

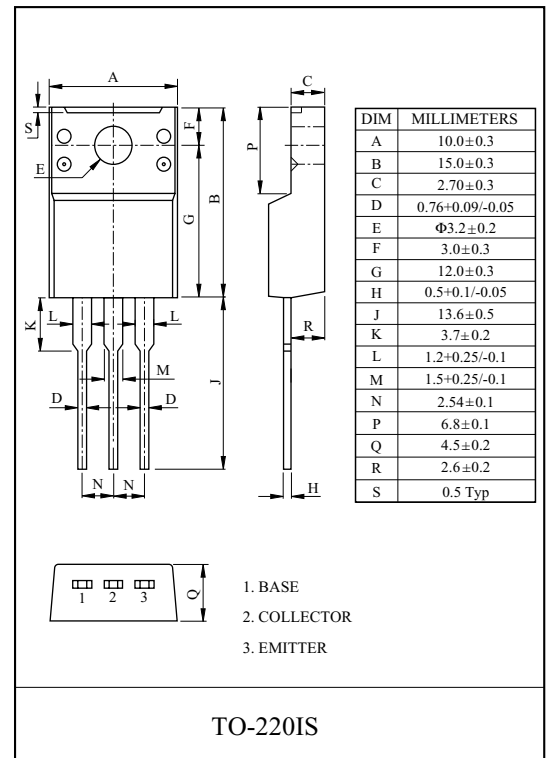
HIGH VOLTAGE APPLICATION.

### FEATURES

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

### MAXIMUM RATING (Ta=25 °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 (Tc=25 °C) |          | $P_C$     | 20        | W    |
| Junction Temperature                   |          | $T_j$     | 150       | °C   |
| Storage Temperature Range              |          | $T_{stg}$ | -55 ~ 150 | °C   |

