

RELAY DRIVERS, LAMP DRIVERS,  
MOTOR DRIVERS AND STROBES APPLICATION.

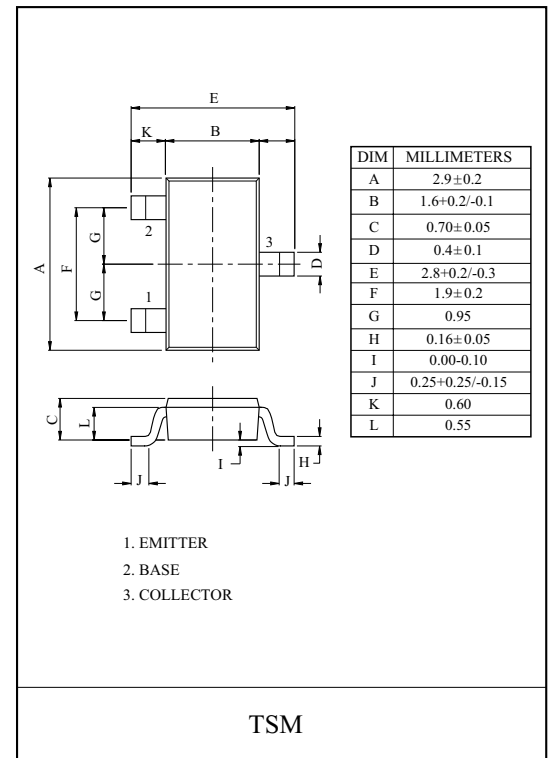
### FEATURES

- 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 KTA1541T.

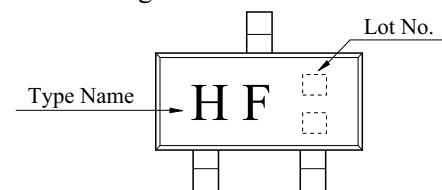
### MAXIMUM RATING (Ta=25°C)

| CHARACTERISTIC              |       | SYMBOL    | RATING    | UNIT |
|-----------------------------|-------|-----------|-----------|------|
| Collector-Base Voltage      |       | $V_{CBO}$ | 40        | V    |
| Collector-Emitter Voltage   |       | $V_{CEO}$ | 30        | V    |
| Emitter-Base Voltage        |       | $V_{EBO}$ | 5         | V    |
| Collector Current           | DC    | $I_C$     | 1.5       | A    |
|                             | Pulse | $I_{CP}$  | 3         |      |
| Base Current                |       | $I_B$     | 300       | 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 (600mm<sup>2</sup> × 0.8mm)



