

## SOT-23 Plastic-Encapsulate Thyristors

### PCR0.6 Silicon Planar PNP Thyristor

#### MAIN FEATURES

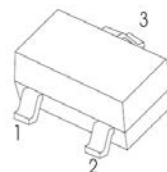
| Symbol       | Value                | Unit     |
|--------------|----------------------|----------|
| $I_{T(RMS)}$ | 0.6                  | A        |
| $V_{DRM}$    | PCR406               | 400      |
|              | PCR606               | 600      |
| $T_j$        | Junction Temperature | -40~+125 |
| $T_{stg}$    | Storage Temperature  | -40~+150 |
|              |                      | °C       |

#### SOT-23

1.CATHODE

2.GATE

3.ANODE



#### DESCRIPTION

Logic level sensitive gate triac intended to be interfaced directly to microcontrollers, logic integrated circuits and other low power gate trigger circuits.

#### FEATURES

- RMS on-state current to 0.6 A
- General purpose switching

#### APPLICATIONS

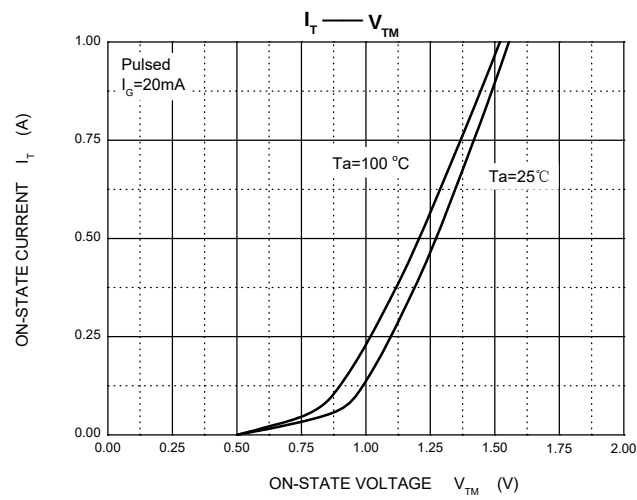
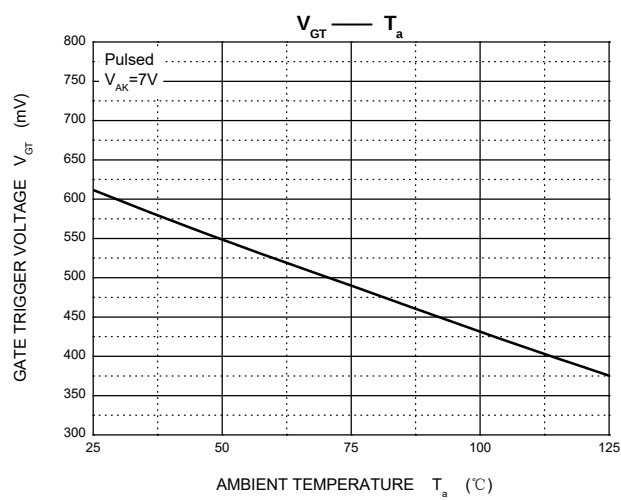
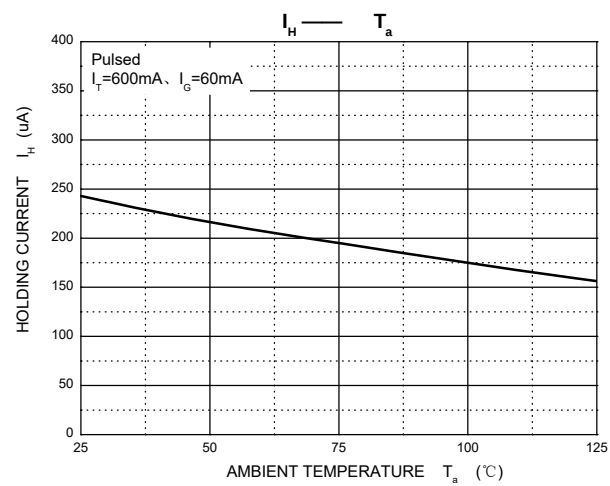
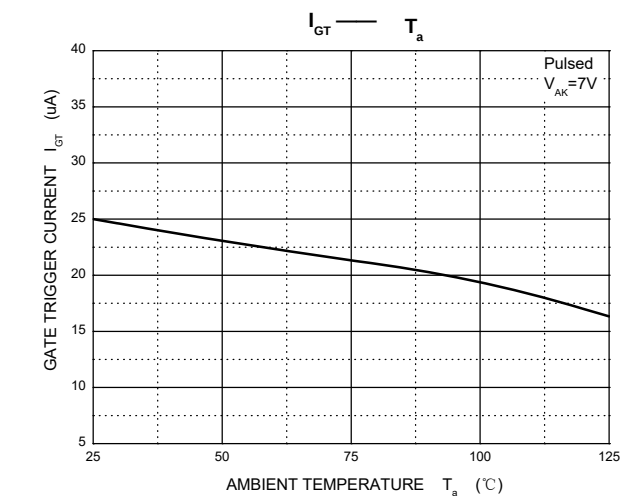
- General purpose switching
- Phase control applications
- Solid state relays

