

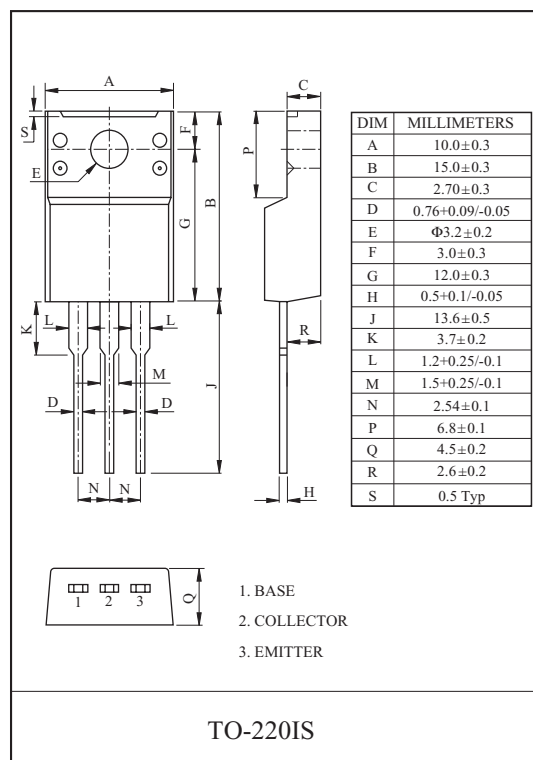
HIGH VOLTAGE APPLICATION.

## FEATURES

- High Transition Frequency :  $f_T=100\text{MHz(Typ.)}$ .
- Complementary to KTC4370/A.

