

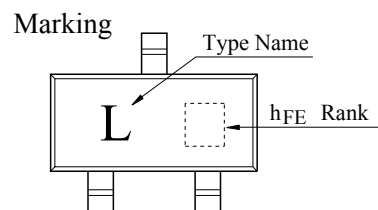
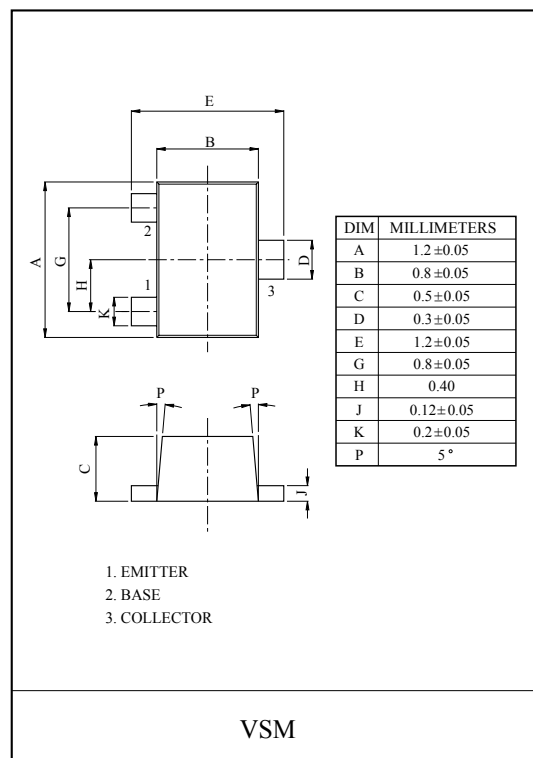
GENERAL PURPOSE APPLICATION.  
SWITCHING APPLICATION.

#### FEATURES

- Excellent  $h_{FE}$  Linearity  
:  $h_{FE}(0.1mA)/h_{FE}(2mA)=0.95(\text{Typ.})$ .
- High  $h_{FE}$  :  $h_{FE}=70\sim700$ .
- Low Noise :  $NF=1\text{dB}(\text{Typ.}), 10\text{dB}(\text{Max.})$ .
- Complementary to KTA2014V.
- Very Small Package.

#### 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 | $P_C$     | 100       | mW   |
| Junction Temperature        | $T_j$     | 150       | °C   |
| Storage Temperature Range   | $T_{stg}$ | -55 ~ 150 | °C   |



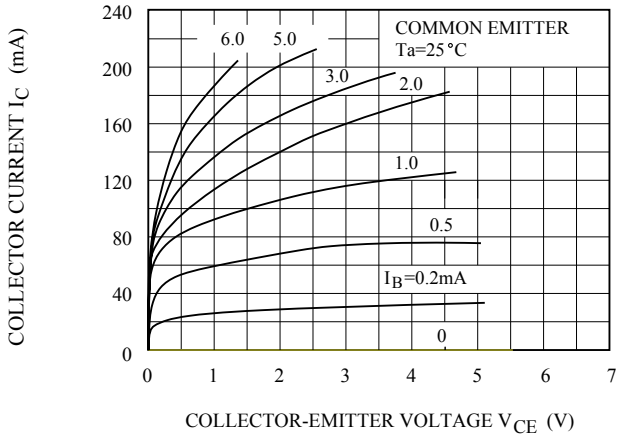
#### ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC                       | SYMBOL          | TEST CONDITION                                     | MIN. | TYP. | MAX. | UNIT    |
|--------------------------------------|-----------------|--|------|------|------|---------|
| Collector Cut-off Current            | $I_{CBO}$       | $V_{CB}=60V, I_E=0$                                | -    | -    | 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) | $V_{CE}=6V, I_C=2mA$                               | 70   | -    | 700  |         |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$   | $I_C=100mA, I_B=10mA$                              | -    | 0.1  | 0.25 | V       |
| Transition Frequency                 | $f_T$           | $V_{CE}=10V, I_C=1mA$                              | 80   | -    | -    | MHz     |
| Collector Output Capacitance         | $C_{ob}$        | $V_{CB}=10V, I_E=0, f=1MHz$                        | -    | 2.0  | 3.5  | pF      |
| Noise Figure                         | NF              | $V_{CE}=6V, I_C=0.1mA,$<br>$f=1kHz, R_g=10k\Omega$ | -    | 1.0  | 10   | dB      |

