

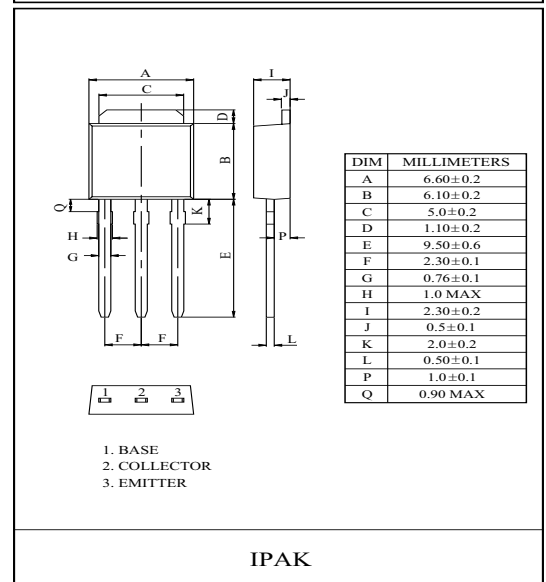
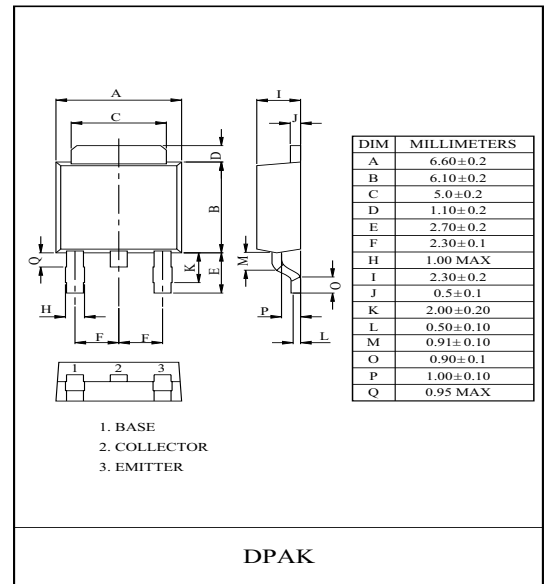
### HIGH VOLTAGE SWITCHING.

### FEATURES

- Low Collector Saturation Voltage  
:  $V_{CE(sat)}=0.5V(\text{Max.})$  at  $(I_C=0.5A)$ .
- High Switching Speed Typically.  
:  $t_f \approx 0.4\mu S$  at  $I_C=1A$ .
- Complementary to KTA1862D.
- Wide Safe Operating Area (SOA)

### MAXIMUM RATING (Ta=25°C)

| CHARACTERISTIC              |         | SYMBOL    | RATING    | UNIT |
|-----------------------------|---------|-----------|-----------|------|
| Collector-Base Voltage      |         | $V_{CBO}$ | 400       | V    |
| Collector-Emitter Voltage   |         | $V_{CEO}$ | 400       | V    |
| Emitter-Base Voltage        |         | $V_{EBO}$ | 7         | V    |
| Collector Current           | DC      | $I_C$     | 2.0       | A    |
|                             | Pulse   |           | 4.0       |      |
| Collector Power Dissipation | Ta=25°C | $P_C$     | 1.3       | W    |
|                             | Tc=25°C |           | 10        |      |
| Junction Temperature        |         | $T_j$     | 150       | °C   |
| Storage Temperature Range   |         | $T_{stg}$ | -55 ~ 150 | °C   |

