

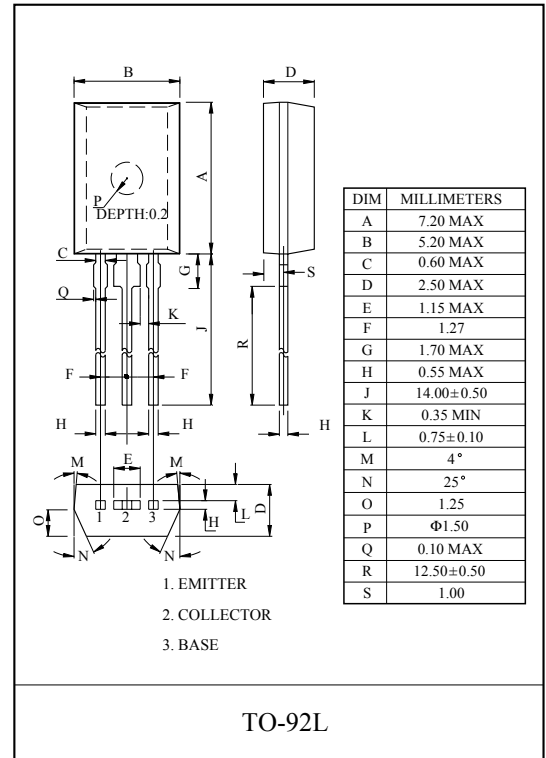
MICRO MOTOR DRIVE, HAMMER DRIVE APPLICATIONS.  
POWER SWITCHING APPLICATIONS.  
POWER AMPLIFIER APPLICATION.

### FEATURES

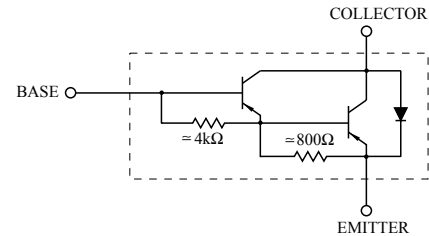
- High DC Current Gain  
:  $h_{FE}=200(\text{Min.}) (V_{CE}=-2V, I_C=-1A)$
- Low Saturation Voltage  
:  $V_{CE(\text{sat})}=-1.5V(\text{Max.}) (I_C=-1A, I_B=-1mA)$
- Complementary to KTD2854.

### MAXIMUM RATINGS (Ta=25°C)

| CHARACTERISTIC              |      | SYMBOL    | RATING    | UNIT |
|-----------------------------|------|-----------|-----------|------|
| Collector-Base Voltage      |      | $V_{CBO}$ | -100      | V    |
| Collector-Emitter Voltage   |      | $V_{CEO}$ | -100      | V    |
| Emitter-Base Voltage        |      | $V_{EBO}$ | -8        | V    |
| Collector Current           | DC   | $I_C$     | -2        | A    |
|                             | Peak | $I_{CP}$  | -3        |      |
| Base Current                |      | $I_B$     | -0.5      | A    |
| Collector Power Dissipation |      | $P_C$     | 1         | W    |
| Junction Temperature        |      | $T_j$     | 150       | °C   |
| Storage Temperature Range   |      | $T_{stg}$ | -55 ~ 150 | °C   |