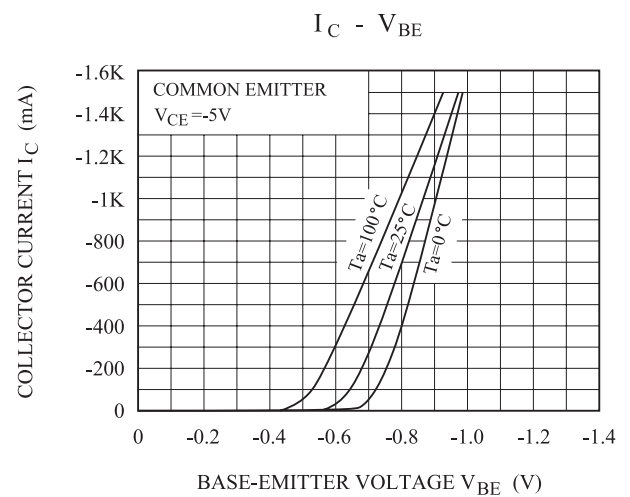
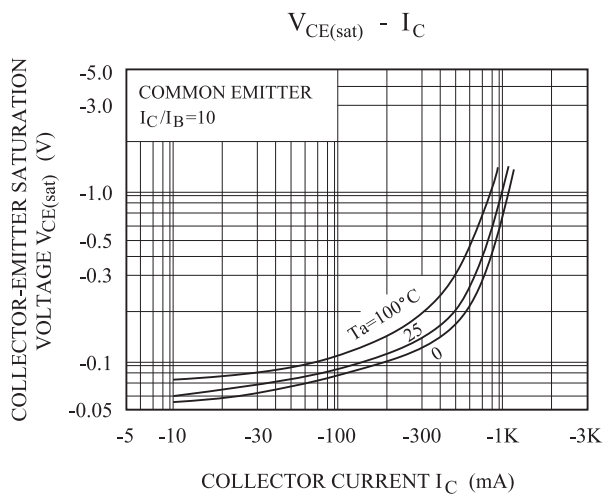
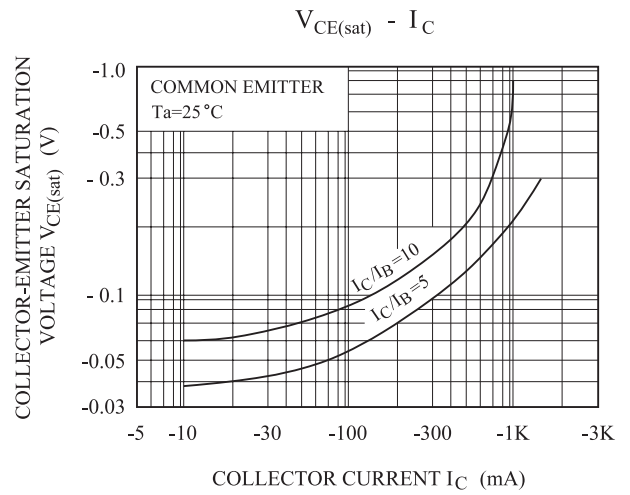
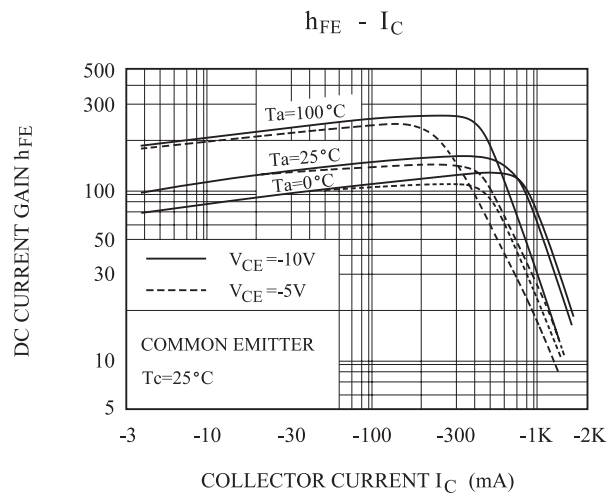
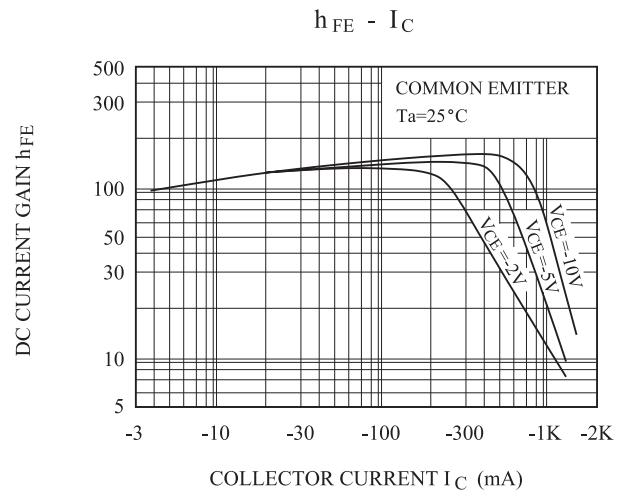
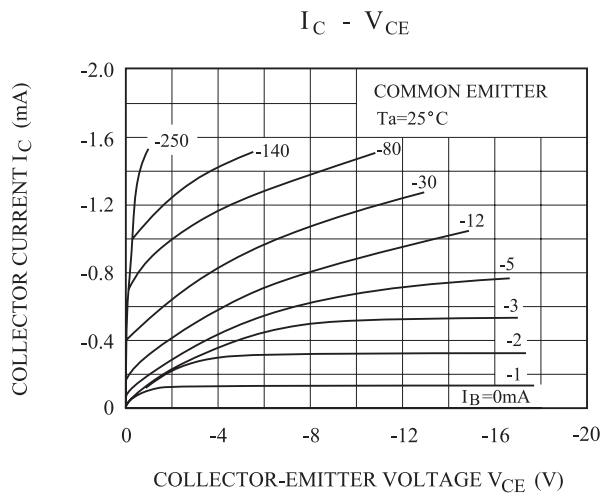
MAXIMUM RATING ( $T_a=25^\circ\text{C}$ )

| CHARACTERISTIC                                         |          | SYMBOL    | RATING    | UNIT             |
|--------------------------------------------------------|----------|-----------|-----------|------------------|
| Collector-Base Voltage                                 | KTA1659  | $V_{CBO}$ | -160      | V                |
|                                                        | KTA1659A |           | -180      |                  |
| Collector-Emitter Voltage                              | KTA1659  | $V_{CEO}$ | -160      | V                |
|                                                        | KTA1659A |           | -180      |                  |
| Emitter-Base Voltage                                   |          | $V_{EBO}$ | -5        | V                |
| Collector Current                                      |          | $I_C$     | -1.5      | A                |
| Base Current                                           |          | $I_B$     | -0.15     | A                |
| Collector Power Dissipation ( $T_c=25^\circ\text{C}$ ) |          | $P_C$     | 20        | W                |
| Junction Temperature                                   |          | $T_j$     | 150       | $^\circ\text{C}$ |
| Storage Temperature Range                              |          | $T_{stg}$ | -55 ~ 150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )

