

GENERAL PURPOSE APPLICATION.  
SWITCHING APPLICATION.

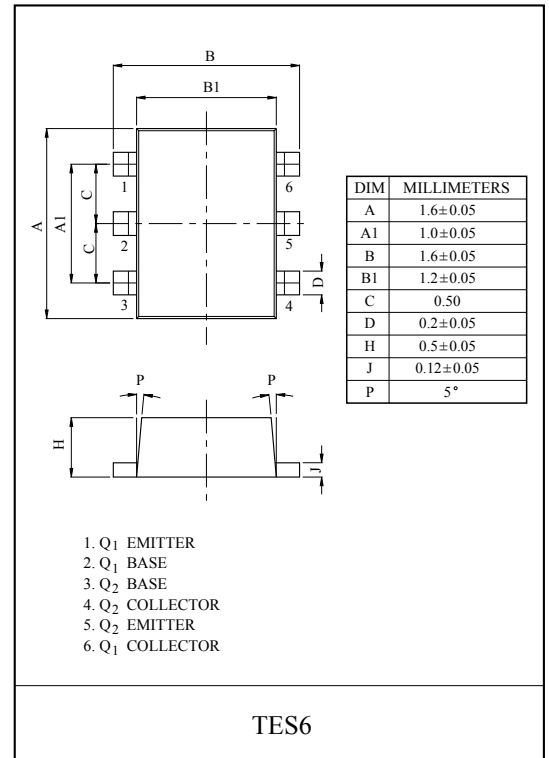
### FEATURES

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

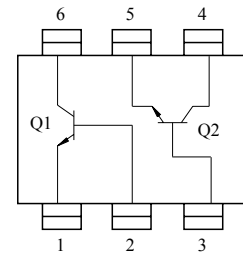
### MAXIMUM RATING (Ta=25°C)

| CHARACTERISTIC              | SYMBOL    | RATING    | UNIT |
|-----------------------------|-----------|-----------|------|
| Collector-Base Voltage      | $V_{CBO}$ | 60        | V    |
| Collector-Emitter Voltage   | $V_{CEO}$ | 50        | V    |
| Emitter-Base Voltage        | $V_{EBO}$ | 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       | °C   |
| Storage Temperature Range   | $T_{stg}$ | -55 ~ 150 | °C   |

\* Total Rating



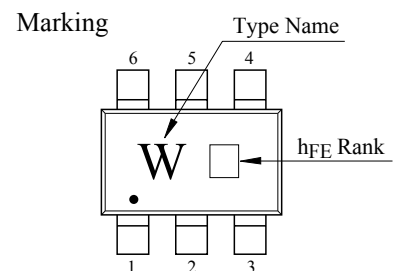
### EQUIVALENT CIRCUIT (TOP VIEW)



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

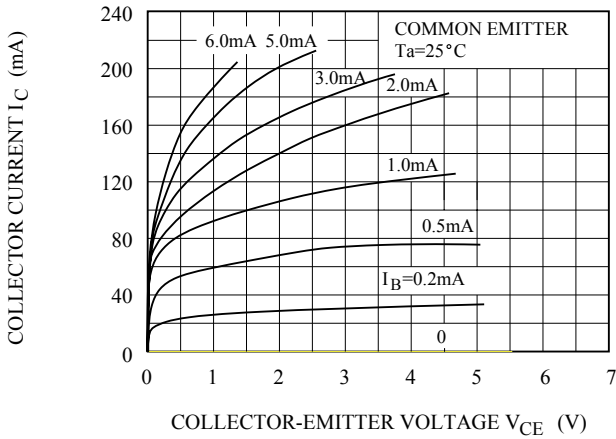
| CHARACTERISTIC                       | SYMBOL          | TEST CONDITION                                | MIN. | TYP. | MAX. | UNIT.   |
|--------------------------------------|-----------------|---|------|------|------|---------|
| Collector Cut-off Current            | $I_{CBO}$       | $V_{CB}=60V, I_E=0$                           | -    | -    | 0.1  | $\mu A$ |
| Emitter Cut-off Current              | $I_{EBO}$       | $V_{EB}=5V, I_C=0$                            | -    | -    | 0.1  | $\mu A$ |
| DC Current Gain                      | $h_{FE}$ (Note) | $V_{CE}=6V, I_C=2mA$                          | 120  | -    | 400  |         |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$   | $I_C=100mA, I_B=10mA$                         | -    | 0.1  | 0.3  | V       |
| Transition Frequency                 | $f_T$           | $V_{CE}=10V, I_C=1mA$                         | 80   | -    | -    | MHz     |
| Collector Output Capacitance         | $C_{ob}$        | $V_{CB}=10V, I_E=0, f=1MHz$                   | -    | 2    | 3.5  | pF      |
| Noise Figure                         | NF              | $V_{CE}=6V, I_C=0.1mA, f=1kHz, R_g=10k\Omega$ | -    | 1.0  | 10   | dB      |

