

RELAY DRIVERS, LAMP DRIVERS, 国产兼容器件，此份资料仅供参考！  
MOTOR DRIVERS APPLICATION.

## FEATURES

- Adoption of MBIT Processes.
- Large Current Capacitance.
- Low Collector-to-Emitter Saturation Voltage.
- High-Speed Switching.
- Ultrasmall Package Facilitates Miniaturization in end Products.
- High Allowable Power Dissipation.
- Complementary to KTC3551T.

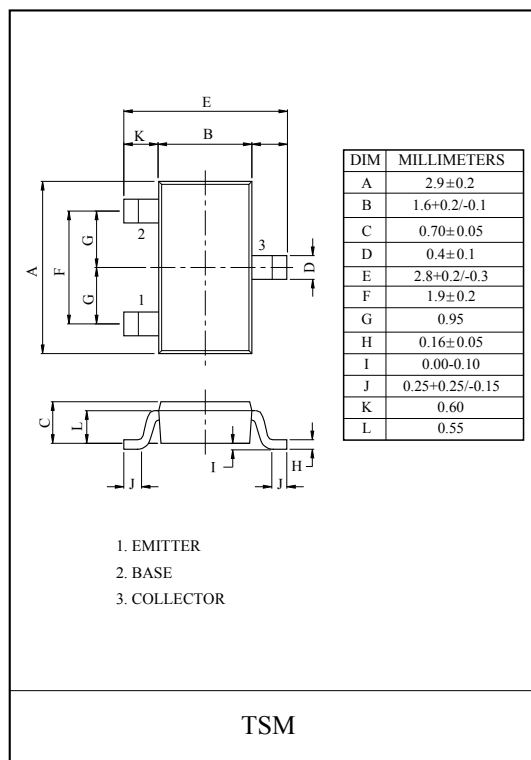
## MAXIMUM RATING (Ta=25℃)

| CHARACTERISTIC              |       | SYMBOL    | RATING    | UNIT |
|-----------------------------|-------|-----------|-----------|------|
| Collector-Base Voltage      |       | $V_{CBO}$ | -50       | V    |
| Collector-Emitter Voltage   |       | $V_{CES}$ | -50       | V    |
|                             |       | $V_{CEO}$ | -50       |      |
| Emitter-Base Voltage        |       | $V_{EBO}$ | -5        | V    |
| Collector Current           | DC    | $I_C$     | -1.0      | A    |
|                             | Pulse | $I_{CP}$  | -3        |      |
| Base Current                |       | $I_B$     | -200      | mA   |
| Collector Power Dissipation |       | $P_C^*$   | 0.9       | W    |
| Junction Temperature        |       | $T_j$     | 150       | ℃    |
| Storage Temperature Range   |       | $T_{stg}$ | -55 ~ 150 | ℃    |

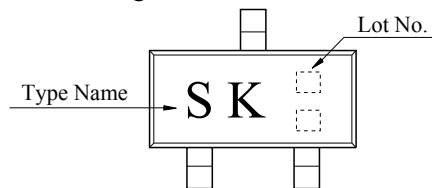
\* Package mounted on a ceramic board (600mm<sup>2</sup> × 0.8mm)