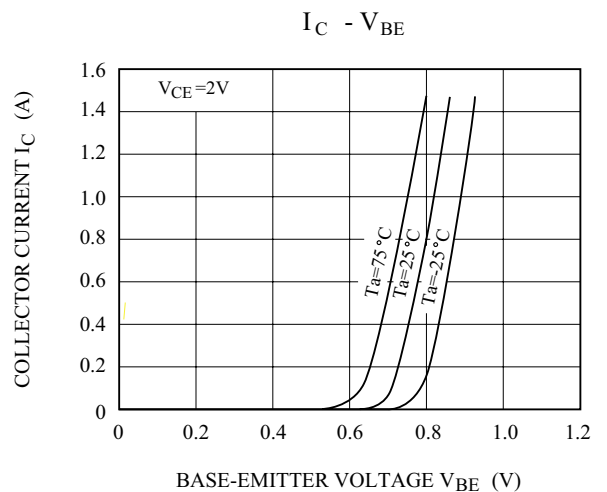
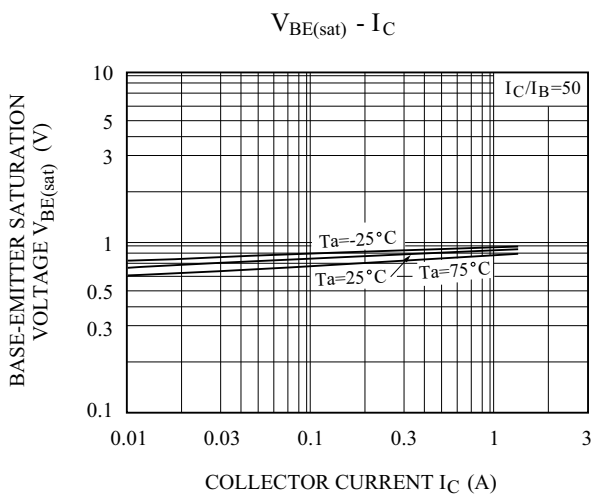
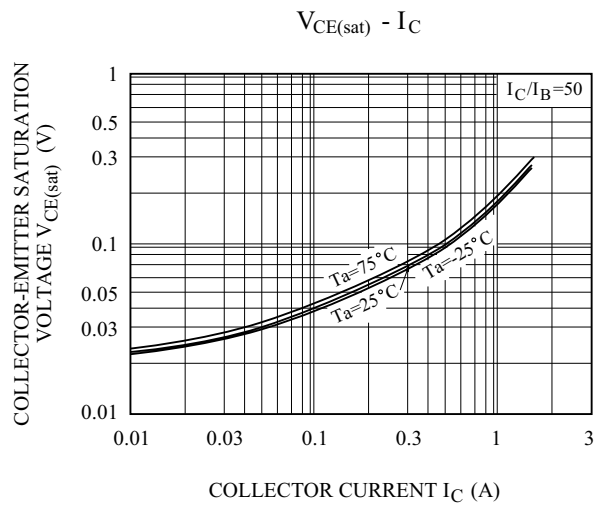
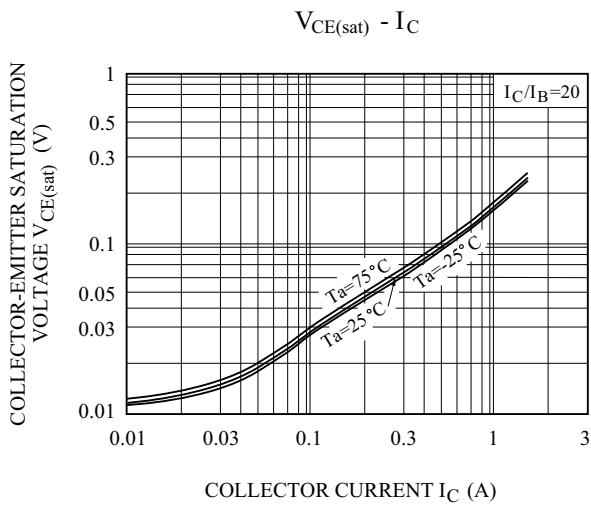
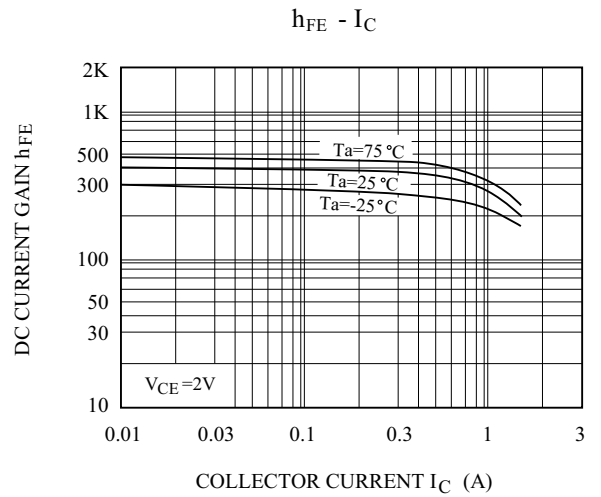
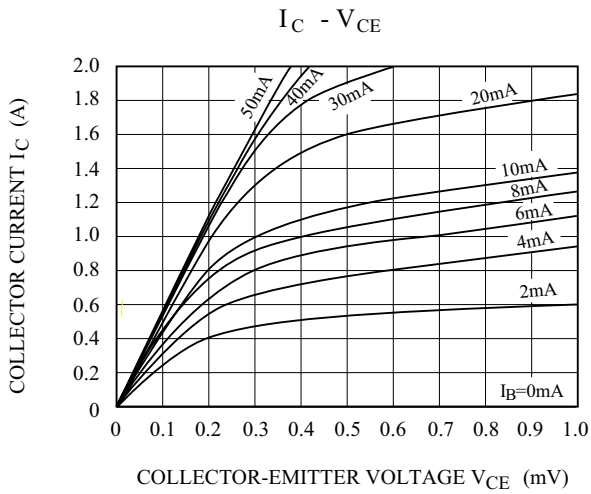
### Marking



