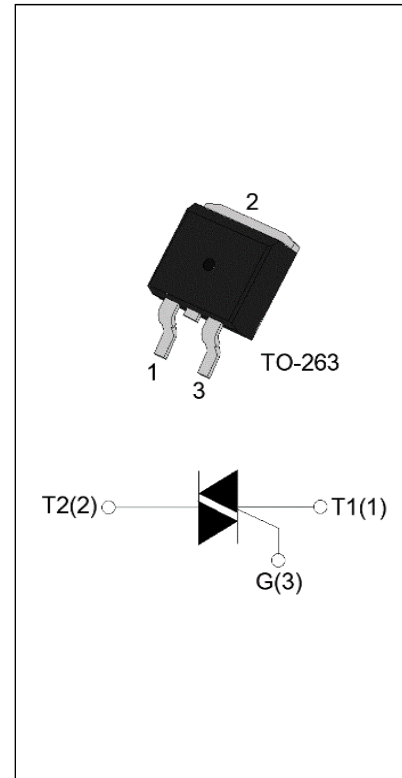


**BTB08-600BW****MAIN FEATURES     3Q TRIAC**

| Symbol            | Value    | Unit |
|-------------------|----------|------|
| $I_{T(RMS)}$      | 8        | A    |
| $V_{DRM}/V_{RRM}$ | 600      | V    |
| $I_{GT1/2/3}$     | 50/50/50 | mA   |

**DESCRIPTION:**

The BTB08-600BW triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. BTB08-600BW snubberless triac is especially recommended for use on inductive loads. It can be driven directly through the MCU I/O port. Package TO-263 is RoHS compliant.

**ABSOLUTE MAXIMUM RATINGS**

| Parameter                                                                                               | Symbol       | Value   | Unit                   |
|---------------------------------------------------------------------------------------------------------|--------------|---------|------------------------|
| Storage junction temperature range                                                                      | $T_{stg}$    | -40-150 | °C                     |
| Operating junction temperature range                                                                    | $T_j$        | -40-125 | °C                     |
| Repetitive peak off-state voltage ( $T_j=25^{\circ}\text{C}$ )                                          | $V_{DRM}$    | 600     | V                      |
| Repetitive peak reverse voltage ( $T_j=25^{\circ}\text{C}$ )                                            | $V_{RRM}$    | 600     | V                      |
| RMS on-state current ( $T_c \leq 90^{\circ}\text{C}$ )                                                  | $I_{T(RMS)}$ | 8       | A                      |
| Non repetitive surge peak on-state current (full cycle , $t_p=10\text{ms}$ , $T_j=25^{\circ}\text{C}$ ) | $I_{TSM}$    | 80      | A                      |
| $I^2t$ value for fusing ( $t_p=10\text{ms}$ , $T_j=25^{\circ}\text{C}$ )                                | $I^2t$       | 64      | $\text{A}^2\text{s}$   |
| Critical rate of rise of on-state current ( $T_j=125^{\circ}\text{C}$ )                                 | $di/dt$      | 50      | $\text{A}/\mu\text{s}$ |
| Peak gate current ( $t_p=20\mu\text{s}$ , $T_j=125^{\circ}\text{C}$ )                                   | $I_{GM}$     | 4       | A                      |
| Average gate power dissipation ( $T_j=125^{\circ}\text{C}$ )                                            | $P_{G(AV)}$  | 1       | W                      |