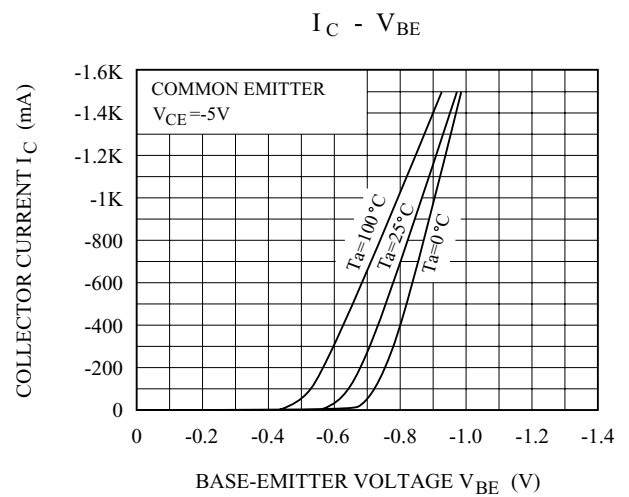
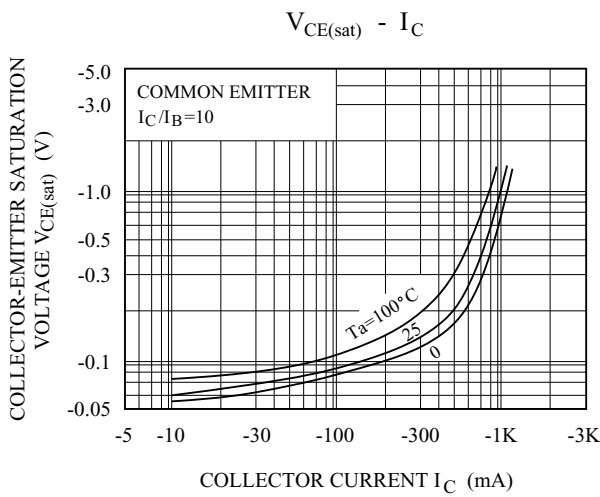
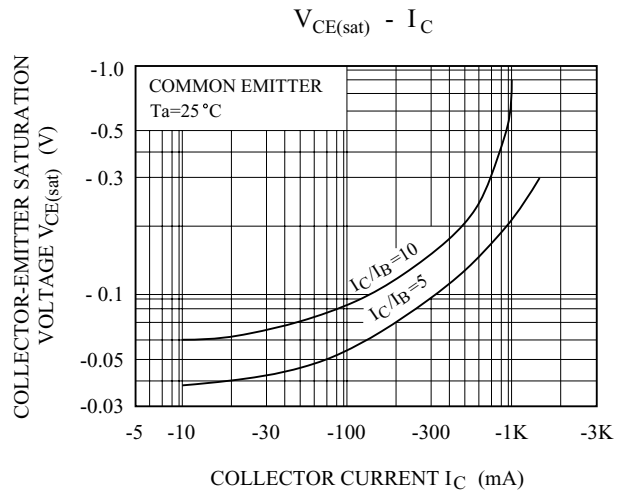
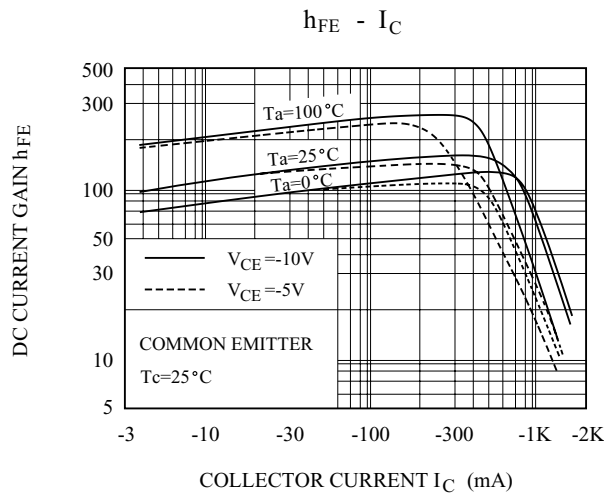
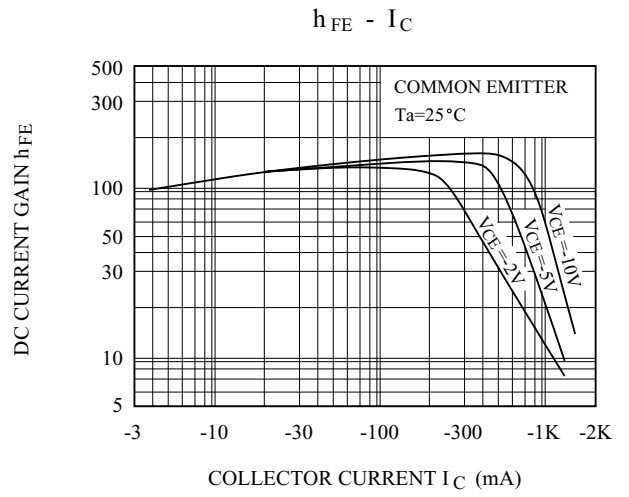
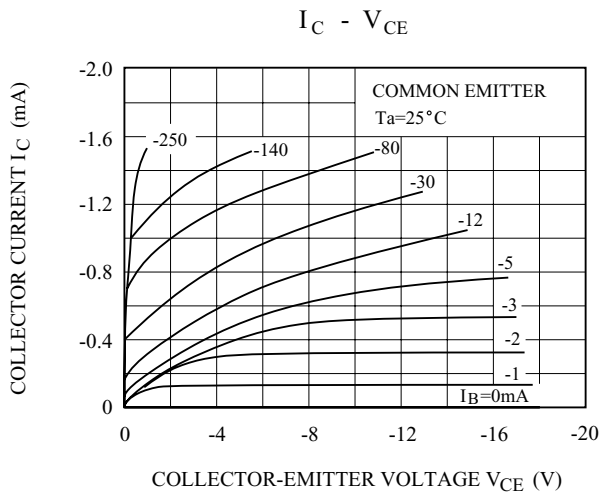


