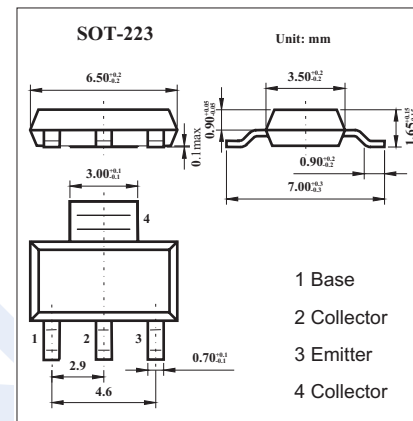


## Surface Mount NPN Silicon Power Darlington Transistor

### KZT122 (CZT122)

#### ■ Features

- High current (max. 5A).
- Low voltage (max. 100V).



#### ■ Absolute Maximum Ratings Ta = 25°C

| Parameter                              | Symbol           | Rating      | Unit |
|----------------------------------------|------------------|-------------|------|
| Collector-base voltage                 | V <sub>CB0</sub> | 100         | V    |
| Collector-emitter voltage              | V <sub>CEO</sub> | 100         | V    |
| Emitter-base voltage                   | V <sub>EB0</sub> | 5           | V    |
| Collector current                      | I <sub>C</sub>   | 5           | A    |
|                                        | I <sub>CP</sub>  | 8           | A    |
| Base current                           | I <sub>B</sub>   | 120         | mA   |
| power dissipation                      | P <sub>D</sub>   | 2           | W    |
| Thermal Resistance Junction-to-Ambient | R <sub>θJA</sub> | 62.5        | °C/W |
| Junction temperature                   | T <sub>J</sub>   | 150         | °C   |
| Storage temperature                    | T <sub>stg</sub> | -65 to +150 | °C   |

#### ■ Electrical Characteristics Ta = 25°C

| Parameter                               | Symbol               | Testconditions                                         | Min  | Typ | Max | Unit |
|-----------------------------------------|----------------------|--------------------------------------------------------|------|-----|-----|------|
| Collector to emitter breakdown voltage  | V <sub>CEO</sub>     | I <sub>C</sub> =30mA                                   | 100  |     |     | V    |
| Collector cutoff current                | I <sub>CEO</sub>     | V <sub>CE</sub> =50V                                   |      |     | 500 | μA   |
| Collector cutoff current                | I <sub>CBO</sub>     | V <sub>CB</sub> = 100 V                                |      |     | 200 | μA   |
| Emitter cutoff current                  | I <sub>EBO</sub>     | V <sub>EB</sub> = 5.0 V                                |      |     | 2.0 | mA   |
| DC current gain                         | h <sub>FE</sub>      | I <sub>C</sub> = 500 mA; V <sub>CE</sub> = 3.0 V       | 1000 |     |     |      |
|                                         |                      | I <sub>C</sub> = 3A; V <sub>CE</sub> = 3.0V            | 1000 |     |     |      |
| Collector to emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> = 3.0A; I <sub>B</sub> = 12mA           |      |     | 2.0 | V    |
| Base to emitter saturation voltage      | V <sub>BE(sat)</sub> | I <sub>C</sub> = 5.0A; I <sub>B</sub> = 20mA           |      |     | 4.0 | V    |
| Output capacitance                      | C <sub>ob</sub>      | V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f=1.0MHz   |      |     | 200 | pF   |
| Transition frequency                    | f <sub>T</sub>       | I <sub>C</sub> = 3A; V <sub>CE</sub> = 4V; f = 1.0 MHz | 4.0  |     |     | MHz  |