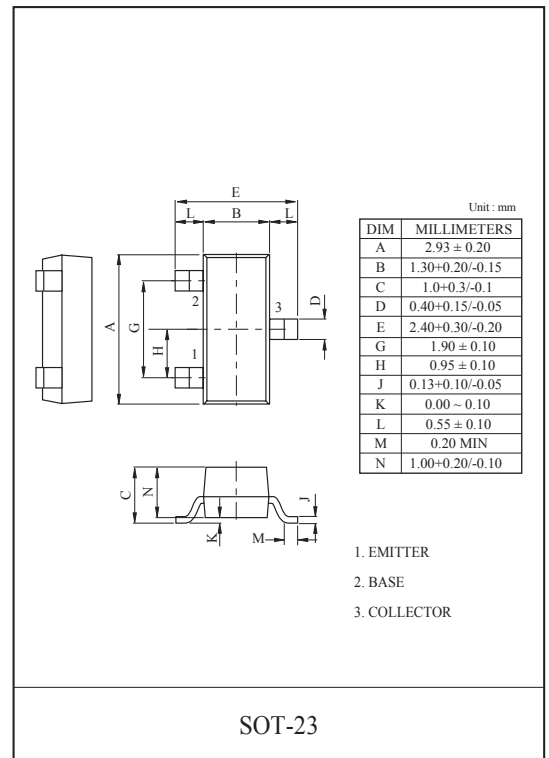


### GENERAL PURPOSE APPLICATION. SWITCHING APPLICATION.

#### FEATURES

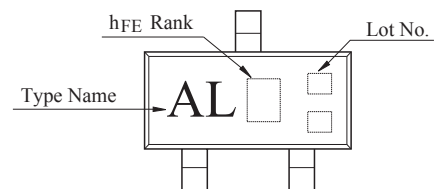
- Excellent  $h_{FE}$  Linearity  
:  $h_{FE}(0.1mA)/h_{FE}(2mA)=0.95$ (Typ.).
- High  $h_{FE}$  :  $h_{FE}=70 \sim 700$ .
- Low Noise :  $NF=1dB$ (Typ.),  $10dB$ (Max.).
- Complementary to KTA1504S.
- Suffix U : Qualified to AEC-Q101.  
ex) KTC3875S-GR-RTK/PU
- Suffix E : EOS(Electrical Over Stress)  
Capacity Enhanced Product.  
ex) KTC3875S-GR-RTK/PE
- Suffix UE : Qualified to AEC-Q101 and  
EOS(Electrical Over Stress)  
Capacity Enhanced Product.  
ex) KTC3875S-GR-RTK/PUE



