

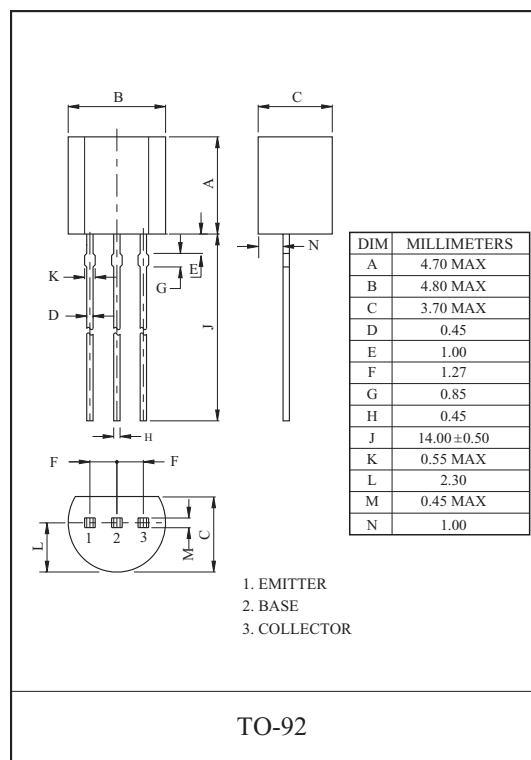
GENERAL PURPOSE APPLICATION.  
SWITCHING APPLICATION.

## FEATURES

- Excellent  $h_{FE}$  Linearity.  
:  $h_{FE}(I_C=0.1mA)/h_{FE}(I_C=2mA)=0.95(Typ.)$
- Low Noise :  $NF=1dB(Typ.)$ . at  $f=1kHz$
- Complementary to KTC945B.

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

| 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         |
| Collector Power Dissipation | $P_C$     | 625       | mW         |
| Junction Temperature        | $T_j$     | 150       | $^\circ C$ |
| Storage Temperature Range   | $T_{stg}$ | -55 ~ 150 | $^\circ C$ |

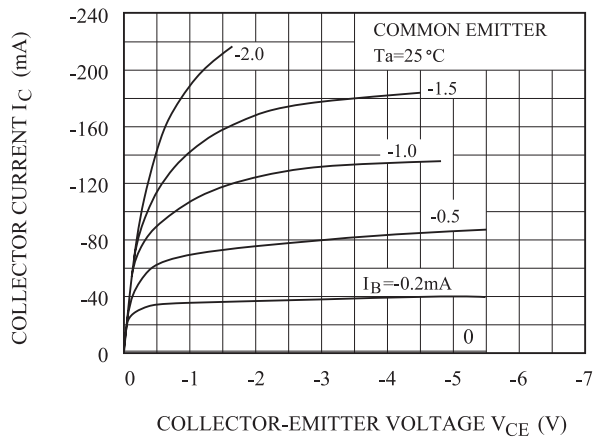
ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )

| CHARACTERISTIC                       | SYMBOL          | TEST CONDITION                                  | MIN. | TYP. | MAX. | UNIT    |
|--------------------------------------|-----------------|-------------------------------------------------|------|------|------|---------|
| Collector-Base Breakdown Voltage     | $V_{(BR)CBO}$   | $I_C=-100\mu A, I_E=0$                          | -60  | -    | -    | V       |
| Collector-Emitter Breakdown Voltage  | $V_{(BR)CEO}$   | $I_C=-1mA, I_B=0$                               | -50  | -    | -    | V       |
| Emitter-Base Breakdown Voltage       | $V_{(BR)EBO}$   | $I_E=-100\mu A, I_C=0$                          | -5   | -    | -    | V       |
| Collector Cut-off Current            | $I_{CBO}$       | $V_{CB}=-50V, I_E=0$                            | -    | -    | -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   | -    | 400  |         |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$   | $I_C=-100mA, I_B=-10mA$                         | -    | -0.1 | -0.3 | V       |
| Base-Emitter Saturation Voltage      | $V_{BE(sat)}$   | $I_C=-100mA, I_B=-10mA$                         | -    | -    | -1.1 | V       |
| Transition Frequency                 | $f_T$           | $V_{CE}=-10V, I_C=-10mA$                        | -    | 300  | -    | MHz     |
| Collector Output Capacitance         | $C_{ob}$        | $V_{CB}=-10V, I_E=0, f=1MHz$                    | -    | 4    | 7    | pF      |
| Noise Figure                         | NF              | $V_{CE}=-6V, I_C=-0.1mA, R_g=10k\Omega, f=1kHz$ | -    | 1.0  | 10   | dB      |

