

VOLTAGE REGULATORS, RELAY DRIVERS  
LAMP DRIVERS, ELECTRICAL EQUIPMENT

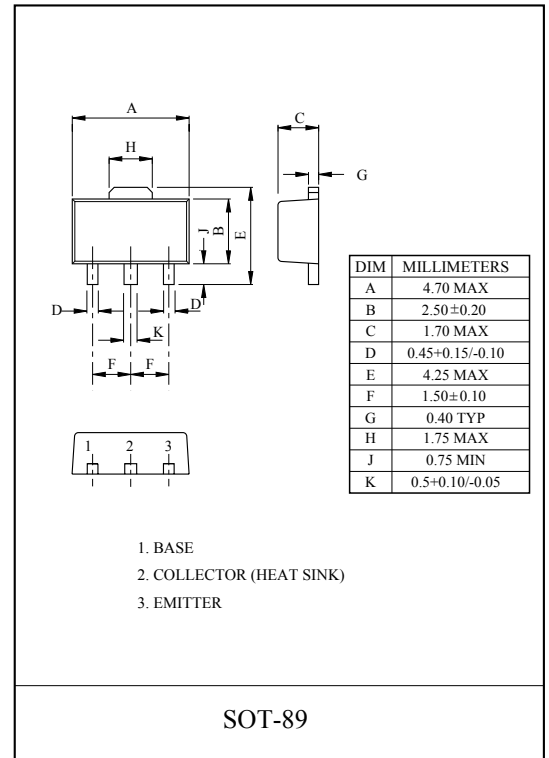
### FEATURES

- Adoption of MBIT processes.
- Low collector-to-emitter saturation voltage.
- Fast switching speed.
- Large current capacity and wide ASO.
- Complementary to KTD1624.

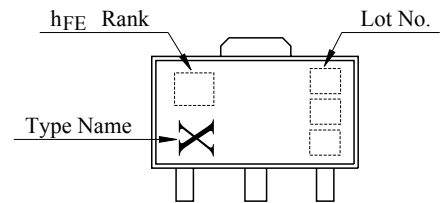
### MAXIMUM RATING (Ta=25°C)

| CHARACTERISTIC              | SYMBOL    | RATING    | UNIT |
|-----------------------------|-----------|-----------|------|
| Collector-Base Voltage      | $V_{CBO}$ | -60       | V    |
| Collector-Emitter Voltage   | $V_{CEO}$ | -50       | V    |
| Emitter-Base Voltage        | $V_{EBO}$ | -6        | V    |
| Collector Current           | $I_C$     | -3        | A    |
| Collector Current(Pulse)    | $I_{CP}$  | -6        | A    |
| Collector Power Dissipation | $P_C$     | 500       | mW   |
|                             | $P_C^*$   | 1         | W    |
| Junction Temperature        | $T_j$     | 150       | °C   |
| Storage Temperature Range   | $T_{stg}$ | -55 ~ 150 | °C   |

\* : Package mounted on ceramic substrate(250mm<sup>2</sup> × 0.8t)

