

RELAY DRIVERS, LAMP DRIVERS,
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 Disipation.
- Complementary to KTA1551T.

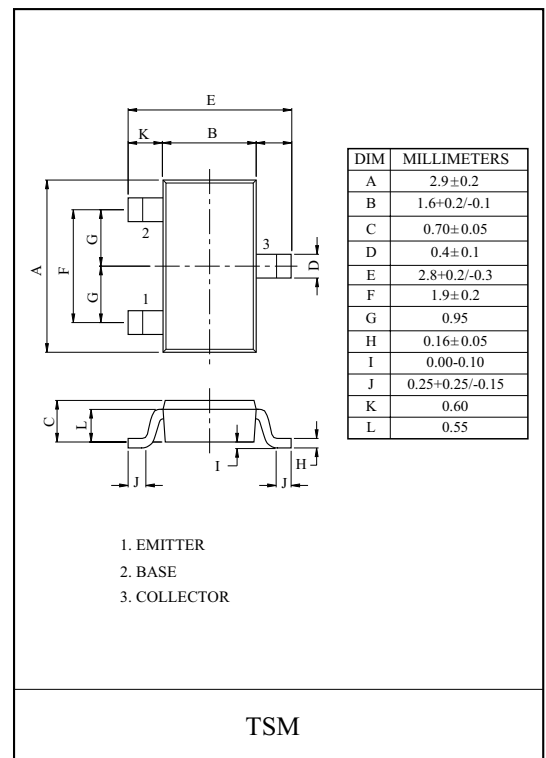
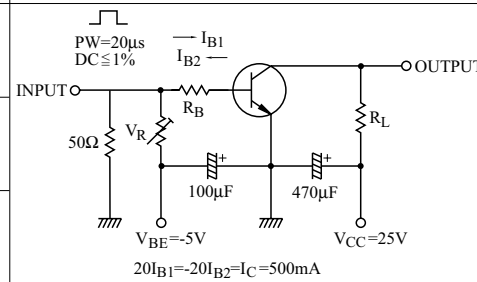
MAXIMUM RATING (Ta=25°C)

| CHARACTERISTIC | | SYMBOL | RATING | UNIT |
|-----------------------------|-------|-----------|-----------|------|
| Collector-Base Voltage | | V_{CBO} | 80 | V |
| Collector-Emitter Voltage | | V_{CES} | 80 | 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 | °C |
| Storage Temperature Range | | T_{stg} | -55 ~ 150 | °C |

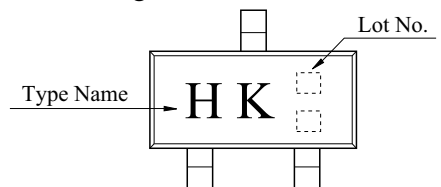
* Package mounted on a ceramic board (600mm² × 0.8mm)

ELECTRICAL CHARACTERISTICS (Ta=25°C)

