

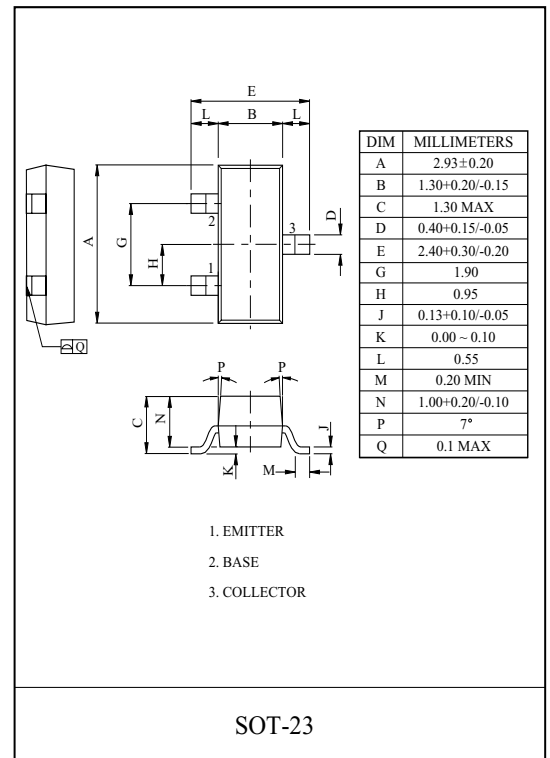
**GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION.**

FEATURES

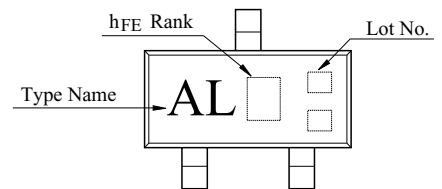
- Excellent h_{FE} Linearity
: $h_{FE}(0.1mA)/h_{FE}(2mA)=0.95(Typ.)$.
- High h_{FE} : $h_{FE}=70 \sim 700$.
- Low Noise : $NF=1dB(Typ.)$, $10dB(Max.)$.
- Complementary to KTA1504S.
- **Suffix U Qualified to AEC-Q101 for Automotive**
: Automotive and standard product are electrically and thermally the same, except where specified.
ex) KTC3875S-Y-RTK/PU, KTC3875S-Y-RTK/HU

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 | |
| Storage Temperature Range | T_{stg} | -55 ~ 150 | |



Marking



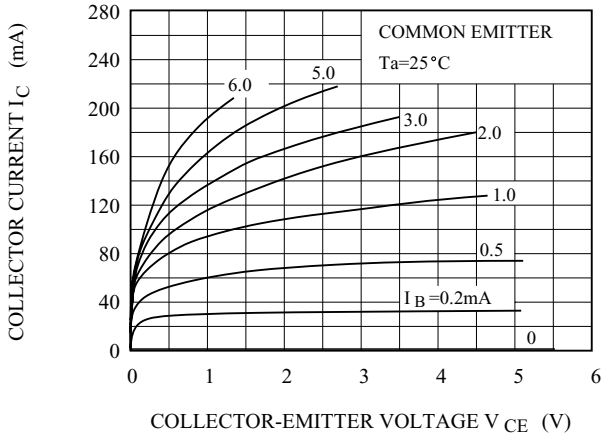
ELECTRICAL CHARACTERISTICS (Ta=25 °C)

| 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 | $V_{CE}=6V, I_C=0.1mA$ $f=1kHz, R_g=10k$ | - | 1.0 | 10 | dB |

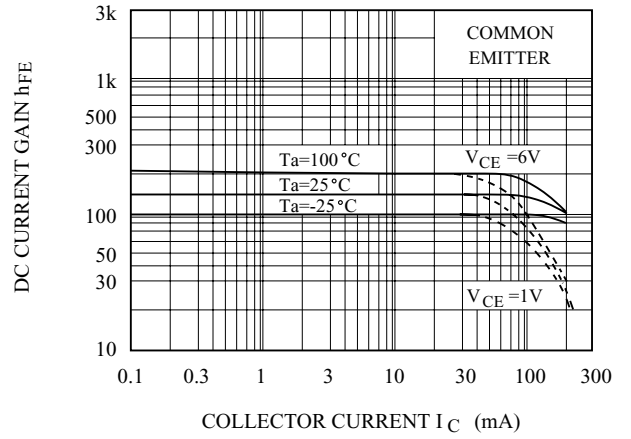
Note : h_{FE} Classification O:70 140, Y:120 240, GR(G):200 400, BL(L):350 700

