

GENERAL PURPOSE APPLICATION.  
SWITCHING APPLICATION.

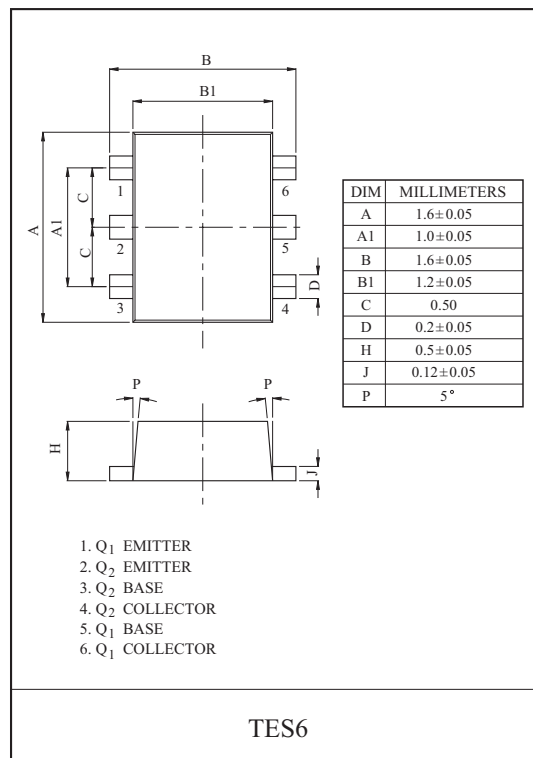
## FEATURES

- A super-minimold package houses 2 transistor.
- Excellent temperature response between these 2 transistor.
- High pairing property in  $h_{FE}$ .
- The follwing characteristics are common for  $Q_1$ ,  $Q_2$ .

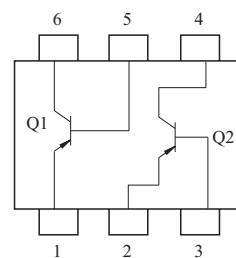
MAXIMUM RATING ( $T_a=25^\circ\text{C}$ )

| CHARACTERISTIC              | SYMBOL    | RATING    | UNIT             |
|-----------------------------|-----------|-----------|------------------|
| Collector-Base Voltage      | $V_{CBO}$ | -50       | V                |
| Collector-Emitter Voltage   | $V_{CEO}$ | -50       | V                |
| Emitter-Base Voltage        | $V_{EBO}$ | -5        | V                |
| Collector Current           | $I_C$     | -150      | mA               |
| Base Current                | $I_B$     | -30       | mA               |
| Collector Power Dissipation | $P_C$ *   | 200       | mW               |
| Junction Temperature        | $T_j$     | 150       | $^\circ\text{C}$ |
| Storage Temperature Range   | $T_{stg}$ | -55 ~ 150 | $^\circ\text{C}$ |

\* Total Rating



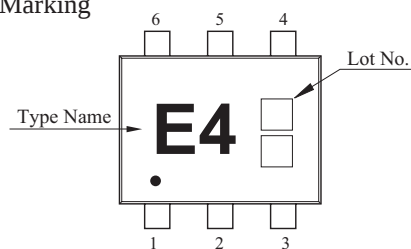
## EQUIVALENT CIRCUIT (TOP VIEW)