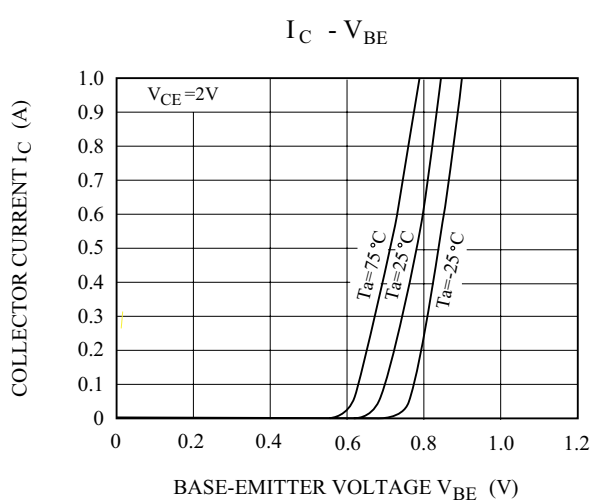
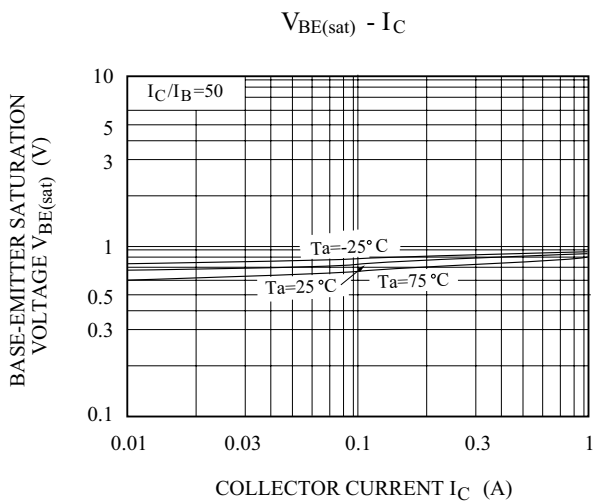
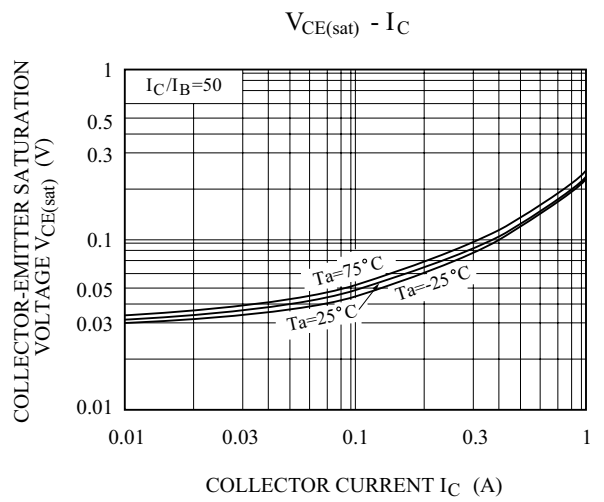
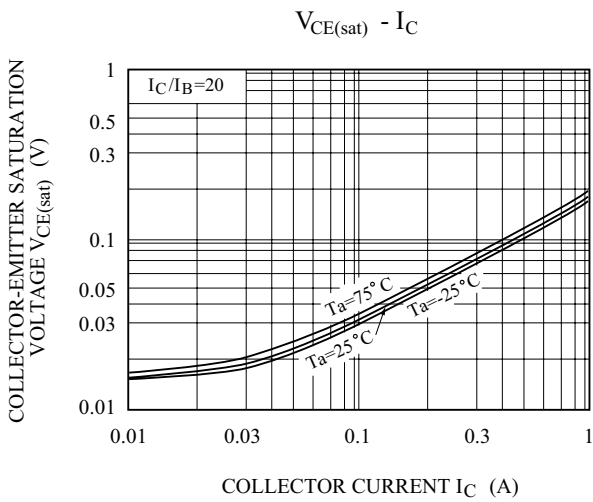
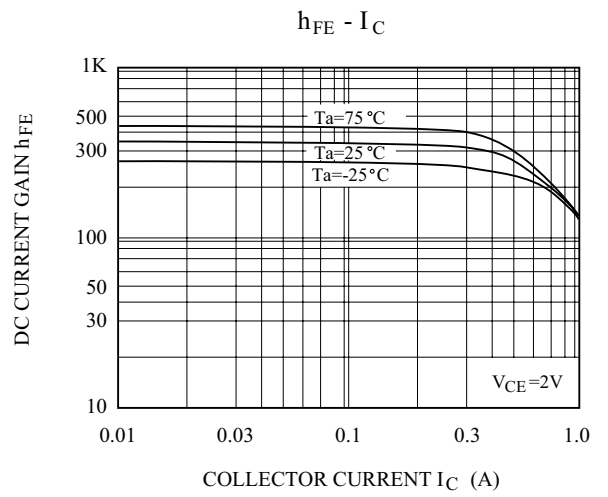
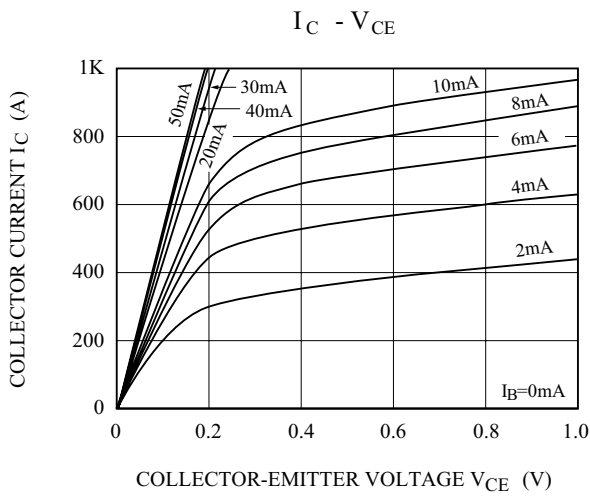
| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|----------------|--------------------------|------|------|------|---------|
| Collector Cut-off Current | I_{CBO} | $V_{CB}=40V, I_E=0$ | - | - | 0.1 | μA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB}=4V, I_C=0$ | - | - | 0.1 | μA |
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=10\mu A, I_E=0$ | 80 | - | - | V |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CES}$ | $I_C=100\mu A, V_{BE}=0$ | 80 | - | - | V |
| | $V_{(BR)CEO}$ | $I_C=1mA, I_B=0$ | 50 | - | - | V |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E=10\mu A, I_C=0$ | 5 | - | - | V |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)1}$ | $I_C=500mA, I_B=10mA$ | - | 130 | 190 | mV |
| | $V_{CE(sat)2}$ | $I_C=300mA, I_B=6mA$ | - | 90 | 135 | mV |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=500mA, I_B=10mA$ | - | 0.81 | 1.2 | V |
| DC Current Gain | h_{FE} | $V_{CE}=2V, I_C=100mA$ | 200 | - | 560 | |
| Transition Frequency | f_T | $V_{CE}=10V, I_C=300mA$ | - | 420 | - | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB}=10V, f=1MHz$ | - | 6 | - | pF |
| Switching Time | Turn-On Time | t_{on} | - | 35 | - | nS |
| | Storage Time | t_{stg} | - | 330 | - | |
| | Fall Time | t_f | - | 40 | - | |