MARKING:406,606

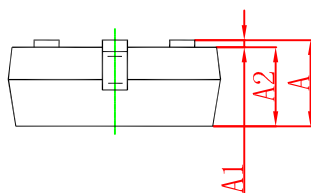
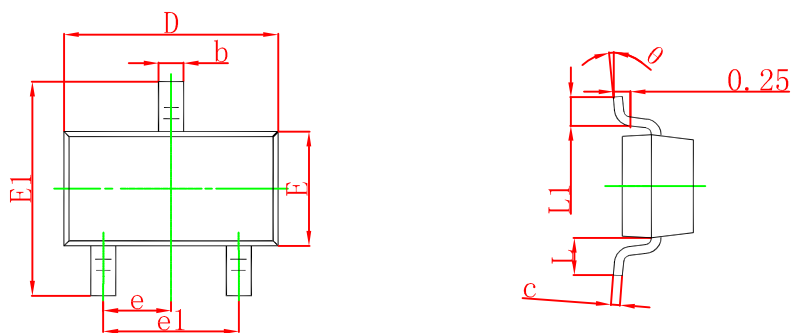
#### ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$ unless otherwise specified)

| Parameter                         | Symbol            | Test conditions                        | Min | Max | Unit          |
|-----------------------------------|-------------------|----------------------------------------|-----|-----|---------------|
| On state voltage                  | $V_{TM}$          | $I_{TM}=0.6\text{A}$                   |     | 1.7 | V             |
| Gate trigger voltage              | $V_{GT}$          | $V_{AK}=7\text{V}$                     |     | 0.8 | V             |
| Repetitive peak off-state voltage | $V_{DRM}(PCR406)$ | $I_{DRM}=10\mu\text{A}$                | 400 |     | V             |
|                                   | $V_{DRM}(PCR606)$ |                                        | 600 |     | V             |
| Holding current                   | $I_H$             | $I_T=600\text{mA}$ , $I_G=60\text{mA}$ |     | 5   | mA            |
| Gate trigger current              | $I_{GT}$          | $V_{AK}=7\text{V}$                     | 5   | 40  | $\mu\text{A}$ |

# Typical Characteristics

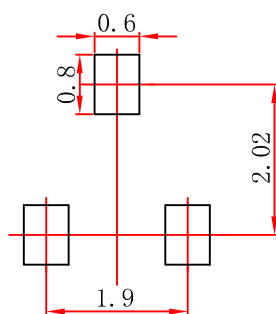


## SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                     | 1.050 | 0.035                | 0.041 |
| b      | 0.300                     | 0.500 | 0.012                | 0.020 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 2.800                     | 3.000 | 0.110                | 0.118 |
| E      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E1     | 2.250                     | 2.550 | 0.089                | 0.100 |
| e      | 0.950 TYP                 |       | 0.037 TYP            |       |
| e1     | 1.800                     | 2.000 | 0.071                | 0.079 |
| L      | 0.550 REF                 |       | 0.022 REF            |       |
| L1     | 0.300                     | 0.500 | 0.012                | 0.020 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

## SOT-23 Suggested Pad Layout



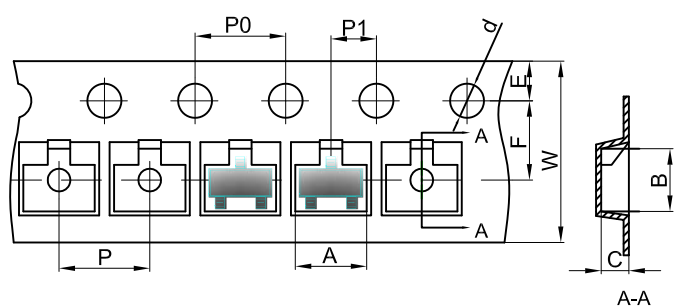
Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