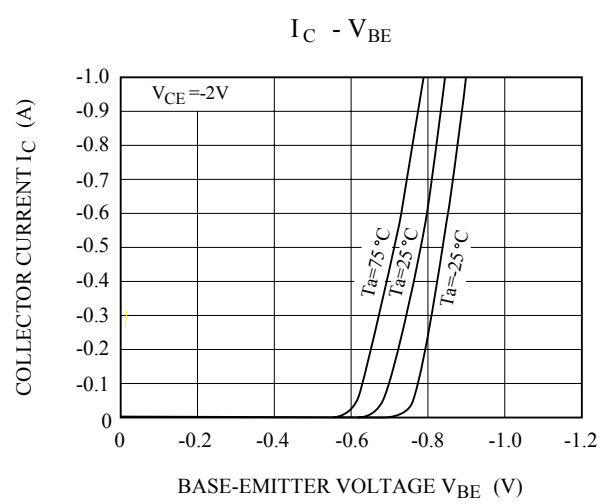
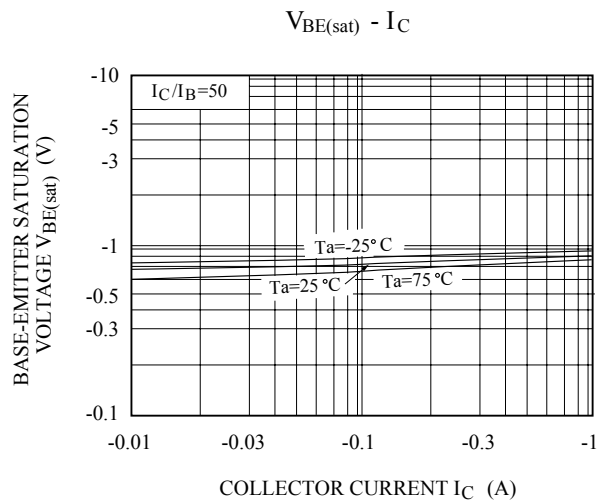
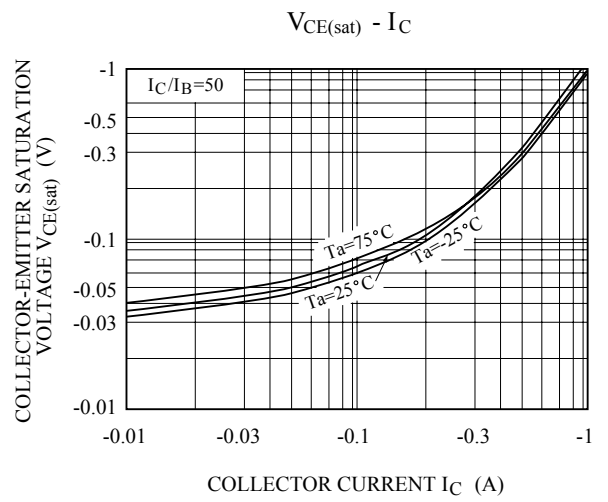
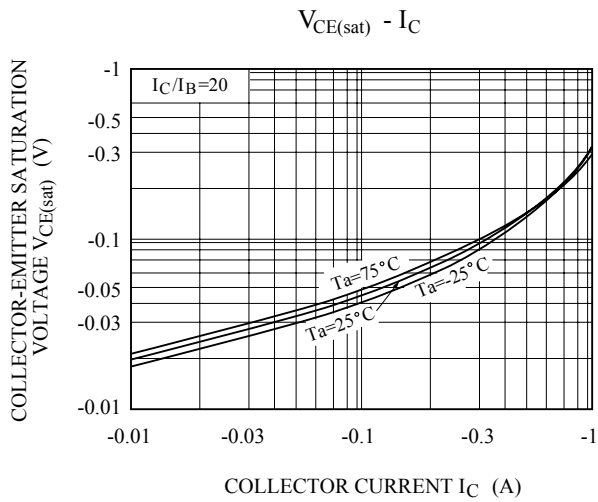
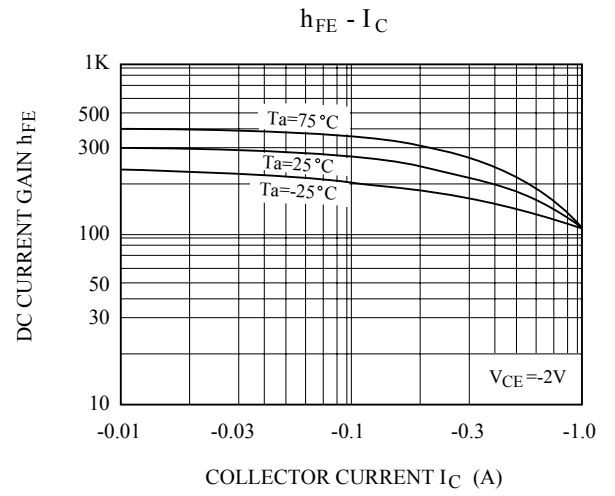
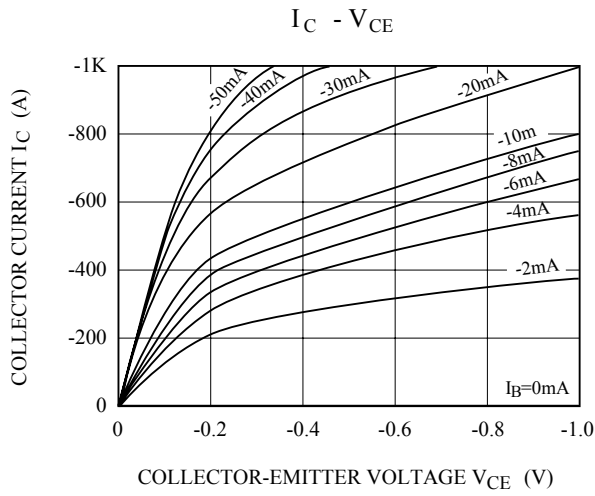
## ELECTRICAL CHARACTERISTICS (Ta=25℃)