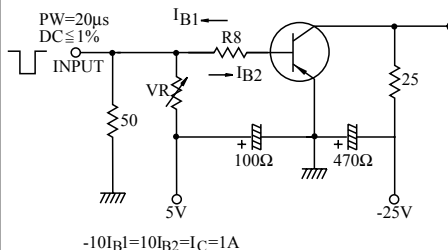


### Marking



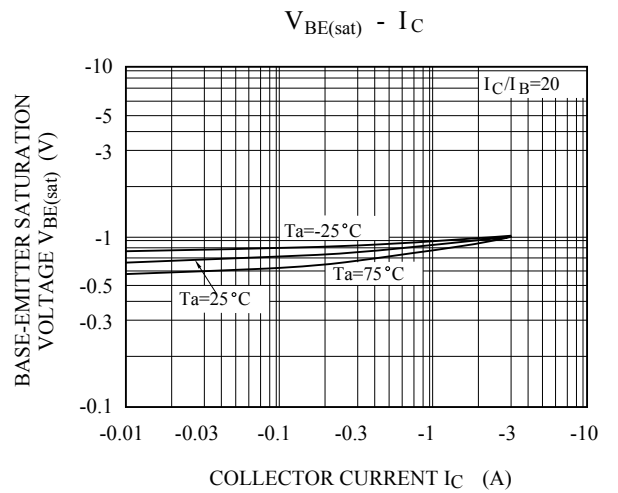
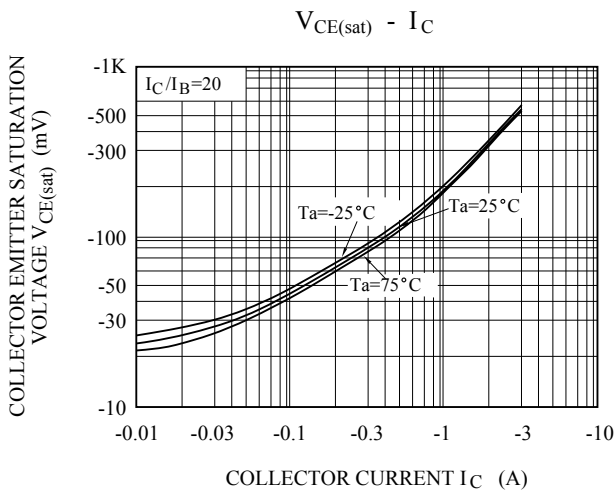
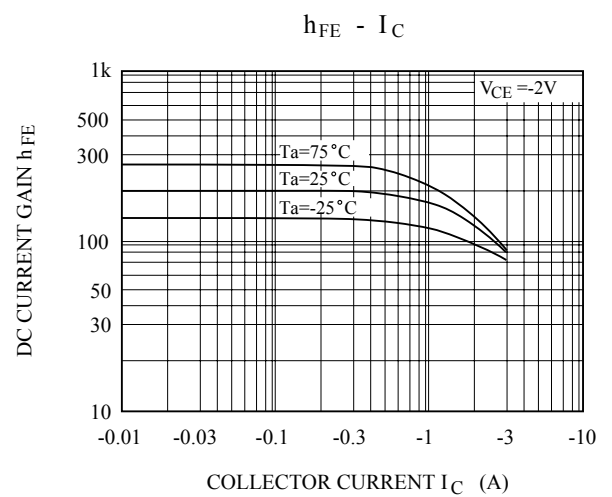
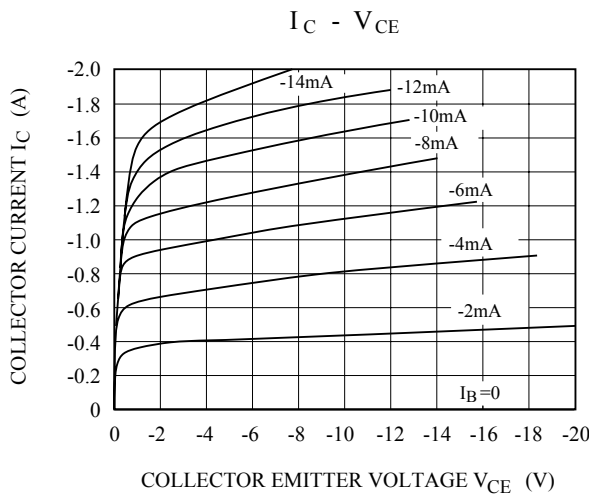
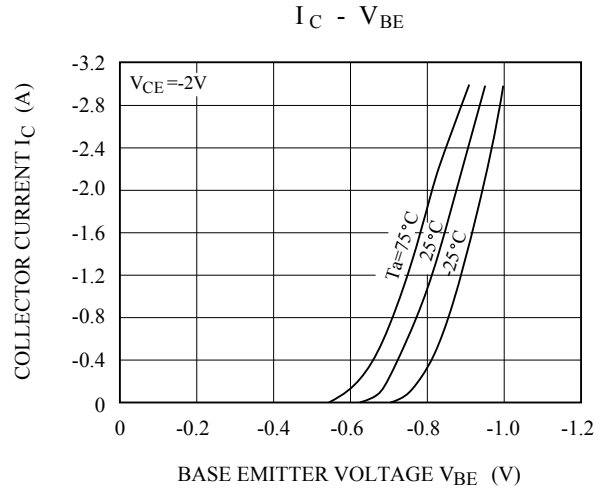
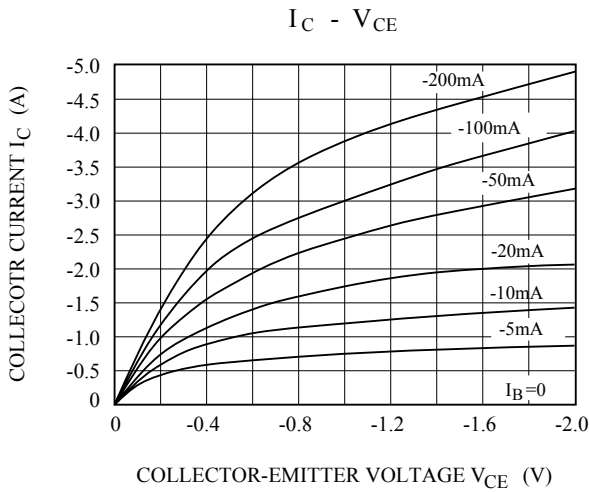
### ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC                       | SYMBOL             | TEST CONDITION           | MIN. | TYP.  | MAX. | UNIT.   |
|--------------------------------------|--------------------|--------------------------|------|-------|------|---------|
| Collector Cut-off Current            | $I_{CBO}$          | $V_{CB}=-40V, I_E=0$     | -    | -     | -1   | $\mu A$ |
| Emitter Cut-off Current              | $I_{EBO}$          | $V_{EB}=-4V, I_C=0$      | -    | -     | -1   | $\mu A$ |
| DC Current Gain                      | $h_{FE}(1)$ (Note) | $V_{CE}=-2V, I_C=-100mA$ | 100  | -     | 400  |         |
|                                      | $h_{FE}(2)$        | $V_{CE}=-2V, I_C=-3A$    | 35   | -     | -    |         |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$      | $I_C=-2A, I_B=-100mA$    | -    | -0.35 | -0.7 | V       |
| Base-Emitter Saturation Voltage      | $V_{BE(sat)}$      | $I_C=-2A, I_B=-100mA$    | -    | -0.94 | -1.2 | V       |
| Transition Frequency                 | $f_T$              | $V_{CE}=-10V, I_C=-50mA$ | -    | 150   | -    | MHz     |
| Collector Output Capacitance         | $C_{ob}$           | $V_{CB}=-10V, f=1MHz$    | -    | 39    | -    | pF      |
| Switching Time                       | Turn-on Time       | $t_{on}$                 | -    | 70    | -    | nS      |
|                                      | Storage Time       | $t_{stg}$                | -    | 450   | -    |         |
|                                      | Fall Time          | $t_f$                    | -    | 35    | -    |         |



Note :  $h_{FE}(1)$  Classification A:100 ~ 200, B:140 ~ 280, C:200 ~ 400

# KTB1124



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