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

| Symbol      | Test Condition                                             | Quadrant    | Value |     | Unit             |
|-------------|------------------------------------------------------------|-------------|-------|-----|------------------|
| $I_{GT}$    | $V_D=12\text{V}$ $R_L=100\Omega$                           | I - II -III | MAX.  | 50  | mA               |
| $V_{GT}$    |                                                            | I - II -III | MAX.  | 1   | V                |
| $V_{GD}$    | $V_D=V_{DRM}$ $T_j=125^{\circ}\text{C}$<br>$R_L=100\Omega$ | I - II -III | MIN.  | 0.2 | V                |
| $I_L$       | $I_G=1.2I_{GT}$                                            | I -III      | MAX.  | 60  | mA               |
|             |                                                            | II          |       | 100 |                  |
| $I_H$       | $I_T=500\text{mA}$                                         |             | MAX.  | 60  | mA               |
| $dV/dt$     | $V_D=2/3V_{DRM}$ $T_j=125^{\circ}\text{C}$                 |             | MIN.  | 500 | V/ $\mu\text{s}$ |
| $(dI/dt)_c$ | $T_j=125^{\circ}\text{C}$                                  |             | MIN.  | 10  | A/ms             |

**STATIC CHARACTERISTICS**

| Symbol    | Parameter                   |                           | Value(MAX.) | Unit             |
|-----------|-----------------------------|---------------------------|-------------|------------------|
| $V_{TM}$  | $I_{TM}=32\text{A}$         | $T_j=25^{\circ}\text{C}$  | 1.5         | V                |
| $V_{TO}$  | Threshold voltage           | $T_j=125^{\circ}\text{C}$ | 0.86        | V                |
| $R_D$     | Dynamic resistance          | $T_j=125^{\circ}\text{C}$ | 36.6        | $\text{m}\Omega$ |
| $I_{DRM}$ | $V_D=V_{DRM}$ $V_R=V_{RRM}$ | $T_j=25^{\circ}\text{C}$  | 5           | $\mu\text{A}$    |
| $I_{RRM}$ |                             | $T_j=125^{\circ}\text{C}$ | 1           | mA               |

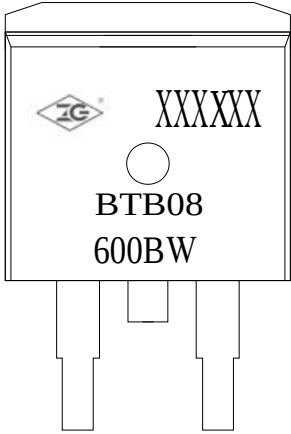
**THERMAL RESISTANCES**

| Symbol        | Parameter             | Value | Unit                        |
|---------------|-----------------------|-------|-----------------------------|
| $R_{th(j-c)}$ | junction to case (AC) | 1.25  | $^{\circ}\text{C}/\text{W}$ |

ORDERING INFORMATION

|                    |     |                |
|--------------------|-----|----------------|
| BTB08              | 600 | BW             |
| Mode               |     |                |
| 600:VDRM/VRRM≥600V |     | BW:IGT1-3≤50mA |

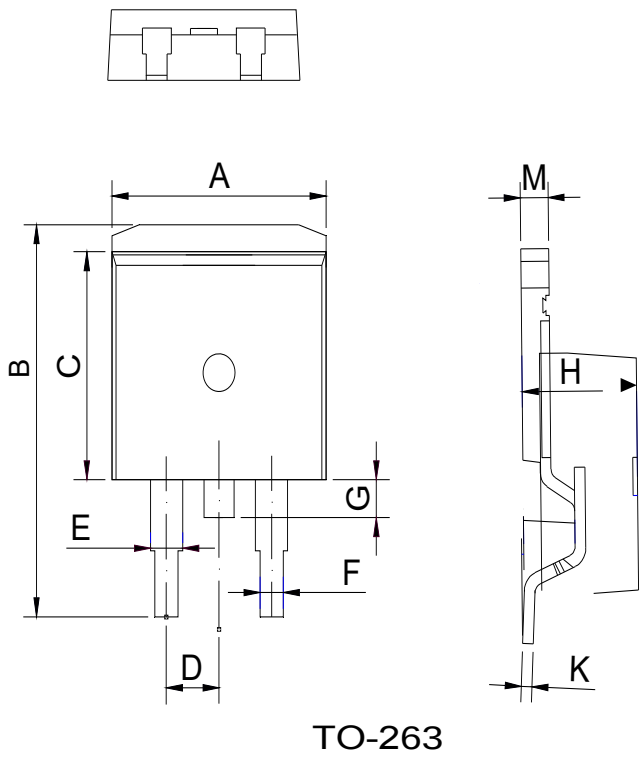
MARKING

|                                                                                    |                                                          |
|------------------------------------------------------------------------------------|----------------------------------------------------------|
|  | <p>X XX XXX</p> <p>Year      Week      Internal Code</p> |
|------------------------------------------------------------------------------------|----------------------------------------------------------|