### ELECTRICAL CHARACTERISTICS (Ta=25 °C)

| CHARACTERISTIC                       |          | SYMBOL          | TEST CONDITION                             | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|----------|-----------------|--|------|------|------|------|
| Collector Cut-off Current            |          | $I_{CBO}$       | $V_{CB}=-160\text{V}, I_E=0$               | -    | -    | -1.0 | μA   |
| Emitter Cut-off Current              |          | $I_{EBO}$       | $V_{EB}=-5\text{V}, I_C=0$                 | -    | -    | -1.0 | μA   |
| Collector-Emitter Breakdown Voltage  | KTA1659  | $V_{(BR)CEO}$   | $I_C=-10\text{mA}, I_B=0$                  | -160 | -    | -    | V    |
|                                      | KTA1659A |                 |  | -180 | -    | -    |      |
| DC Current Gain                      |          | $h_{FE}$ (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   |

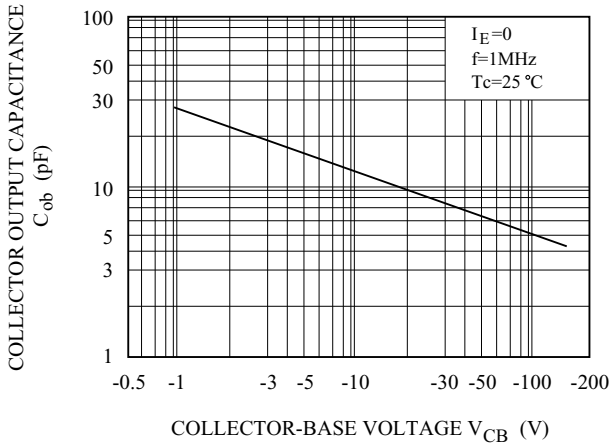
Note :  $h_{FE}$  Classification O:70~140, Y:120~240

# KTA1659/A

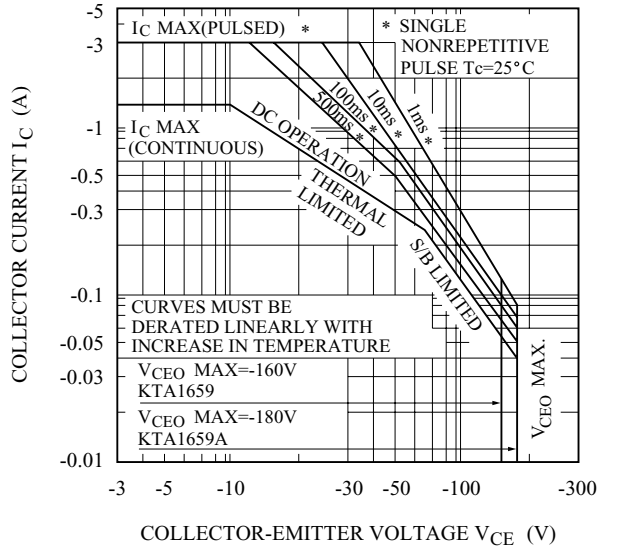


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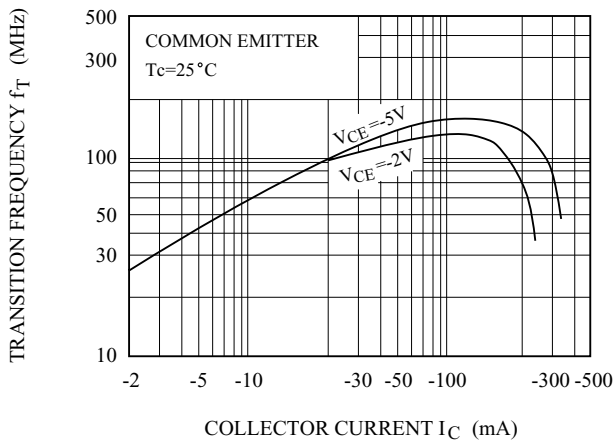
$C_{ob} - V_{CB}$



SAFE OPERATING AREA



$f_T - I_C$



$P_c - T_a$