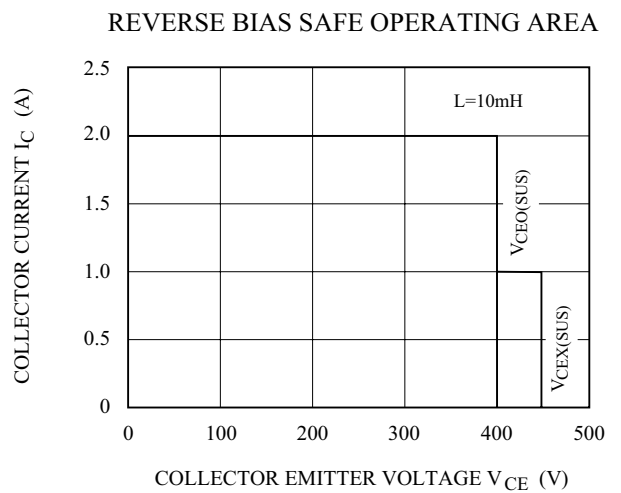
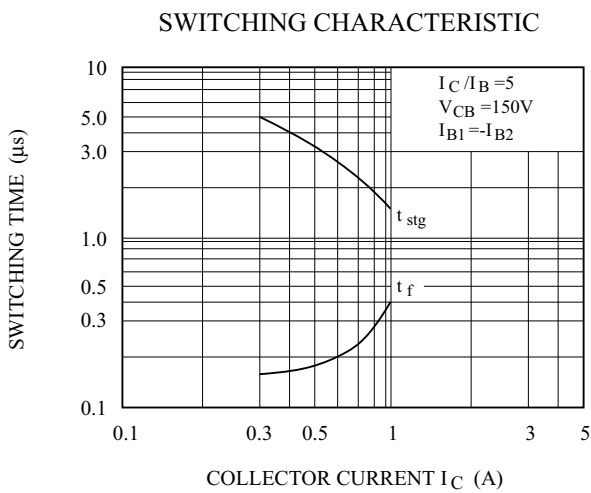
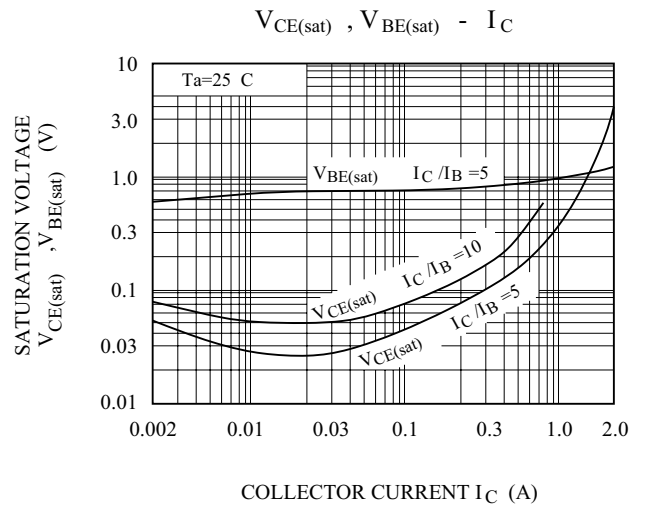
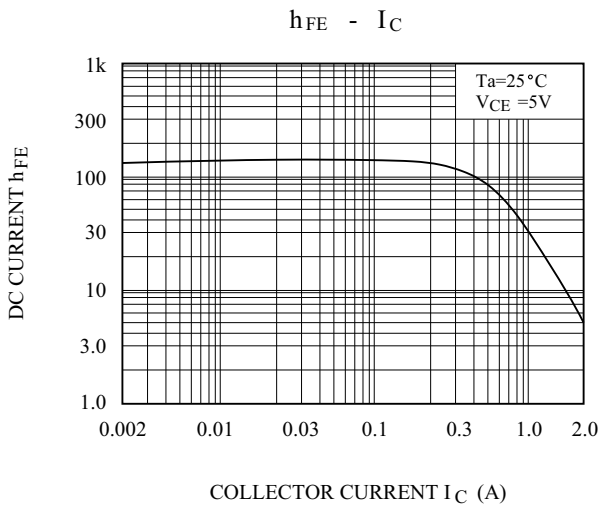
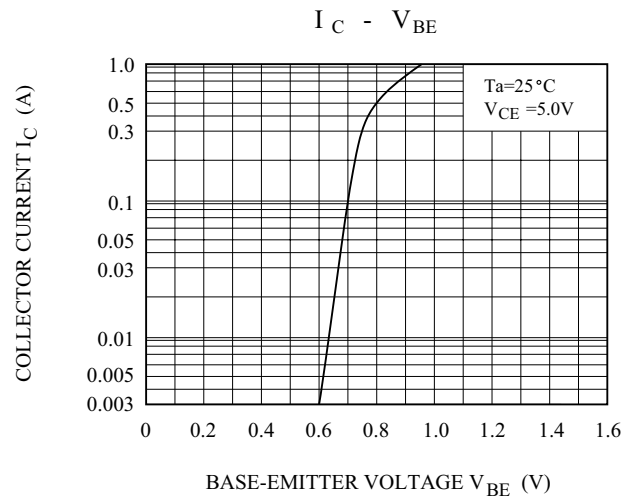
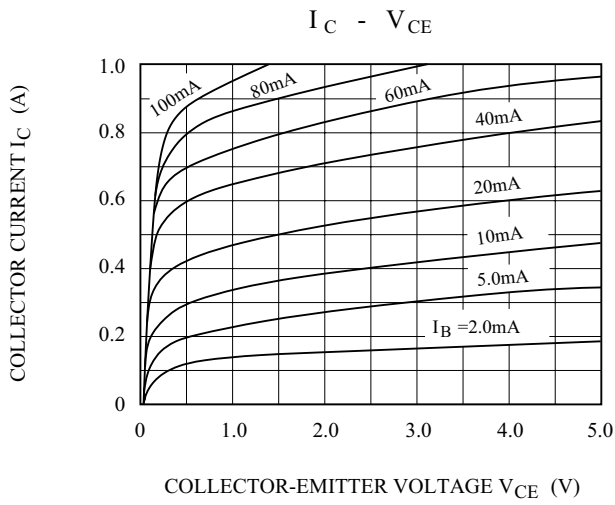


### ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC               |                    | SYMBOL        | TEST CONDITION  | MIN. | TYP. | MAX. | UNIT    |
|------------------------------|--------------------|---------------|---|------|------|------|---------|
| Collector Cut-off Current    |                    | $I_{CBO}$     | $V_{CB}=400V, I_E=0$  | -    | -    | 1.0  | $\mu A$ |
| Emitter Cut-off Current      |                    | $I_{EBO}$     | $V_{EB}=5.0V, I_C=0$  | -    | -    | 1.0  | $\mu A$ |
| DC Current Gain              | $h_{FE(1)}$ (Note) | $h_{FE}$      | $V_{CE}=5.0V, I_C=100mA$                                    | 56   | 100  | 180  |         |
|                              | $h_{FE(2)}$        |               | $V_{CE}=5.0V, I_C=500mA$                                    | 6    | -    | -    |         |
| Collector Saturation Voltage |                    | $V_{CE(sat)}$ | $I_C=500mA, I_B=100mA$                                      | -    | 0.3  | 0.5  | V       |
| Base Saturation Voltage      |                    | $V_{BE(sat)}$ | $I_C=500mA, I_B=100mA$                                      | -    | -    | 1.2  | V       |
| Transition Frequency         |                    | $f_T$         | $V_{CE}=10V, I_E=-100mA, f=5MHz$                            | -    | 18   | -    | MHz     |
| Collector Output Capacitance |                    | $C_{ob}$      | $V_{CB}=10V, I_E=0, f=1MHz$                                 | -    | 30   | -    | pF      |
| Switching Time               | Turn-on Time       | $t_{on}$      | <p><math>I_{B1}=-I_{B2}=0.2A</math><br/>DUTY CYCLE ≤ 1%</p> | -    | 0.2  | -    | $\mu S$ |
|                              | Storage Time       | $t_{stg}$     |   | -    | 1.8  | -    |         |
|                              | Fall Time          | $t_f$         |   | -    | 0.4  | -    |         |

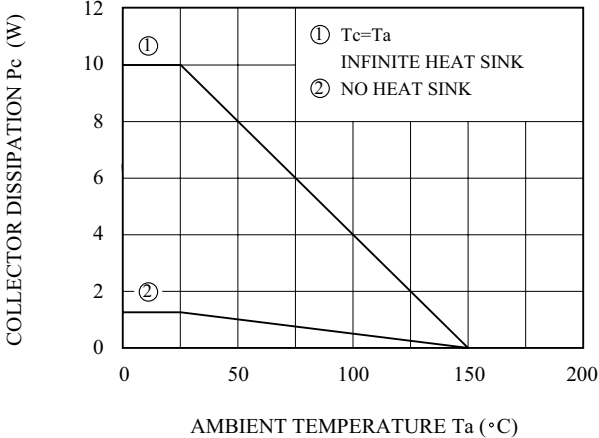
Note :  $h_{FE(1)}$  Classification O:56 ~ 120 , Y:82 ~ 180

# KTC3631D/L



# KTC3631D/L

Pc - Ta



SAFE OPERATING AREA