ORDERING INFORMATION

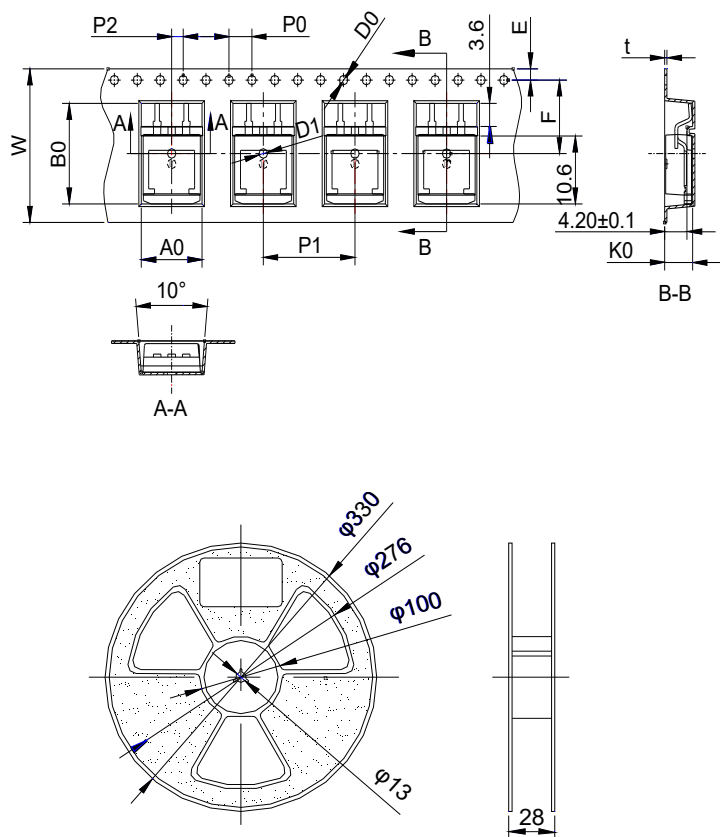
| Order code  | Voltage<br>V <sub>DRM</sub> /V <sub>RRM</sub> (V) | IGT(mA)   | Package | Base qty.<br>(pcs) | Delivery mode |
|-------------|---------------------------------------------------|-----------|---------|--------------------|---------------|
|             |                                                   | I -II-III |         |                    |               |
| BTB08-600BW | 600                                               | 50        | TO-263  | 800                | Tube          |

PACKAGE MECHANICAL DATA



| Ref. | Dimensions  |       |       |
|------|-------------|-------|-------|
|      | Millimeters |       |       |
|      | Min.        | Typ.  | Max.  |
| A    | /           | 10.00 | /     |
| B    | 13.80       | 14.20 | 14.60 |
| C    | /           | /     | 1.60  |
| D    | /           | 2.54  | /     |
| E    | 1.20        | 1.40  | 1.60  |
| F    | 0.50        | 0.70  | 0.90  |
| G    | /           | /     | 1.60  |
| H    | /           | /     | 4.80  |
| K    | 0.30        | 0.50  | 0.70  |
| M    | 1.10        | 1.30  | 1.50  |