Marking

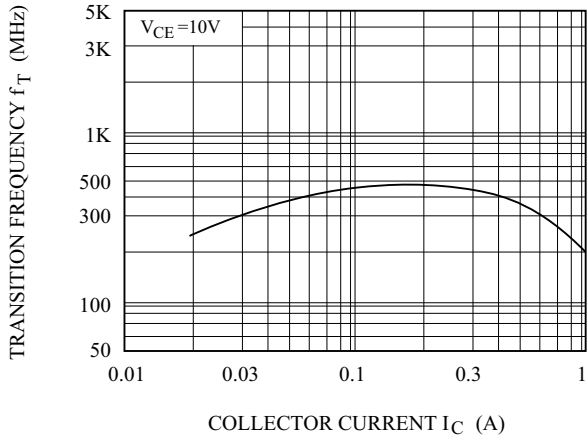


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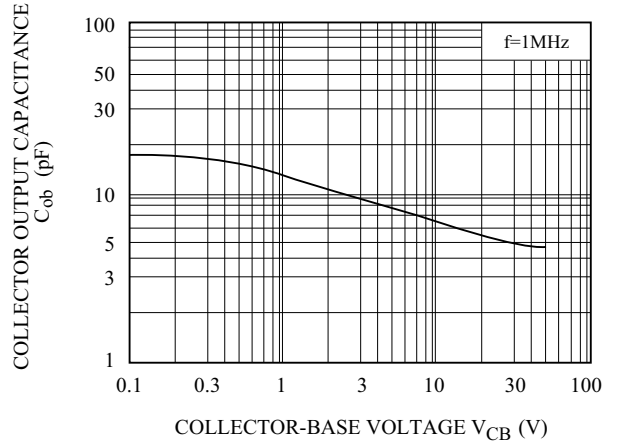


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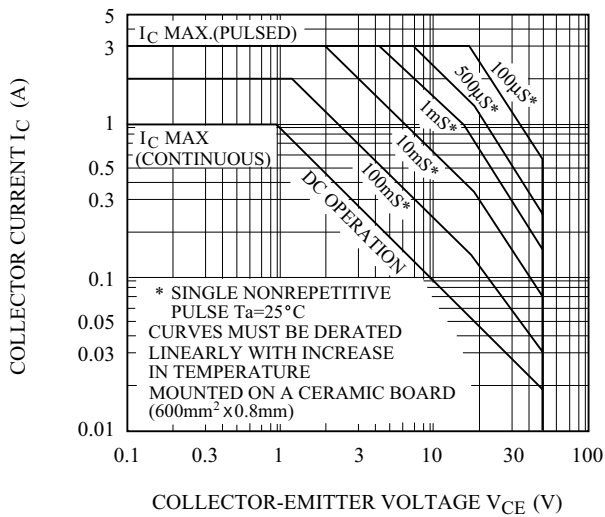
$f_T - I_C$



$C_{ob} - V_{CB}$



SAFE OPERATING AREA



$P_c - T_a$

