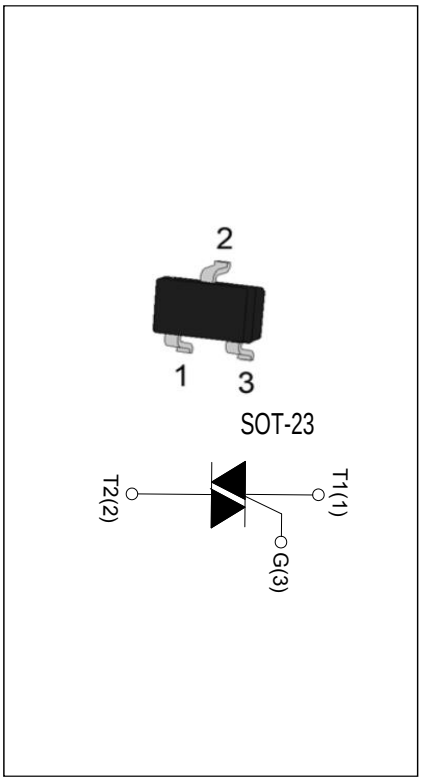
# 97A6

## MAIN FEATURES 4Q TRIAC

| Symbol | Value | Unit |
|---|---|---|
| $I_{T(RMS)}$ | 1 | A |
| $V_{DRM}$ /$V_{RRM}$ | 600 | V |
| $I_{GT1/2/3}$ | 5/5/5/10 | mA |




## DESCRIPTION:

The 97A6 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. Package SOT-23 is RoHS compliant.

## ABSOLUTE MAXIMUM RATINGS

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Storage junction temperature range | $T_{stg}$ | -40-150 | ℃ |
| Operating junction temperature range | $T_j$ | -40-125 | ℃ |
| Repetitive peak off-state voltage ($T_j$=25℃) | $V_{DRM}$ | 600 | V |
| Repetitive peak reverse voltage ($T_j$=25℃) | $V_{RRM}$ | 600 | V |
| RMS on-state current ($T_C$≤90℃) | $I_{T(RMS)}$ | 1 | A |
| Non repetitive surge peak on-state current (full cycle , $t_p$=20ms , $T_j$=25℃) | $I_{TSM}$ | 10 | A |
| $I^2t$ value for fusing ($t_p$=10ms , $T_j$=25℃) | $I^2t$ | 0.41 | $A^2s$ |
| Critical rate of rise of on-state current ( $T_j$=125℃) | dI/dt | 50 | A/μs |
| Peak gate current ($t_p$=20μs , $T_j$=125℃) | $I_{GM}$ | 1 | A |
| Average gate power dissipation ($T_j$=125℃) | $P_{G(AV)}$ | 0.1 | W |

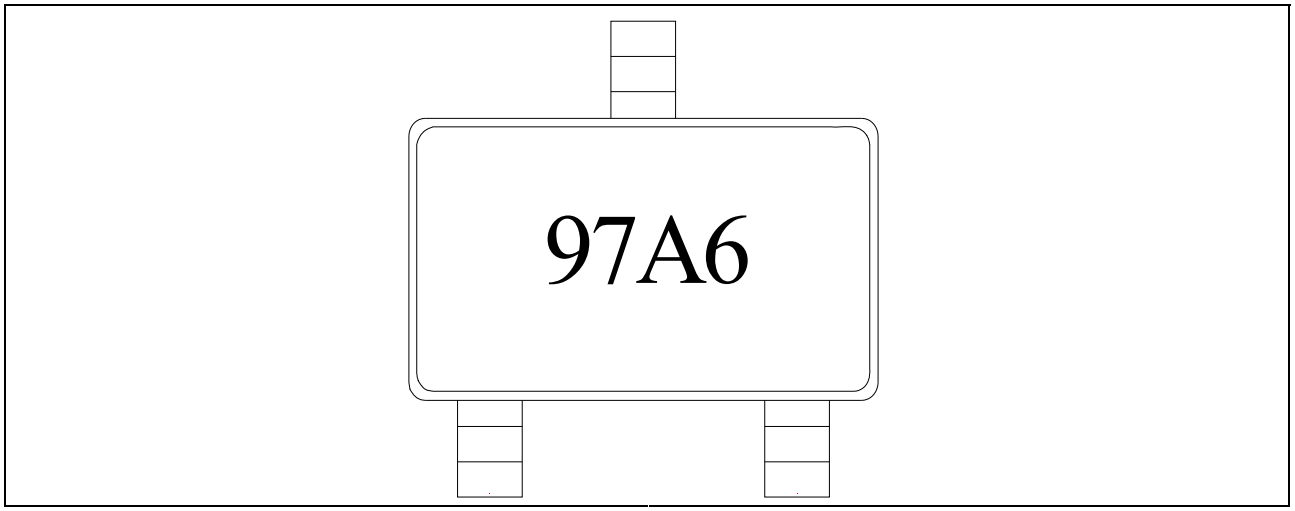
**ELECTRICAL CHARACTERISTICS** ($T_j$=25℃ unless otherwise specified)