| CHARACTERISTIC                       |              | SYMBOL                | TEST CONDITION                                                                                                                                                                                                                                                                         | MIN. | TYP.  | MAX. | UNIT |
|--------------------------------------|--------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|------|------|
| Collector Cut-off Current            |              | I <sub>CBO</sub>      | V <sub>CB</sub> =-40V, I <sub>E</sub> =0                                                                                                                                                                                                                                               | -    | -     | -0.1 | μA   |
| Emitter Cut-off Current              |              | I <sub>EBO</sub>      | V <sub>EB</sub> =-4V, I <sub>C</sub> =0                                                                                                                                                                                                                                                | -    | -     | -0.1 | μA   |
| Collector-Base Breakdown Voltage     |              | V <sub>(BR)CBO</sub>  | I <sub>C</sub> =-10μA, I <sub>E</sub> =0                                                                                                                                                                                                                                               | -50  | -     | -    | V    |
| Collector-Emitter Breakdown Voltage  |              | V <sub>(BR)CES</sub>  | I <sub>C</sub> =-100μA, V <sub>BE</sub> =0                                                                                                                                                                                                                                             | -50  | -     | -    | V    |
|                                      |              | V <sub>(BR)CEO</sub>  | I <sub>C</sub> =-1mA, I <sub>B</sub> =0                                                                                                                                                                                                                                                | -50  | -     | -    | V    |
| Emitter-Base Breakdown Voltage       |              | V <sub>(BR)EBO</sub>  | I <sub>E</sub> =-10μA, I <sub>C</sub> =0                                                                                                                                                                                                                                               | -5   | -     | -    | V    |
| Collector-Emitter Saturation Voltage |              | V <sub>CE(sat)1</sub> | I <sub>C</sub> =-500mA, I <sub>B</sub> =-10mA                                                                                                                                                                                                                                          | -    | -280  | -430 | mV   |
|                                      |              | V <sub>CE(sat)2</sub> | I <sub>C</sub> =-300mA, I <sub>B</sub> =-6mA                                                                                                                                                                                                                                           | -    | -145  | -220 | mV   |
| Base-Emitter Saturation Voltage      |              | V <sub>BE(sat)</sub>  | I <sub>C</sub> =-500mA, I <sub>B</sub> =-10mA                                                                                                                                                                                                                                          | -    | -0.81 | -1.2 | V    |
| DC Current Gain                      |              | h <sub>FE</sub>       | V <sub>CE</sub> =-2V, I <sub>C</sub> =-100mA                                                                                                                                                                                                                                           | 200  | -     | 560  |      |
| Transition Frequency                 |              | f <sub>T</sub>        | V <sub>CE</sub> =-10V, I <sub>C</sub> =-300mA                                                                                                                                                                                                                                          | -    | 420   | -    | MHz  |
| Collector Output Capacitance         |              | C <sub>ob</sub>       | V <sub>CB</sub> =-10V, f=1MHz                                                                                                                                                                                                                                                          | -    | 9     | -    | pF   |
| Switching Time                       | Turn-On Time | t <sub>on</sub>       | <p>PW=20μs<br/>DC≤1%</p> <p>INPUT</p> <p>50Ω</p> <p>VR</p> <p>100μF</p> <p>V<sub>BE</sub>=5V</p> <p>-IB<sub>1</sub></p> <p>IB<sub>2</sub></p> <p>RB</p> <p>OUTPUT</p> <p>RL</p> <p>470μF</p> <p>V<sub>CC</sub>=-25V</p> <p>-20IB<sub>1</sub>=20IB<sub>2</sub>=I<sub>C</sub>=-500mA</p> | -    | 35    | -    | nS   |
|                                      | Storage Time | t <sub>stg</sub>      |                                                                                                                                                                                                                                                                                        | -    | 170   | -    |      |
|                                      | Fall Time    | t <sub>f</sub>        |                                                                                                                                                                                                                                                                                        | -    | 30    | -    |      |



## Marking





# KTA1551T

