 quadrants
- Advanced technology to provide customers with high commutation performances
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Switching applications
- Phase control
- Static switching on inductive or resistive load


**ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}\text{C}$ )**

| SYMBOL              | PARAMETER                                                | MAX                        | UNIT               |
|---------------------|----------------------------------------------------------|----------------------------|--------------------|
| $V_{\text{DRM}}$    | Repetitive peak off-state voltage                        | 600                        | V                  |
| $V_{\text{RRM}}$    | Repetitive peak reverse voltage                          | 600                        | V                  |
| $I_{\text{T(RSM)}}$ | Average on-state current $T_c=75^{\circ}\text{C}$        | 40                         | A                  |
| $I_{\text{TSM}}$    | Surge non-repetitive on-state current                    | 50HZ<br>315<br>60HZ<br>300 | A                  |
| $P_{\text{G(AV)}}$  | Average gate power dissipation ( over any 20 ms period ) | 1                          | W                  |
| $T_j$               | Operating junction temperature                           | -40~125                    | $^{\circ}\text{C}$ |
| $T_{\text{stg}}$    | Storage temperature                                      | -40~150                    | $^{\circ}\text{C}$ |

## isc Thyristors

## BTA41-600BW

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 |     | 0.01<br>6 | mA   |
| I <sub>DRM</sub>     | Repetitive peak off-state current |                                                                                    |                                               |     |           |      |
| V <sub>TM</sub>      | On-state voltage                  | I <sub>T</sub> =60A; t <sub>p</sub> =380 μ s                                       |                                               |     | 1.8       | V    |
| I <sub>GT</sub>      | Gate-trigger current              | V <sub>D</sub> =12V;R <sub>L</sub> =33Ω;                                           |                                               | I   | 50        | mA   |
|                      |                                   |                                                                                    |                                               | II  | 50        |      |
|                      |                                   |                                                                                    |                                               | III | 50        |      |
| V <sub>GT</sub>      | Gate-trigger voltage              | V <sub>D</sub> =12V;R <sub>L</sub> =33Ω;                                           |                                               |     | 1.5       | V    |
| R <sub>th(j-c)</sub> | Junction to case                  |                                                                                    |                                               |     | 1.2       | °C/W |

**NOTICE:**

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.