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

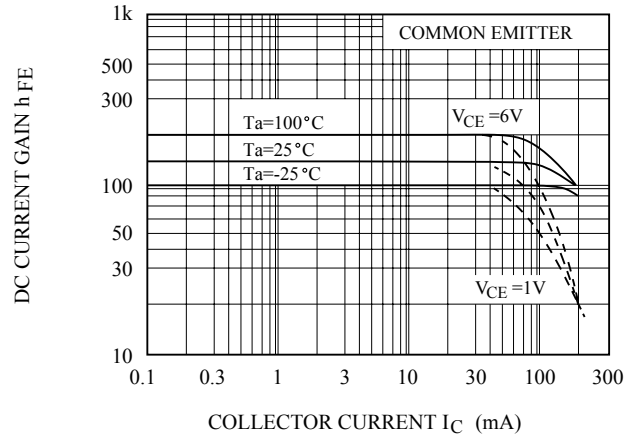


# KTC812E

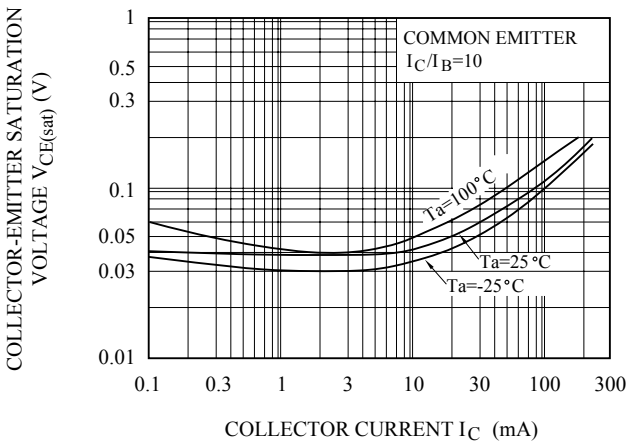
$I_C - V_{CE}$



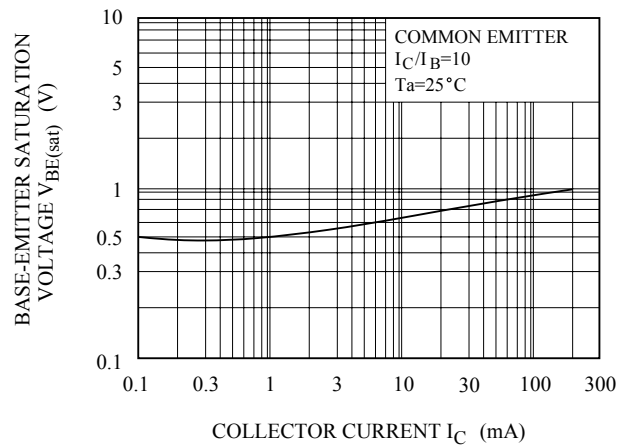
$h_{FE} - I_C$



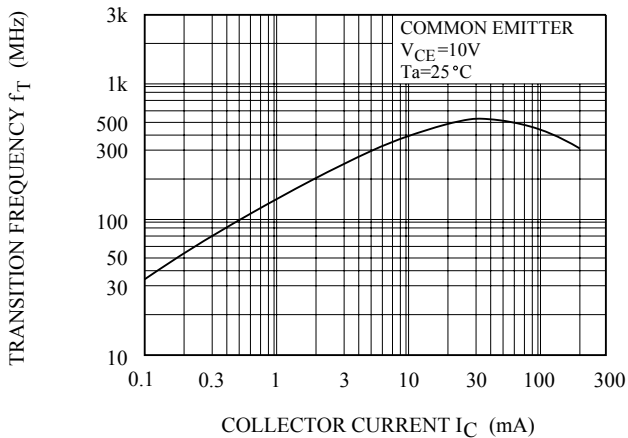
$V_{CE(sat)} - I_C$



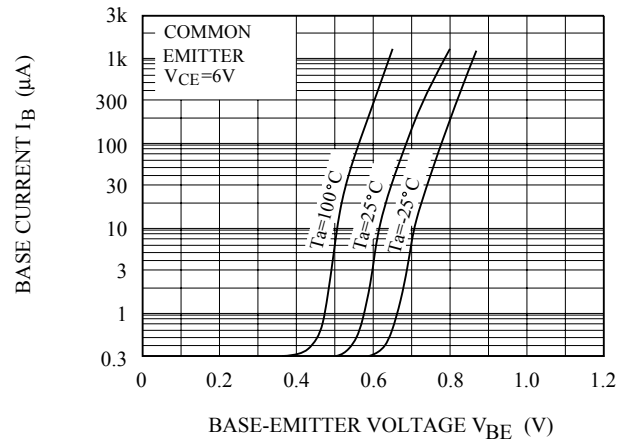
$V_{BE(sat)} - I_C$



$f_T - I_C$



$I_B - V_{BE}$



# KTC812E

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