| Symbol | Test Condition | Quadrant | Value | | Unit |
|---|---|---|---|---|---|
| $I_{GT}$ | $V_D$ =12V $R_L$ =100Ω | Ⅰ-Ⅱ-Ⅲ | MAX. | 5 | mA |
| | | Ⅳ | | 10 | |
| $V_{GT}$ | | ALL | MAX. | 1 | V |
| $V_{GD}$ | $V_D$ =$V_{DRM}$ $T_j$ =125℃ $R_L$ =100Ω | ALL | MIN. | 0.2 | V |
| $I_L$ | $I_G$ =1.2$I_{GT}$ | Ⅰ-Ⅲ-Ⅳ | MAX. | 5 | mA |
| | | Ⅱ | | 20 | |
| $I_H$ | $I_T$ =500mA | | MAX. | 8 | mA |
| dV/dt | $V_D$=2/3$V_{DRM}$ $T_j$ =125℃ | | MIN. | 50 | V/μs |

**STATIC CHARACTERISTICS**

| Symbol | Parameter | | Value(MAX.) | Unit |
|---|---|---|---|---|
| $V_{TM}$ | $I_{TM}$ =32A | $T_j$=25℃ | 1.30 | V |
| $V_{TO}$ | Threshold voltage | $T_j$=125℃ | 0.98 | V |
| $R_D$ | Dynamic resistance | $T_j$=125℃ | 362 | mΩ |
| $I_{DRM}$ | $V_D$ =$V_{DRM}$ $V_R$ =$V_{RRM}$ | $T_j$=25℃ | 5 | μA |
| $I_{RRM}$ | | $T_j$=125℃ | 0.15 | mA |

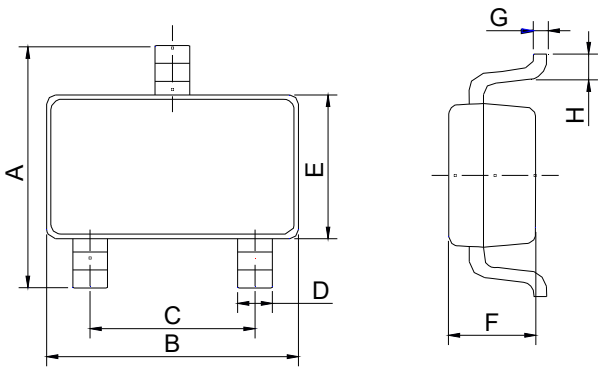
## MARKING




## ORDERING INFORMATION

| Order code | Voltage $V_{DRM}/V_{RRM}$ (V) | IGT(mA) | | Package | Base qty. (pcs) | Delivery mode |
|---|---|---|---|---|---|---|
| | | Ⅰ-Ⅱ-Ⅲ | Ⅳ | | | |
| 97A6 | 600 | 5 | 10 | SOT-23 | 3000 | REEL |