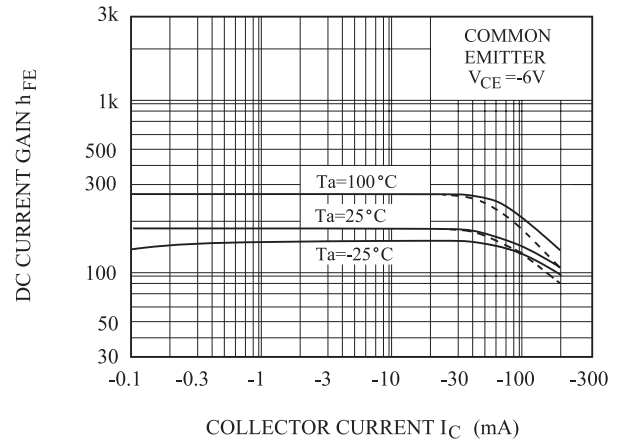
Note :  $h_{FE}$  Classification O:70 ~ 140, Y:120 ~ 240, GR:200 ~ 400

# KTA733B

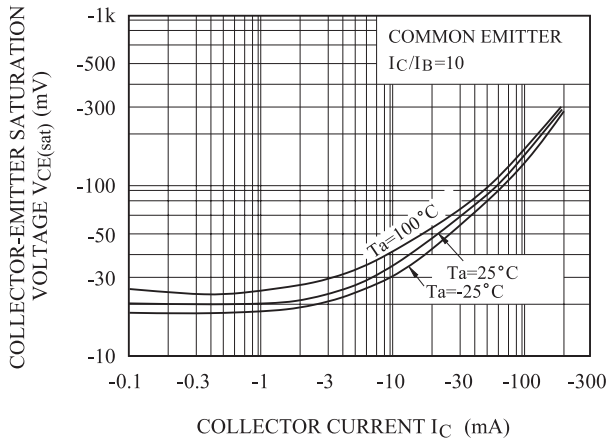
$I_C - V_{CE}$



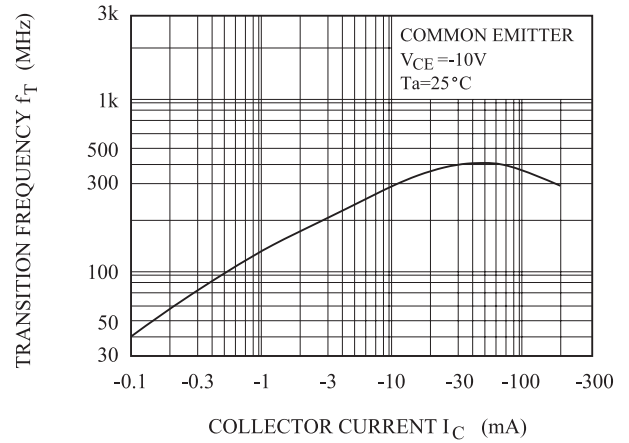
$h_{FE} - I_C$



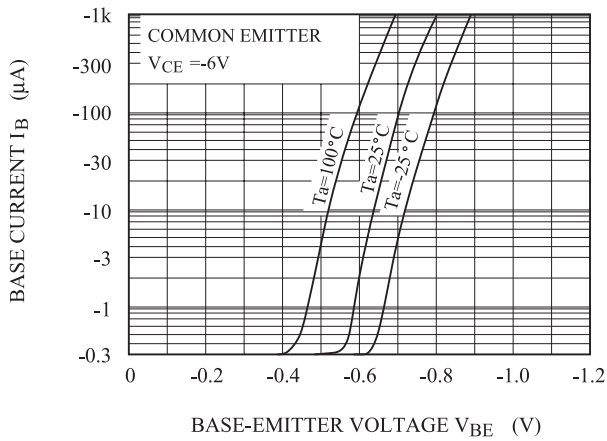
$V_{CE(sat)} - I_C$



$f_T - I_C$



$I_B - V_{BE}$



$P_C - T_a$

