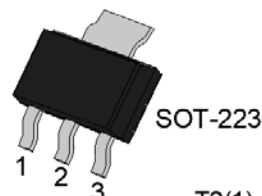


The ACJ110-8V triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. The ACJ110-8V embeds a TVS structure to absorb the inductive turn-off energy such as those described in the IEC 61000-4-5 standards. At the same time, the triac shields the positive signal trigger to reduce the probability of product misoperation. It is triggered with a negative gate current flowing out of the gate pin. Package SOT-223 is RoHS compliant.



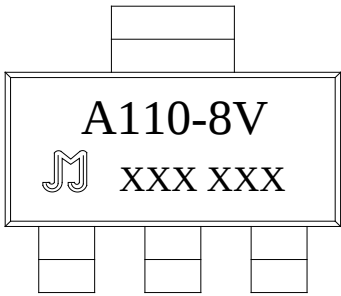
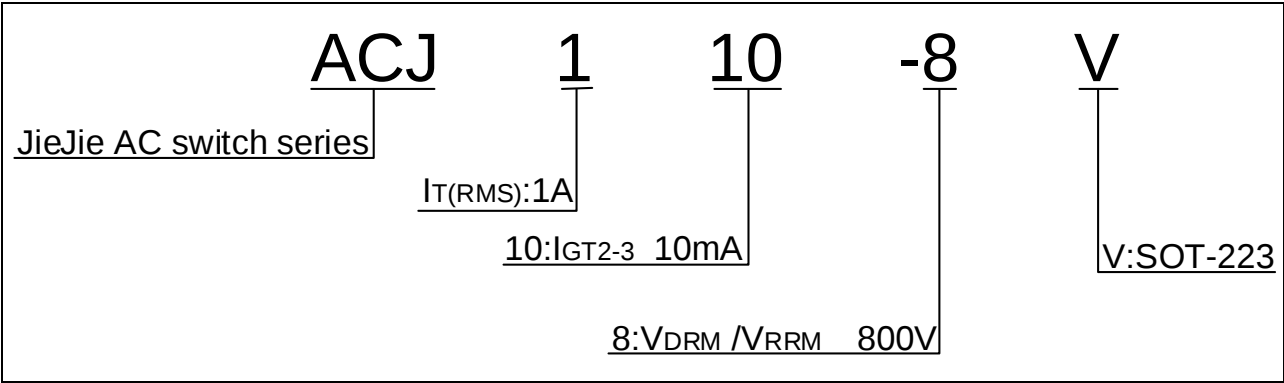
| Symbol            | Value | Unit |
|-------------------|-------|------|
| $I_{T(RMS)}$      | 1     | A    |
| $V_{DRM}/V_{RRM}$ | 800   | V    |
| $I_{GT}$ /        | 10/10 | mA   |

| 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 ( $T_j=25^\circ\text{C}$ )                                              | $V_{DRM}$    | 800     | V                    |
| Repetitive peak reverse voltage ( $T_j=25^\circ\text{C}$ )                                                | $V_{RRM}$    | 800     | V                    |
| RMS on-state current ( $T_c=93^\circ\text{C}$ )                                                           | $I_{T(RMS)}$ | 1       | A                    |
| Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$ , $T_j=25^\circ\text{C}$ )      | $I_{TSM}$    | 12      | A                    |
| Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$ , $T_j=25^\circ\text{C}$ )    |              | 13.2    |                      |
| $I^2t$ value for fusing ( $t_p=10\text{ms}$ , $T_j=25^\circ\text{C}$ )                                    | $I^2t$       | 0.72    | $\text{A}^2\text{s}$ |
| Critical rate of rise of on-state current ( $I_G=2 I_{GT}$ , $f=100\text{Hz}$ , $T_j=125^\circ\text{C}$ ) | $di/dt$      | 100     | $\text{A/s}$         |
| Peak gate current ( $t_p=20\text{ s}$ , $T_j=125^\circ\text{C}$ )                                         | $I_{GM}$     | 1       | A                    |
| Positive applied gate voltage                                                                             | $V_{GM}$     | 15      | V                    |

|                                                            |             |     |   |
|------------------------------------------------------------|-------------|-----|---|
| Average gate power dissipation ( $T_j=125^\circ\text{C}$ ) | $P_{G(AV)}$ | 0.1 | W |
| Peak gate power                                            | $P_{GM}$    | 2   | W |