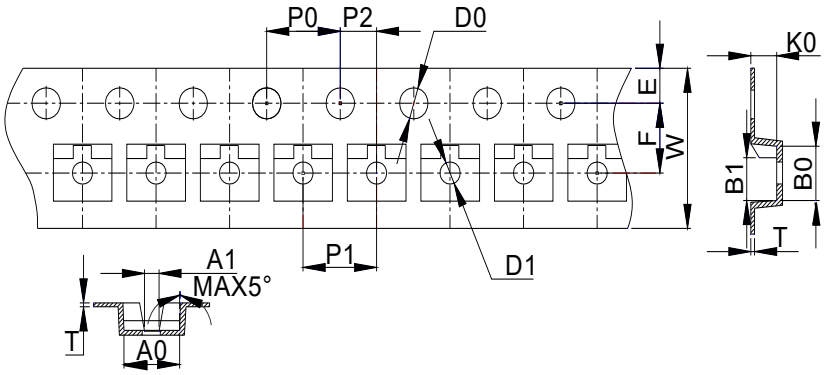
## PACKAGE MECHANICAL DATA




SOT-23

| Ref. | Dimensions | | |
|---|---|---|---|
| | Millimeters | | |
| | Min. | Typ. | Max. |
| A | 2.65 | 2.80 | 2.95 |
| B | 2.82 | 2.92 | 3.02 |
| C | 1.80 | 1.90 | 2.00 |
| D | 0.30 | 0.35 | 0.40 |
| E | 1.50 | 1.60 | 1.70 |
| F | 1.07 | 1.17 | 1.27 |
| G | 0.05 | 0.15 | 0.25 |
| H | 0.25 | 0.40 | 0.55 |

## DELIVERY MODE




| Ref. | Dimensions Millimeters | | |
|---|---|---|---|
| | Min. | Typ. | Max. |
| A0 | 3.10 | 3.20 | 3.30 |
| A1 | 1.02 | 1.04 | 1.06 |
| B0 | 3.18 | 3.28 | 3.38 |
| B1 | 2.39 | 2.49 | 2.59 |
| K0 | 1.22 | 1.32 | 1.42 |
| P0 | 3.90 | 4.00 | 4.10 |
| P1 | 3.90 | 4.00 | 4.10 |
| P2 | 1.95 | 2.00 | 2.05 |
| T | 0.15 | 0.20 | 0.25 |
| E | 1.65 | 1.75 | 1.85 |
| F | 3.45 | 3.50 | 3.55 |
| D0 | 1.50 | 1.55 | 1.60 |
| D1 | 1.00 | 1.10 | 1.20 |
| W | 7.90 | 8.00 | 8.20 |

