

## SOT-89 Plastic-Encapsulate Transistors

### Features

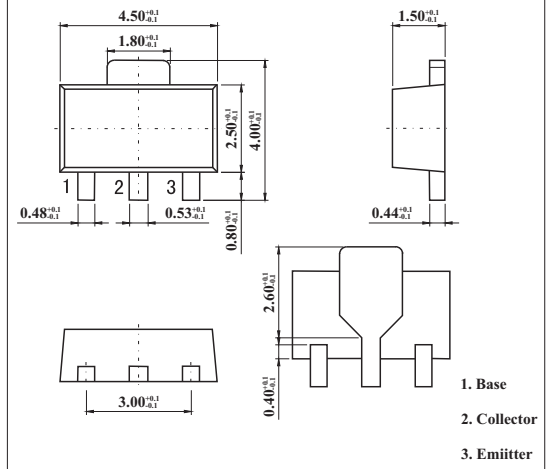
- High current (max. 500mA).
- Low voltage (max. 150 V).
- Surface Mount NPN Silicon Transistor

### MECHANICAL DATA

- Case style:SOT-89 molded plastic
- Mounting position:any

### SOT-89

Unit: mm



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

| Parameter                              | Symbol           | Rating      | Unit |
|----------------------------------------|------------------|-------------|------|
| Collector-base voltage                 | V <sub>CB0</sub> | 180         | V    |
| Collector-emitter voltage              | V <sub>CEO</sub> | 160         | V    |
| Emitter-base voltage                   | V <sub>EBO</sub> | 6           | V    |
| Collector current (DC)                 | I <sub>C</sub>   | 600         | mA   |
| power dissipation                      | P <sub>D</sub>   | 1.2         | W    |
| thermal resistance Junction-to-ambient | R <sub>θJA</sub> | 104         | °C/W |
| Junction temperature                   | T <sub>j</sub>   | 150         | °C   |
| Storage temperature                    | T <sub>stg</sub> | -65 to +150 | °C   |

### PACKAGE INFORMATION

| Device            | Package | Shipping       |
|-------------------|---------|----------------|
| KXT5551 (CXT5551) | SOT-89  | 1000/Tape&Reel |

| Parameter                               | Symbol               | Testconditions                                            | Min | Typ | Max  | Unit |
|-----------------------------------------|----------------------|-----------------------------------------------------------|-----|-----|------|------|
| Collector to base breakdown voltage     | V <sub>CB0</sub>     | I <sub>C</sub> =100 μA                                    | 180 |     |      | V    |
| Collector to emitter breakdown voltage  | V <sub>CEO</sub>     | I <sub>C</sub> =1.0mA                                     | 160 |     |      | V    |
| Emitter to base breakdown voltage       | V <sub>EBO</sub>     | I <sub>E</sub> =10 μA                                     | 6.0 |     |      | V    |
| Collector cutoff current                | I <sub>CBO</sub>     | V <sub>CB</sub> = 120 V, I <sub>E</sub> = 0               |     |     | 50   | nA   |
|                                         |                      | V <sub>CB</sub> = 120 V, T <sub>A</sub> =100°C            |     |     | 50   | μA   |
| DC current gain                         | h <sub>FE</sub>      | I <sub>C</sub> = 1.0 mA; V <sub>CE</sub> = 5.0 V          | 80  |     |      |      |
|                                         |                      | I <sub>C</sub> = 10mA; V <sub>CE</sub> = 5.0V             | 80  |     | 250  |      |
|                                         |                      | I <sub>C</sub> = 50 mA; V <sub>CE</sub> = 5.0V            | 30  |     |      |      |
| Collector to emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> = 10 mA; I <sub>B</sub> = 1.0mA            |     |     | 0.15 | V    |
|                                         |                      | I <sub>C</sub> = 50 mA; I <sub>B</sub> = 5.0mA            |     |     | 0.20 | V    |
| Base to emitter saturation voltage      | V <sub>BE(sat)</sub> | I <sub>C</sub> = 10 mA; I <sub>B</sub> = 1.0mA            |     |     | 1.00 | V    |
|                                         |                      | I <sub>C</sub> = 50 mA; I <sub>B</sub> = 5.0mA            |     |     | 1.00 | V    |
| Output capacitance                      | C <sub>ob</sub>      | V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f=1.0MHz      |     |     | 6.0  | pF   |
| Transition frequency                    | f <sub>T</sub>       | I <sub>C</sub> = 10 mA; V <sub>CE</sub> =10V; f = 100 MHz | 100 |     | 300  | MHz  |

Marking

1G6