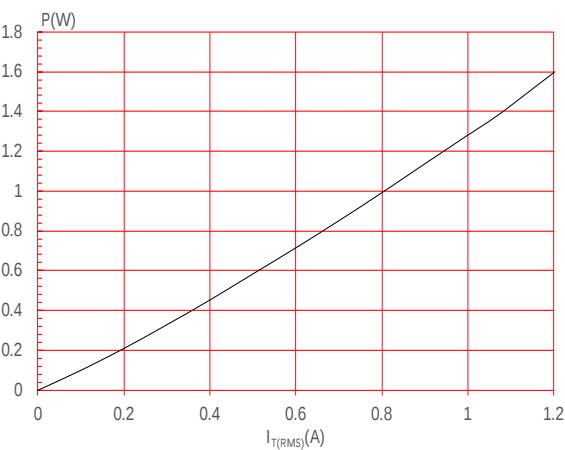
Peak pulse voltage

( $T_j=25^\circ\text{C}$ ; non-repetitive, off-state; FIG.8) PGM



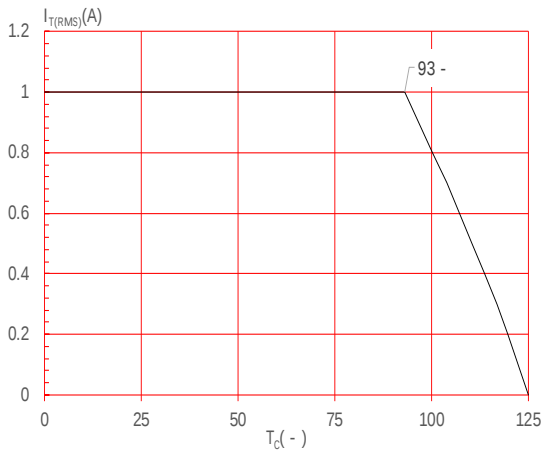
XXX XXX  
LOT NO.

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



**FIG.3:** RMS on-state current versus ambient temperature (printed circuit board FR4,copper thi

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



**FIG.4:** Surge peak on-state current versus number of cycles

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**FIG.7:** Relative variations of gate trigger current, holding current and latching current versus junction temperature

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**ACJ110-8V**

| Order code | Voltage<br>$V_{\text{DRM}}/V_{\text{RRM}}$ (V) | IGT(mA) | Package | Base qty.<br>(pcs) | Delivery<br>mode |
|------------|------------------------------------------------|---------|---------|--------------------|------------------|
| ACJ110-8V  | 800                                            | 10      | SOT-223 | 4,000              | Tape & Reel      |

#### Document Revision History

| Date         | Revision | Changes      |
|--------------|----------|--------------|
| Apr.13, 2023 | A.1.0    | Last updated |
| Oct.23, 2025 | A.1.1    | Revise       |

| Ref. | Dimensions  |      |      |        |       |       |
|------|-------------|------|------|--------|-------|-------|
|      | Millimeters |      |      | Inches |       |       |
|      | Min.        | Typ. | Max. | Min.   | Typ.  | Max.  |
| A    | 1.50        | 1.60 | 1.80 | 0.059  | 0.063 | 0.071 |
| A1   | 0.01        | 0.06 | 0.10 | 0.001  | 0.002 | 0.004 |
| B    | 2.90        | 3.00 | 3.10 | 0.114  | 0.118 | 0.122 |
| B1   | 0.60        | 0.70 | 0.80 | 0.024  | 0.028 | 0.031 |
| C    | 0.22        | 0.26 | 0.32 | 0.009  | 0.010 | 0.013 |
| D    | 6.30        | 6.50 | 6.70 | 0.248  | 0.256 | 0.264 |
| E    | 3.30        | 3.50 | 3.70 | 0.130  | 0.138 | 0.146 |
| F    | 4.40        |      |      | 0.173  |       |       |
| F1   | 2.20        |      |      | 0.087  |       |       |
| G    | 0.50        |      | 1.00 | 0.020  |       | 0.039 |
| H    | 1.50        | 1.75 | 2.00 | 0.059  | 0.069 | 0.079 |
| J    | 6.70        | 7.00 | 7.30 | 0.264  | 0.276 | 0.287 |
| K    |             |      |      |        |       |       |

**ACJ110-8V**