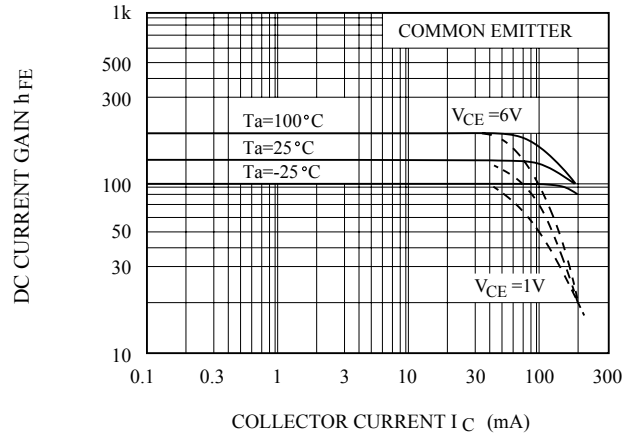
Note :  $h_{FE}$  Classification O(2):70~140, Y(4):120~240, GR(6):200~400, BL(8):350~700

# KTC4075V

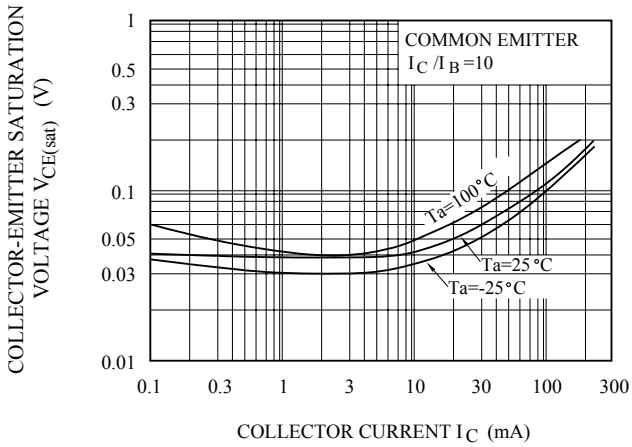
$I_C - V_{CE}$



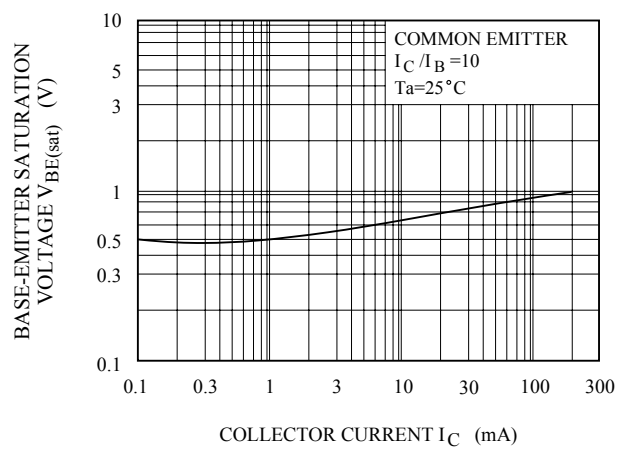
$h_{FE} - I_C$



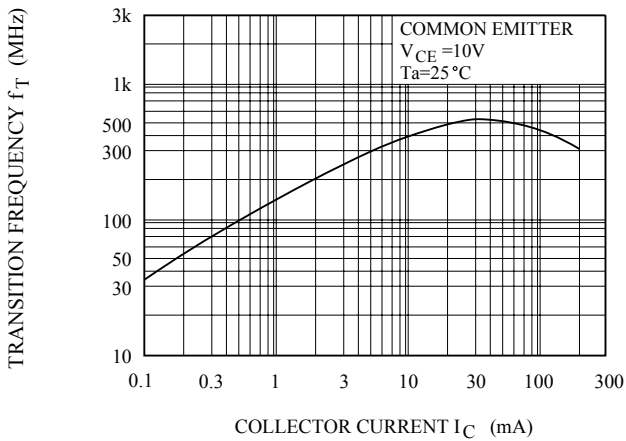