### ELECTRICAL CHARACTERISTICS (Ta=25°C)

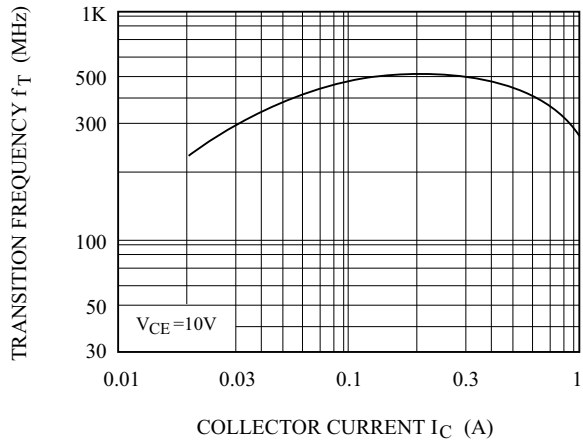
| CHARACTERISTIC                       |              | SYMBOL        | TEST CONDITION          | MIN. | TYP. | MAX. | UNIT    |
|--------------------------------------|--------------|---------------|-------------------------|------|------|------|---------|
| Collector Cut-off Current            |              | $I_{CBO}$     | $V_{CB}=30V, I_E=0$     | -    | -    | 0.1  | $\mu A$ |
| Emitter Cut-off Current              |              | $I_{EBO}$     | $V_{EB}=4V, I_C=0$      | -    | -    | 0.1  | $\mu A$ |
| Collector-Base Breakdown Voltage     |              | $V_{(BR)CBO}$ | $I_C=10\mu A, I_E=0$    | 40   | -    | -    | V       |
| Collector-Emitter Breakdown Voltage  |              | $V_{(BR)CEO}$ | $I_C=1mA, I_B=0$        | 30   | -    | -    | V       |
| Emitter-Base Breakdown Voltage       |              | $V_{(BR)EBO}$ | $I_E=10\mu A, I_C=0$    | 5    | -    | -    | V       |
| Collector-Emitter Saturation Voltage |              | $V_{CE(sat)}$ | $I_C=750mA, I_B=15mA$   | -    | 150  | 225  | mV      |
| Base-Emitter Saturation Voltage      |              | $V_{BE(sat)}$ | $I_C=750mA, I_B=15mA$   | -    | 0.85 | 1.2  | V       |
| DC Current Gain                      |              | $h_{FE}$      | $V_{CE}=2V, I_C=100mA$  | 200  | -    | 560  |         |
| Transition Frequency                 |              | $f_T$         | $V_{CE}=10V, I_C=300mA$ | -    | 450  | -    | MHz     |
| Collector Output Capacitance         |              | $C_{ob}$      | $V_{CB}=10V, f=1MHz$    | -    | 20   | -    | pF      |
| Switching Time                       | Turn-On Time | $t_{on}$      |                         | -    | 35   | -    | nS      |
|                                      | Storage Time | $t_{stg}$     |                         | -    | 205  | -    |         |
|                                      | Fall Time    | $t_f$         |                         | -    | 30   | -    |         |

# KTC3541T

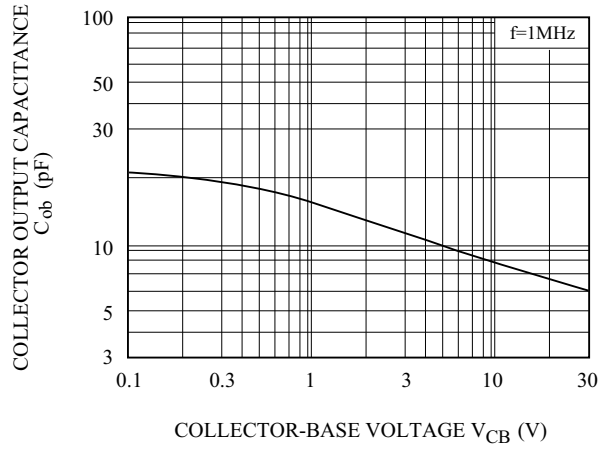


# KTC3541T

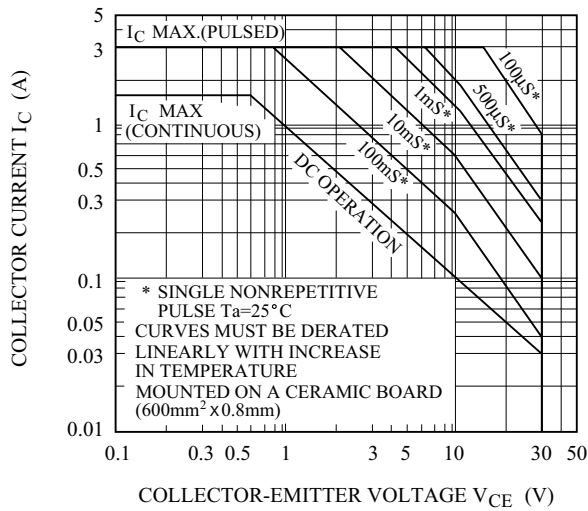
$f_T - I_C$



$C_{ob} - V_{CB}$



SAFE OPERATING AREA



$P_c - T_a$

