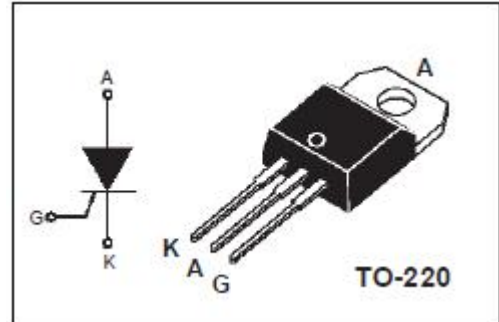


## isc Thyristors

## BT151-800R

## APPLICATIONS

- It is suitable to fit all modes of control found in applications such as overvoltage crowbar protection, motor control circuits in power tools and kitchen aids, in-rush current limiting circuits, capacitive discharge ignition, voltage regulation circuits etc.
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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

| SYMBOL              | PARAMETER                             | MIN                   | UNIT             |   |
|---------------------|---------------------------------------|-----------------------|------------------|---|
| $V_{\text{DRM}}$    | Repetitive peak off-state voltage     | 800                   | V                |   |
| $V_{\text{RRM}}$    | Repetitive peak reverse voltage       | 800                   | V                |   |
| $I_{\text{T(AV)}}$  | Average on-state current              | 7.5                   | A                |   |
| $I_{\text{T(RMS)}}$ | RMS on-state current                  | 12                    | A                |   |
| $I_{\text{TSM}}$    | Surge non-repetitive on-state current | $T_P=10\text{ms}$     | A                |   |
| $P_{\text{G(AV)}}$  | Average gate power dissipation        | over any 20 ms period | 0.5              | W |
| $T_j$               | Operating junction temperature        | 110                   | $^\circ\text{C}$ |   |
| $T_{\text{stg}}$    | Storage temperature                   | -40~150               | $^\circ\text{C}$ |   |

ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$  unless otherwise specified)

| SYMBOL               | PARAMETER                         | CONDITIONS   | MIN                     | MAX  | UNIT               |
|----------------------|-----------------------------------|--|-------------------------|------|--------------------|
| $I_{\text{RRM}}$     | Repetitive peak reverse current   | $V_{\text{RM}}=V_{\text{RRM}}, R_{\text{GK}}=220\ \Omega,$ | $T_j=25^\circ\text{C}$  | 5    | $\mu\text{A}$      |
|                      |                                   |  | $T_j=125^\circ\text{C}$ | 0.5  | mA                 |
| $I_{\text{DRM}}$     | Repetitive peak off-state current | $V_{\text{DM}}=V_{\text{DRM}}, R_{\text{GK}}=220\ \Omega$  | $T_j=25^\circ\text{C}$  | 5    | $\mu\text{A}$      |
|                      |                                   |  | $T_j=125^\circ\text{C}$ | 0.5  | mA                 |
| $V_{\text{TM}}$      | On-state voltage                  | $I_{\text{TM}}=23\text{A}$                                 |                         | 1.75 | V                  |
| $I_{\text{GT}}$      | Gate-trigger current              | $V_{\text{D}}=12\text{V}; I_{\text{T}}=0.1\text{A}$        |                         | 15   | mA                 |
| $V_{\text{GT}}$      | Gate-trigger voltage              | $V_{\text{D}}=12\text{V}; I_{\text{T}}=0.1\text{A}$        |                         | 1.5  | V                  |
| $R_{\text{th(j-c)}}$ | Thermal resistance                | Junction to case   |                         | 1.3  | $^\circ\text{C/W}$ |

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