| PACKAGE | OUTLINE | TUBE (PCS) |
|---|---|---|
| 97A6 | REEL | 3000 |

**FIG.1** Maximum power dissipation versus RMS on-state current

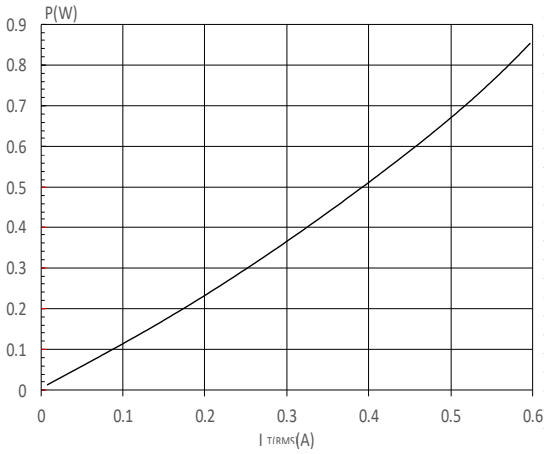



**FIG.2:** RMS on-state current versus case temperature

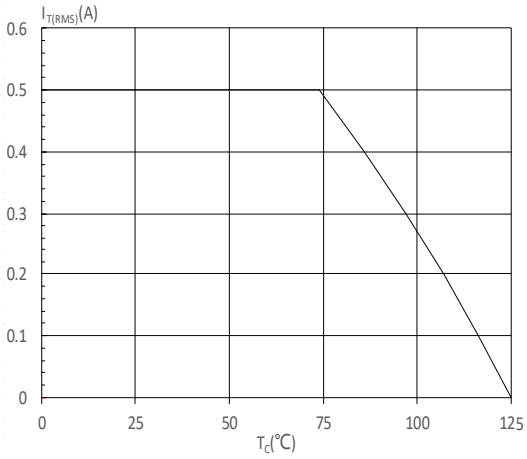



**FIG.3:** Surge peak on-state current versus number of cycles

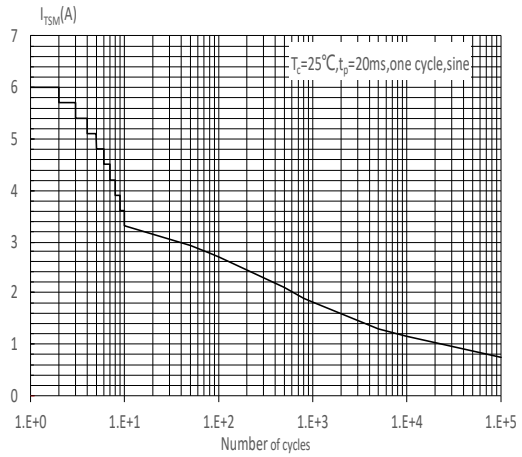



**FIG.4:** On-state characteristics

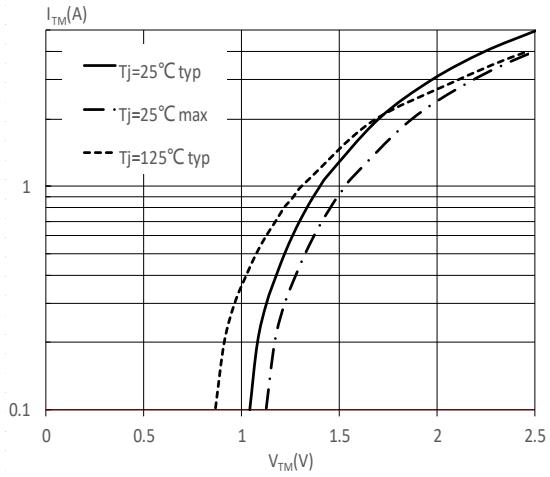



**FIG.5:** Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p$<20ms, and corresponding value of $I^2t$
(Ⅰ-Ⅱ: dI/dt<50A/μs;Ⅲ-Ⅳ: dI/dt<20A/μs)

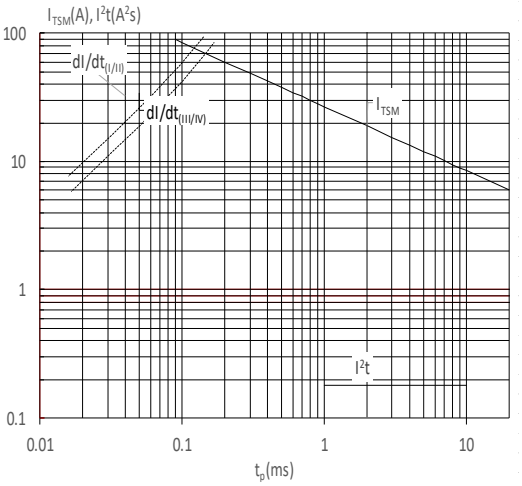
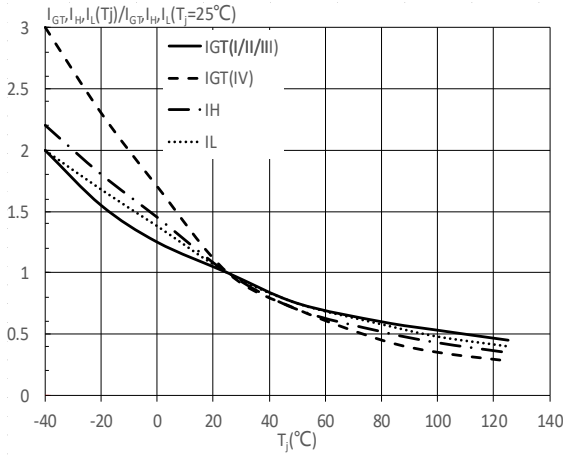



**FIG.6:** Relative variations of gate trigger current, holding current and latching current versus junction temperature



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)