KTC3875S

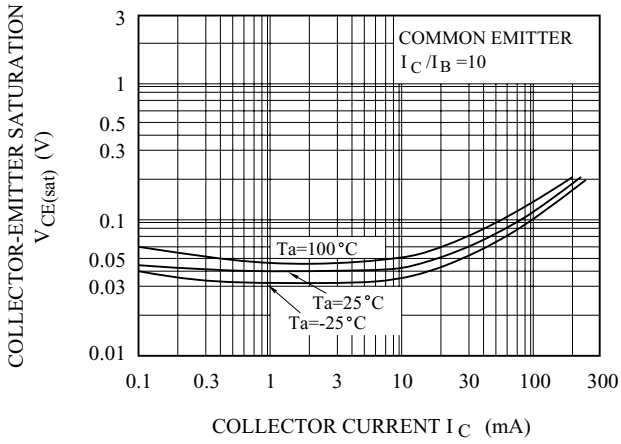
$I_C - V_{CE}$



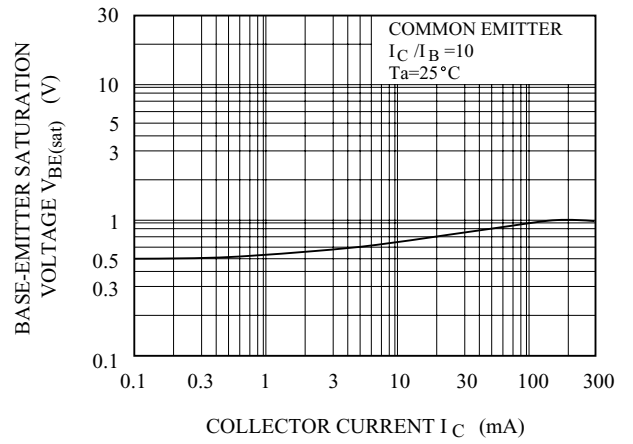
$h_{FE} - I_C$



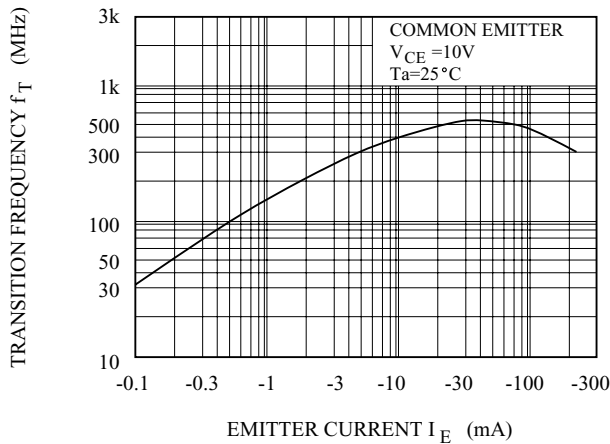
$V_{CE(sat)} - I_C$



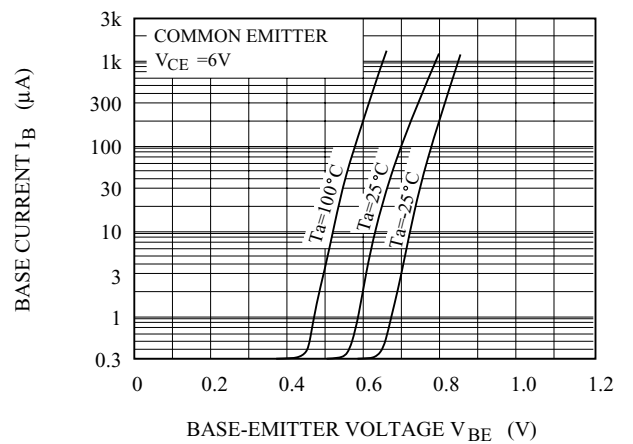
$V_{BE(sat)} - I_C$



$f_T - I_E$

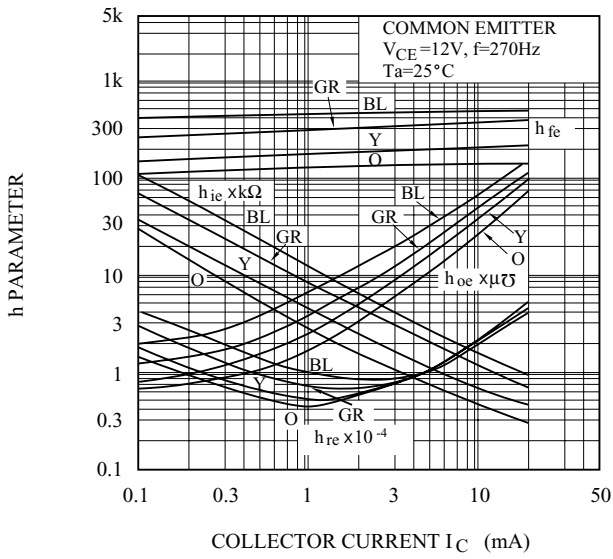


$I_B - V_{BE}$

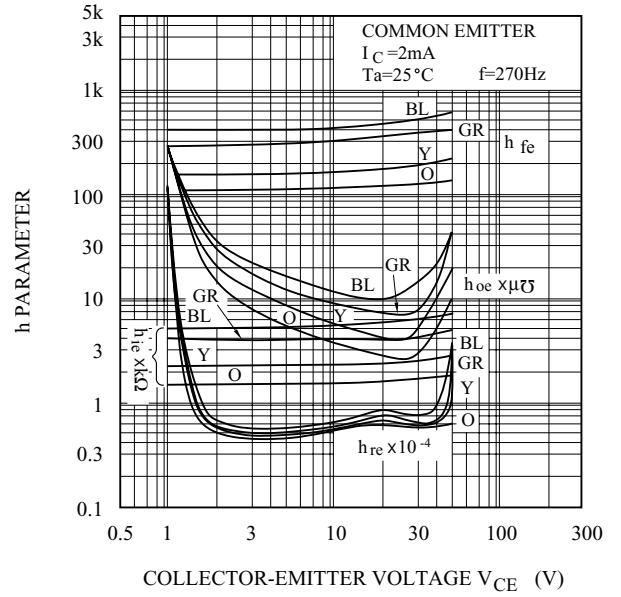


KTC3875S

h PARAMETER - I_C



h PARAMETER - V_{CE}



P_C - T_a