### NOTICE

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

SOT-23 Embossed Carrier Tape

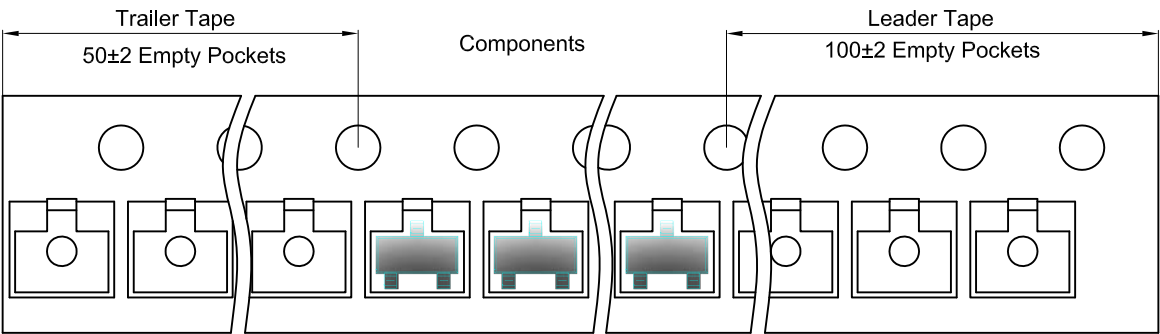


Packaging Description:

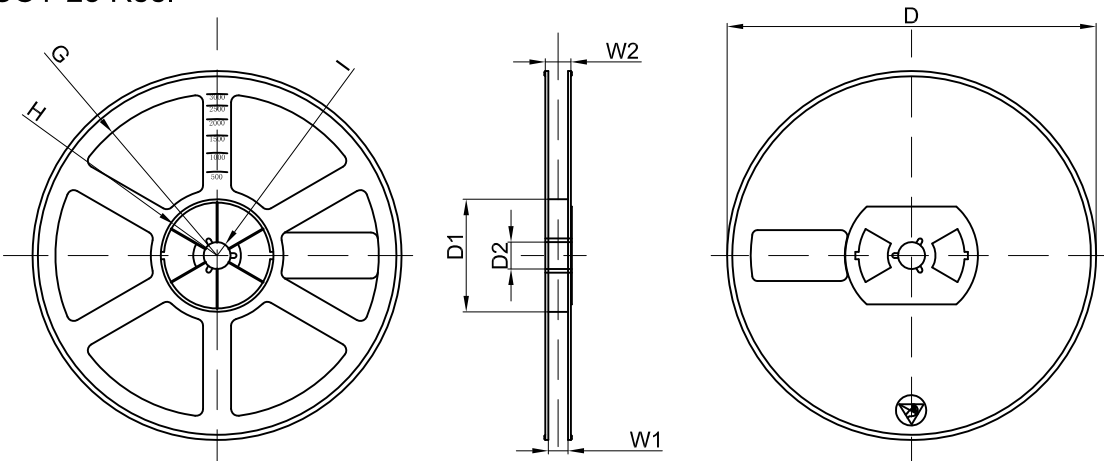
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

| Dimensions are in millimeter |      |      |      |       |      |      |      |      |      |      |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| Pkg type                     | A    | B    | C    | d     | E    | F    | P0   | P    | P1   | W    |
| SOT-23                       | 3.15 | 2.77 | 1.22 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

SOT-23 Tape Leader and Trailer



SOT-23 Reel



| Dimensions are in millimeter |         |       |       |        |        |       |      |       |
|------------------------------|---------|-------|-------|--------|--------|-------|------|-------|
| Reel Option                  | D       | D1    | D2    | G      | H      | I     | W1   | W2    |
| 7"Dia                        | Ø178.00 | 54.40 | 13.00 | R78.00 | R25.60 | R6.50 | 9.50 | 12.30 |

| REEL     | Reel Size | Box        | Box Size(mm) | Carton      | Carton Size(mm) | G.W.(kg) |
|----------|-----------|------------|--------------|-------------|-----------------|----------|
| 3000 pcs | 7 inch    | 45,000 pcs | 203×203×195  | 180,000 pcs | 438×438×220     |          |