DELIVERY MODE



| Ref. | Dimensions  |       |       |
|------|-------------|-------|-------|
|      | Millimeters |       |       |
|      | Min.        | Typ.  | Max.  |
| W    | 23.70       | 24.00 | 24.30 |
| E    | 1.65        | 1.75  | 1.85  |
| F    | 11.40       | 11.50 | 11.60 |
| D0   | /           | 1.50  | 1.60  |
| D1   | /           | 1.50  | 1.60  |
| P0   | 3.90        | 4.00  | 4.10  |
| P1   | 15.90       | 16.00 | 16.10 |
| P2   | 1.90        | 2.00  | 2.10  |
| A0   | 10.80       | 10.90 | 11.00 |
| B0   | 16.20       | 16.30 | 16.40 |
| K0   | 4.80        | 4.90  | 5.00  |
| T    | 0.35        | 0.40  | 0.45  |

| PACKAGE | OUTLINE | REEL (PCS) | PER CARTON (PCS) |
|---------|---------|------------|------------------|
| TO-263  | TAPING  | 800        | 4,000            |

FIG.1: Maximum power dissipation versus RMS on-state current (full cycle)

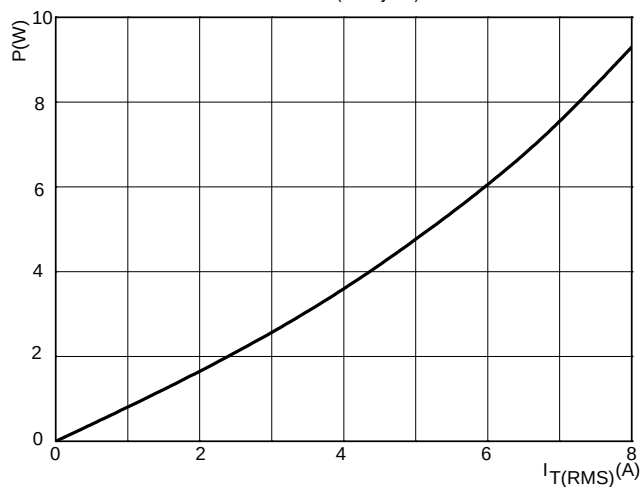


FIG.2: RMS on-state current versus case temperature (full cycle)

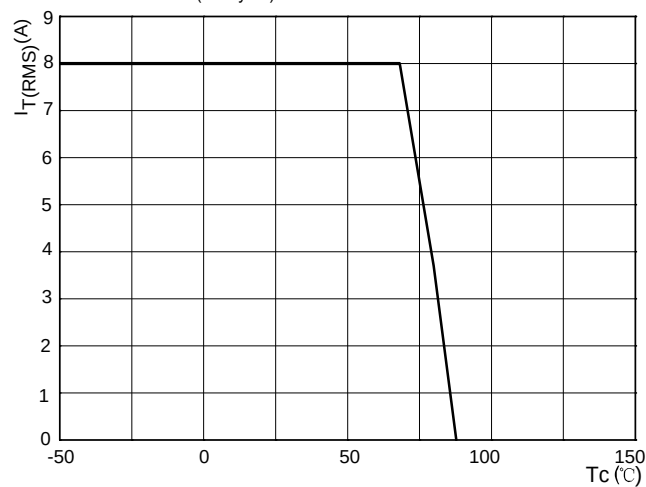


FIG.3: Surge peak on-state current versus number of cycles

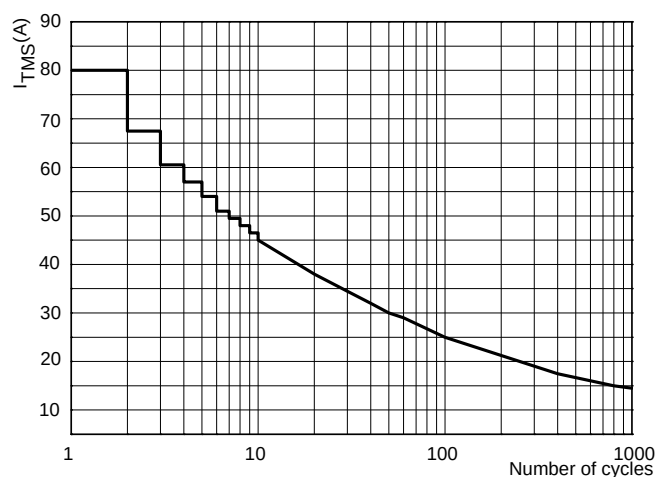


FIG.4: On-state characteristics (maximum values)