$V_{CE(sat)} - I_C$



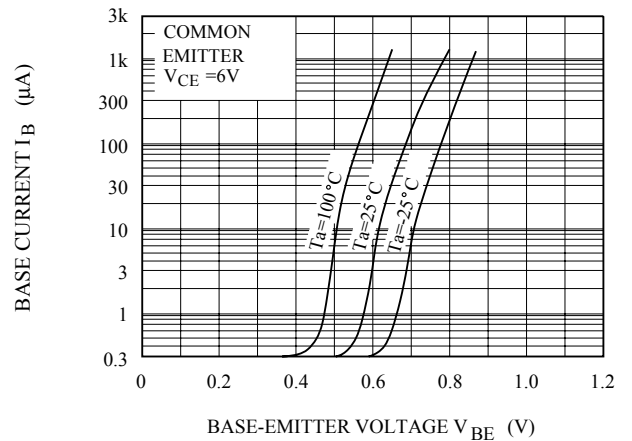
$V_{BE(sat)} - I_C$



$f_T - I_C$

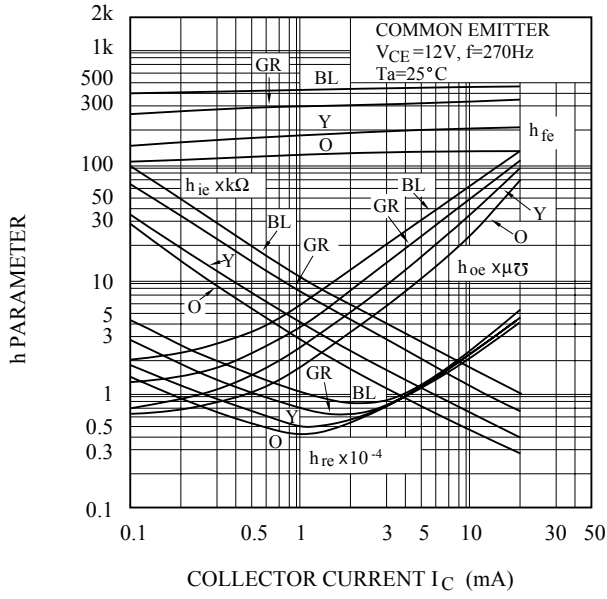


$I_B - V_{BE}$

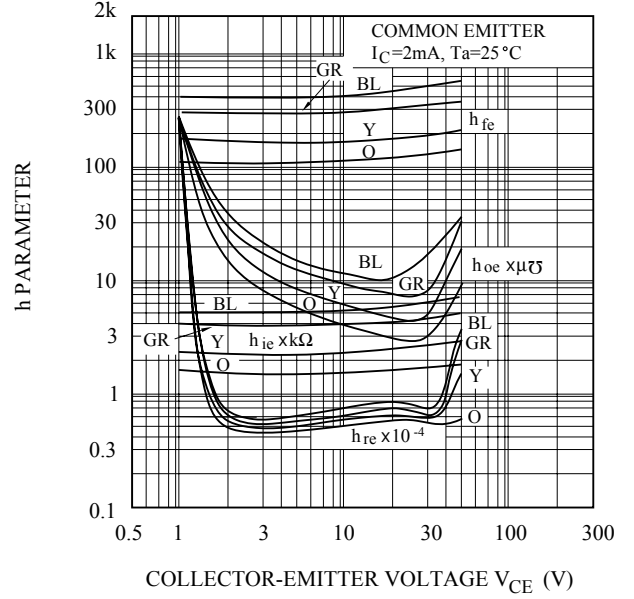


# KTC4075V

h PARAMETER -  $I_C$



h PARAMETER -  $V_{CE}$



$P_c - T_a$