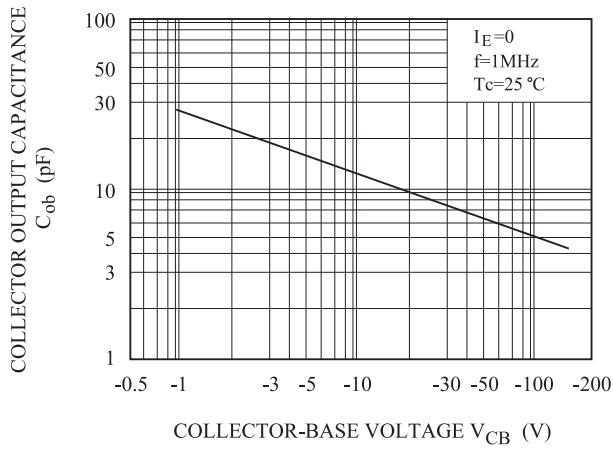
| CHARACTERISTIC                       |          | SYMBOL                | TEST CONDITION                             | MIN. | TYP. | MAX. | UNIT          |
|--------------------------------------|----------|-----------------------|--------------------------------------------|------|------|------|---------------|
| Collector Cut-off Current            |          | $I_{CBO}$             | $V_{CB}=-160\text{V}, I_E=0$               | -    | -    | -1.0 | $\mu\text{A}$ |
| Emitter Cut-off Current              |          | $I_{EBO}$             | $V_{EB}=-5\text{V}, I_C=0$                 | -    | -    | -1.0 | $\mu\text{A}$ |
| Collector-Emitter Breakdown Voltage  | KTA1659  | $V_{(BR)CEO}$         | $I_C=-10\text{mA}, I_B=0$                  | -160 | -    | -    | V             |
|                                      | KTA1659A |                       |                                            | -180 | -    | -    |               |
| DC Current Gain                      |          | $h_{FE}(\text{Note})$ | $V_{CE}=-5\text{V}, I_C=-100\text{mA}$     | 70   | -    | 240  |               |
| Collector-Emitter Saturation Voltage |          | $V_{CE(sat)}$         | $I_C=-500\text{mA}, I_B=-50\text{mA}$      | -    | -    | -1.5 | V             |
| Base-Emitter Voltage                 |          | $V_{BE}$              | $V_{CE}=-5\text{V}, I_C=-500\text{mA}$     | -    | -    | -1.0 | V             |
| Transition Frequency                 |          | $f_T$                 | $V_{CE}=-10\text{V}, I_C=-100\text{mA}$    | -    | 100  | -    | MHz           |
| Collector Output Capacitance         |          | $C_{ob}$              | $V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$ | -    | 30   | -    | pF            |

Note :  $h_{FE}$  Classification O:70~140, Y:120~240

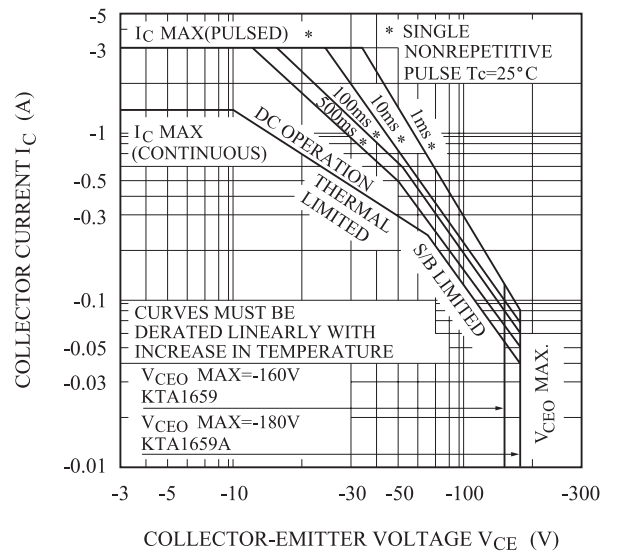


# KTA1659/A

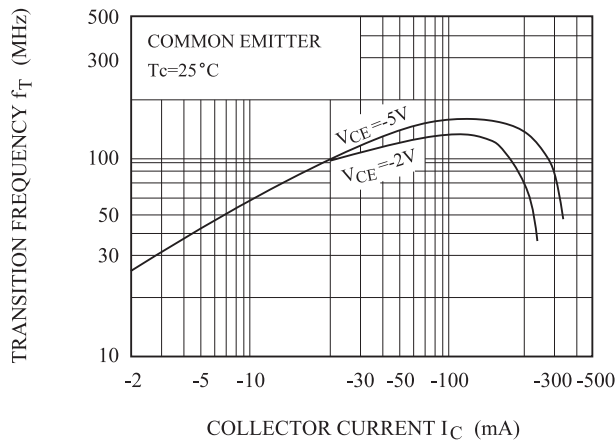
$C_{ob} - V_{CB}$



SAFE OPERATING AREA



$f_T - I_C$



$P_c - T_a$