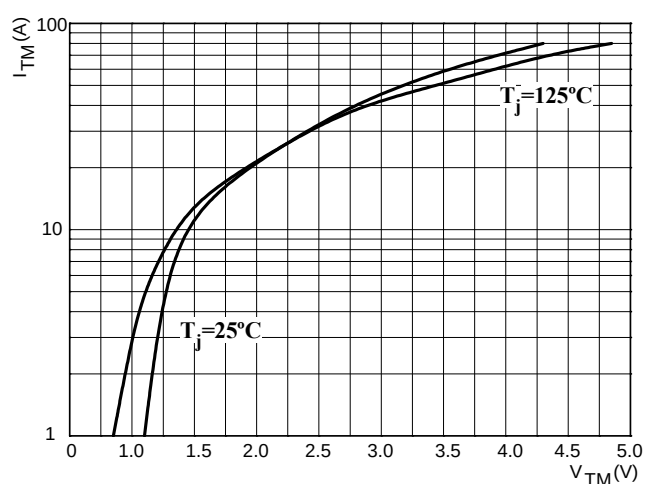
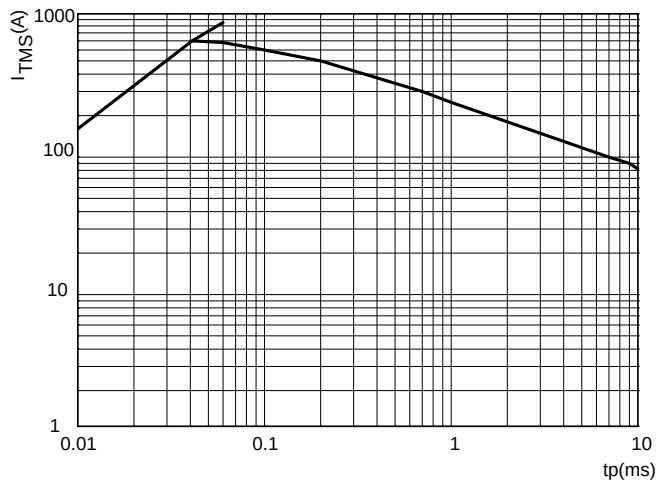
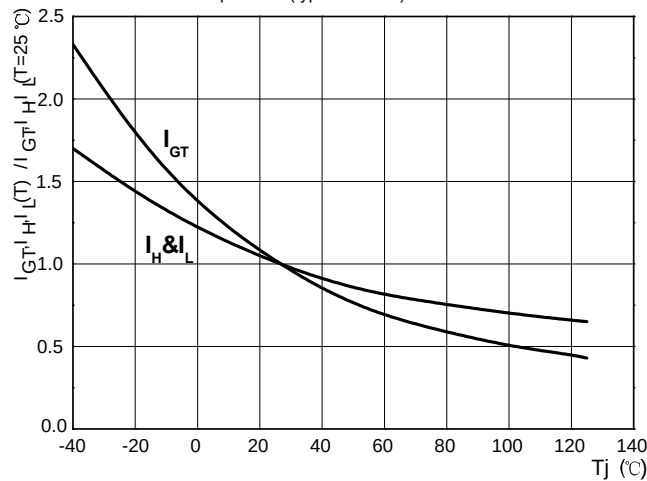
FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 10ms$ 

FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature (typical values)



单击下面可查看定价，库存，交付和生命周期等信息

[>>ZG\(中鑫半导体\)](#)