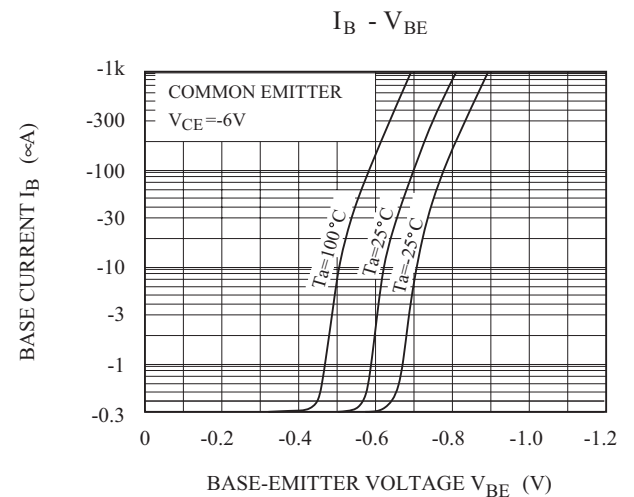
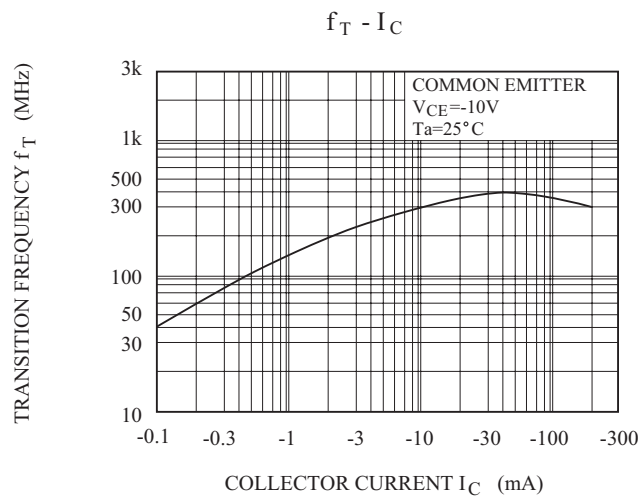
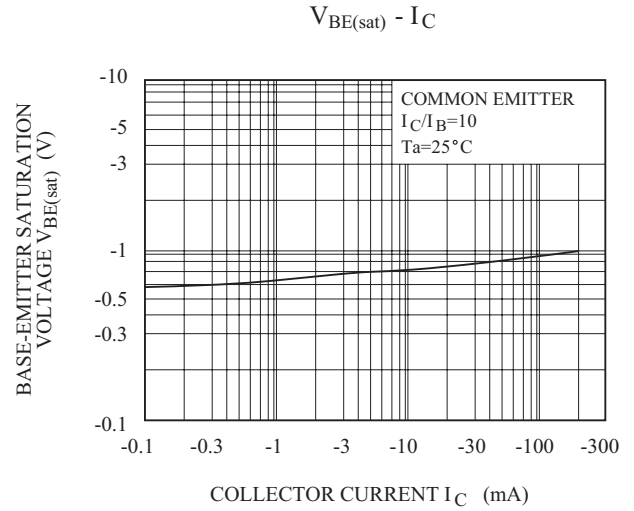
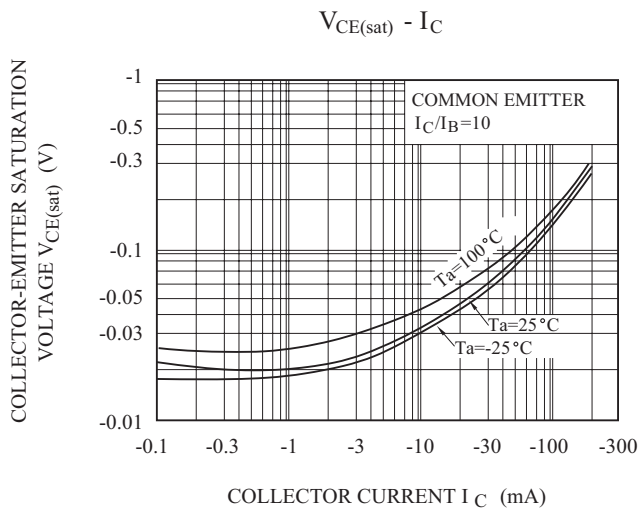
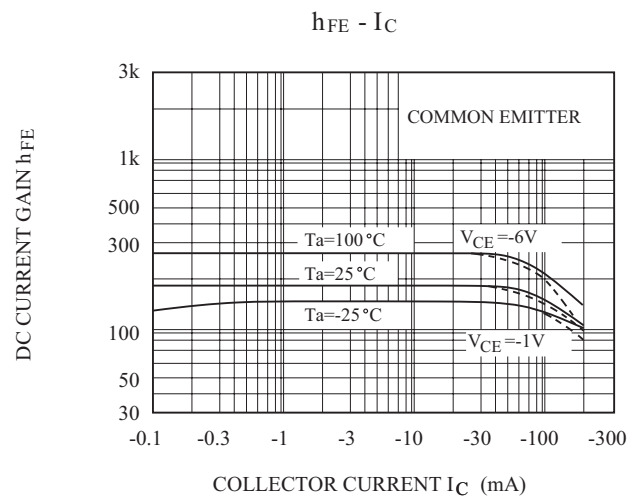
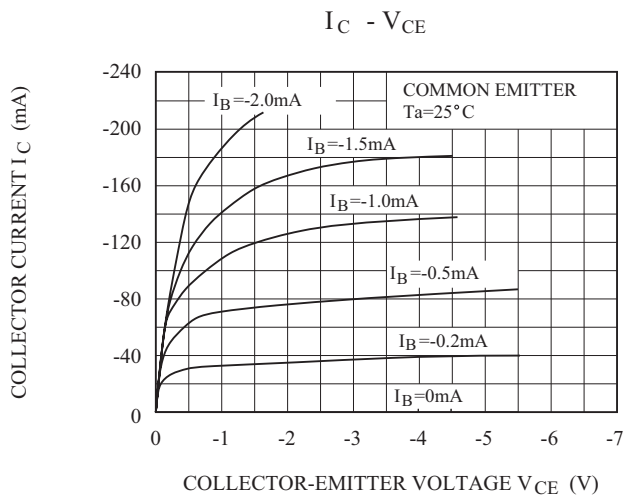
ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )

| CHARACTERISTIC                       | SYMBOL          | TEST CONDITION                                                                       | MIN. | TYP. | MAX.  | UNIT.         |
|--------------------------------------|-----------------|--------------------------------------------------------------------------------------|------|------|-------|---------------|
| Collector Cut-off Current            | $I_{CBO}$       | $V_{CB}=-50\text{V}$ , $I_E=0$                                                       | -    | -    | -0.1  | $\mu\text{A}$ |
| Emitter Cut-off Current              | $I_{EBO}$       | $V_{EB}=-5\text{V}$ , $I_C=0$                                                        | -    | -    | -0.1  | $\mu\text{A}$ |
| DC Current Gain                      | $h_{FE}$ (Note) | $V_{CE}=-6\text{V}$ , $I_C=-2\text{mA}$                                              | 120  | -    | 400   |               |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$   | $I_C=-100\text{mA}$ , $I_B=-10\text{mA}$                                             | -    | -0.1 | -0.30 | V             |
| Transition Frequency                 | $f_T$           | $V_{CE}=-10\text{V}$ , $I_C=-1\text{mA}$                                             | 80   | -    | -     | MHz           |
| Collector Output Capacitance         | $C_{ob}$        | $V_{CB}=-10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$                                     | -    | 4    | 7     | pF            |
| Noise Figure                         | NF              | $V_{CE}=-6\text{V}$ , $I_C=-0.1\text{mA}$ , $f=1\text{kHz}$ , $R_g=10\text{k}\Omega$ | -    | 1.0  | 10    | dB            |

Note :  $h_{FE}$  Classification Y(4):120 ~ 240, GR(6):200 ~ 400

## Marking





# KTA711E

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