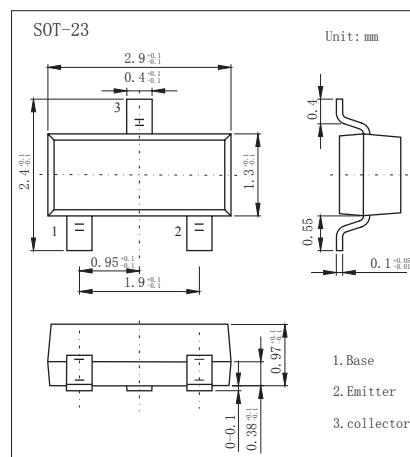


## NPN Transistors

### S9018

#### ■ Features

- High current gain bandwidth product.
- power dissipation.(PC=200mW)



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

| Parameter                       | Symbol           | Rating     | Unit |
|---------------------------------|------------------|------------|------|
| Collector to Base Voltage       | V <sub>CB0</sub> | 30         | V    |
| Collector to Emitter Voltage    | V <sub>CE0</sub> | 15         | V    |
| Emitter to Base Voltage         | V <sub>EB0</sub> | 5          | V    |
| Collector Current to Continuous | I <sub>c</sub>   | 50         | mA   |
| Collector Power Dissipation     | P <sub>c</sub>   | 200        | mW   |
| Junction Temperature            | T <sub>j</sub>   | 150        | °C   |
| Storage Temperature             | T <sub>stg</sub> | -55 to 150 | °C   |

#### ■ Electrical Characteristics Ta = 25

| Parameter                               | Symbol               | Testconditions                                      | Min | Typ | Max  | Unit |
|-----------------------------------------|----------------------|-----------------------------------------------------|-----|-----|------|------|
| Collector to base breakdown voltage     | V <sub>(BR)CB0</sub> | I <sub>c</sub> = 100 uA, I <sub>E</sub> =0          | 30  |     |      | V    |
| Collector to emitter breakdown voltage  | V <sub>(BR)CE0</sub> | I <sub>c</sub> = 1mA, I <sub>B</sub> =0             | 15  |     |      | V    |
| Emitter to base breakdown voltage       | V <sub>(BR)EB0</sub> | I <sub>E</sub> =100 uA, I <sub>c</sub> =0           | 5   |     |      | V    |
| Collector cut to off current            | I <sub>CB0</sub>     | V <sub>CB</sub> =12V, I <sub>E</sub> =0             |     |     | 0.05 | uA   |
| Emitter cut to off current              | I <sub>EB0</sub>     | V <sub>EB</sub> = 3V, I <sub>c</sub> =0             |     |     | 0.1  | uA   |
| DC current gain                         | h <sub>FE</sub>      | V <sub>CE</sub> =5V, I <sub>c</sub> = 1mA           | 70  |     | 190  |      |
| Collector to emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>c</sub> =10mA, I <sub>B</sub> = 1mA          |     |     | 0.5  | V    |
| Base to emitter saturation voltage      | V <sub>BE(sat)</sub> | I <sub>c</sub> =10mA, I <sub>B</sub> = 1mA          |     |     | 1.4  | V    |
| Transition frequency                    | f <sub>T</sub>       | V <sub>CE</sub> =5V, I <sub>c</sub> = 5mA, f=400MHz | 600 |     |      | MHz  |

#### ■ Classification of hfe

| Type    | KST9018-L | KST9018-H |
|---------|-----------|-----------|
| Range   | 70-105    | 105-190   |
| Marking | J8        |           |