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

#### Marking

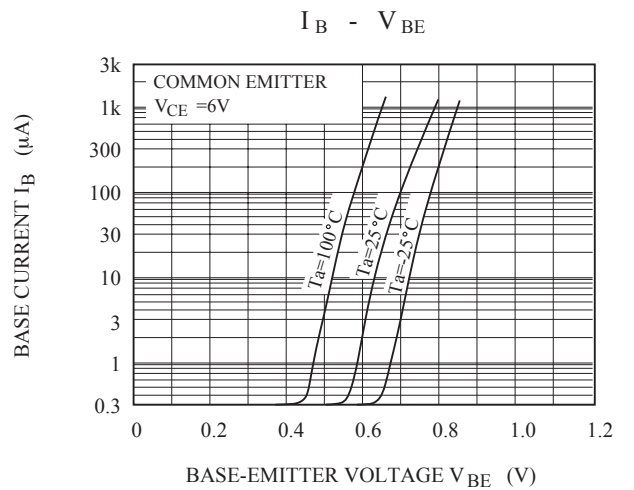
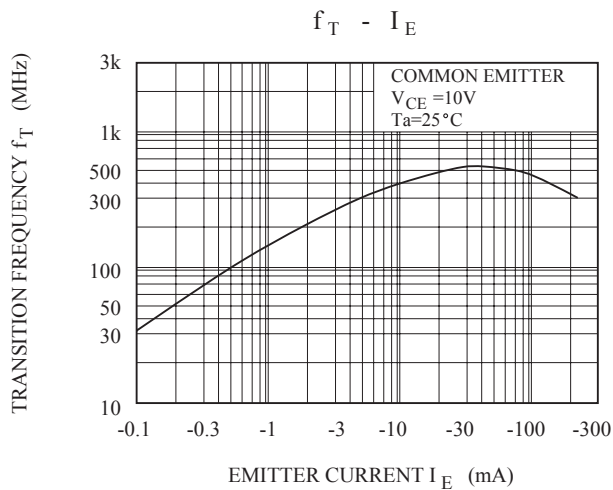
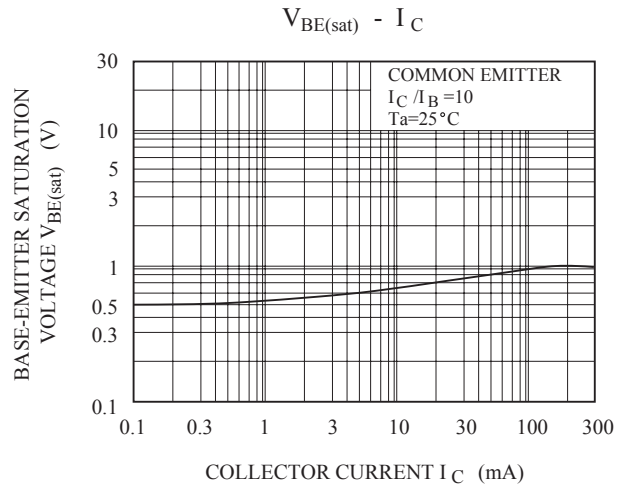
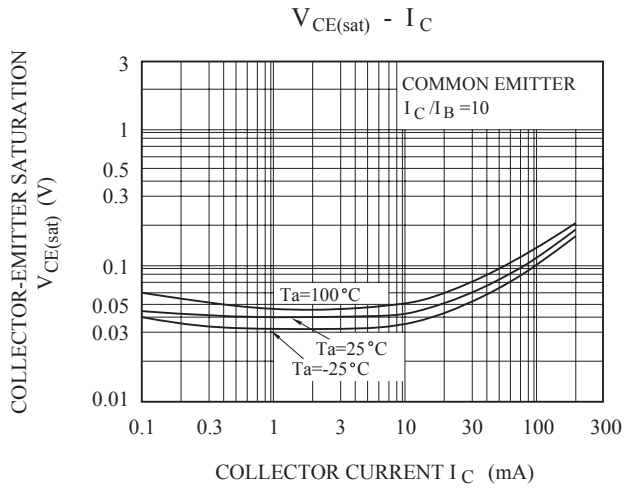
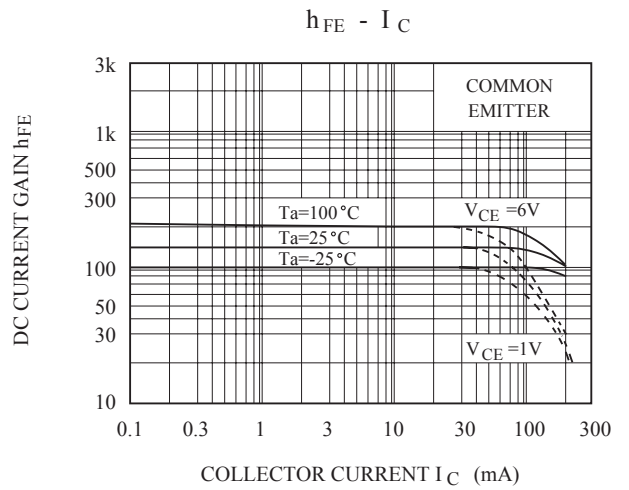
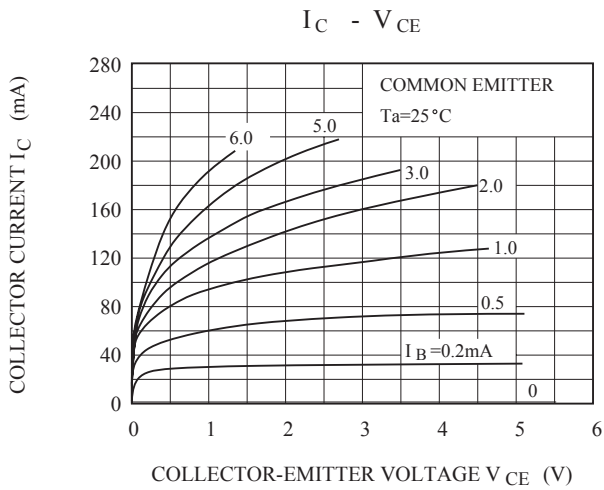


#### ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC                       | SYMBOL          | TEST CONDITION                                    | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|-----------------|---|------|------|------|------|
| Collector Cut-off Current            | $I_{CBO}$       | $V_{CB}=60V, I_E=0$                               | -    | -    | 0.1  | μA   |
| Emitter Cut-off Current              | $I_{EBO}$       | $V_{EB}=5V, I_C=0$                                | -    | -    | 0.1  | μA   |
| 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    |
| Base-Emitter Saturation Voltage      | $V_{BE(sat)}$   | $I_C=100mA, I_B=10mA$                             | -    | 0.86 | 1.0  | 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   |

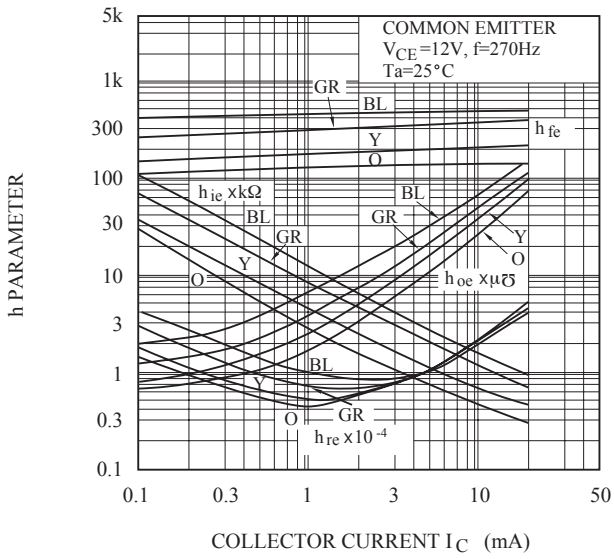
Note :  $h_{FE}$  Classification O:70 ~ 140, Y:120 ~ 240, GR(G):200 ~ 400, BL(L):350 ~ 700

# KTC3875S

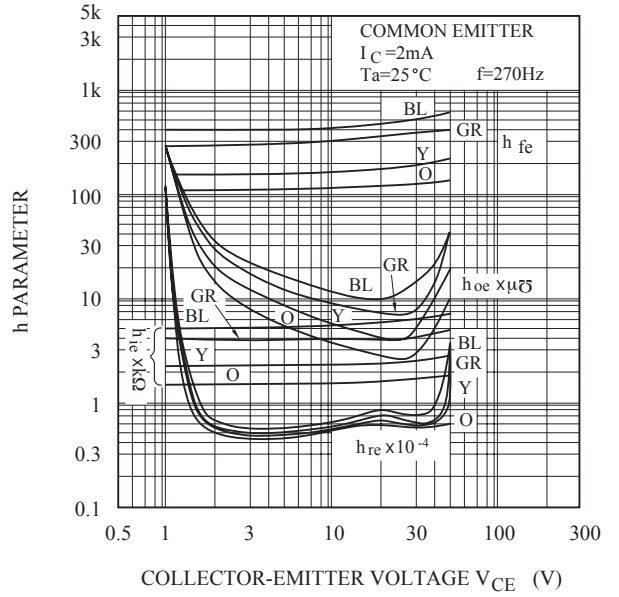


# KTC3875S

h PARAMETER -  $I_C$



h PARAMETER -  $V_{CE}$



$P_C$  -  $T_a$