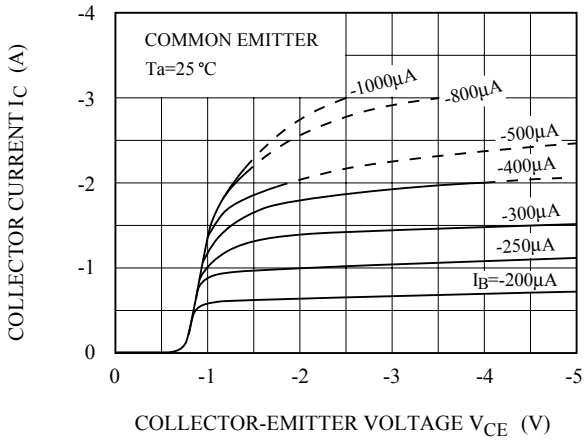
### EQUIVALENT CIRCUIT



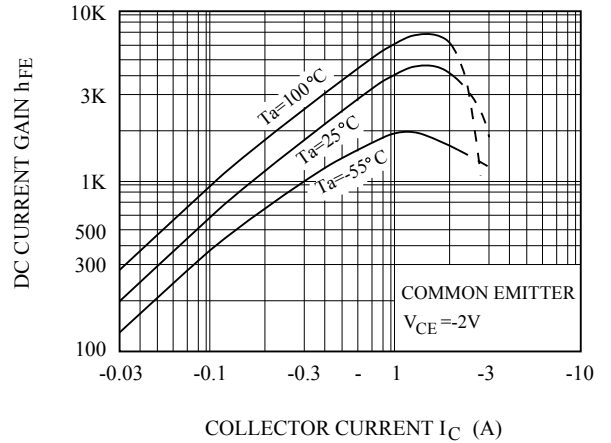
### ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC                       |              | SYMBOL               | TEST CONDITION                      | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|--------------|----------------------|-------------------------------------|------|------|------|------|
| Collector Cut-off Current            |              | $I_{CBO}$            | $V_{CB}=-80V, I_E=0$                | -    | -    | -10  | μA   |
| Emitter Cut-off Current              |              | $I_{EBO}$            | $V_{EB}=-8V, I_C=0$                 | -    | -    | -4   | mA   |
| Collector-Emitter Breakdown Voltage  |              | $V_{(BR)CEO}$        | $I_C=-10mA, I_B=0$                  | -100 | -    | -    | V    |
| DC Current Gain                      |              | $h_{FE}$             | $V_{CE}=-2V, I_C=-1A(\text{Pulse})$ | 2000 | -    | -    |      |
| Collector-Emitter Saturation Voltage |              | $V_{CE(\text{sat})}$ | $I_C=-1A, I_B=-1mA(\text{Pulse})$   | -    | -    | -1.5 | V    |
| Base-Emitter Saturation Voltage      |              | $V_{BE(\text{sat})}$ | $I_C=-1A, I_B=-1mA(\text{Pulse})$   | -    | -    | -2.0 | V    |
| Transition Frequency                 |              | $f_T$                | $V_{CE}=-2V, I_C=-0.5A$             | -    | 50   | -    | MHz  |
| Collector Output Capacitance         |              | $C_{ob}$             | $V_{CB}=-10V, I_E=0, f=1MHz$        | -    | 27   | -    | pF   |
| Switching Time                       | Turn On Time | $t_{on}$             |                                     | -    | 0.4  | -    | μS   |
|                                      | Storage Time | $t_{stg}$            |                                     | -    | 2.0  | -    |      |
|                                      | Fall Time    | $t_f$                |                                     | -    | 0.4  | -    |      |

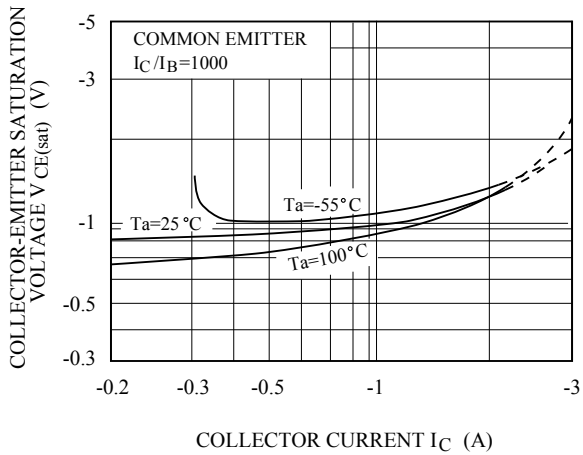
$I_C - V_{CE}$



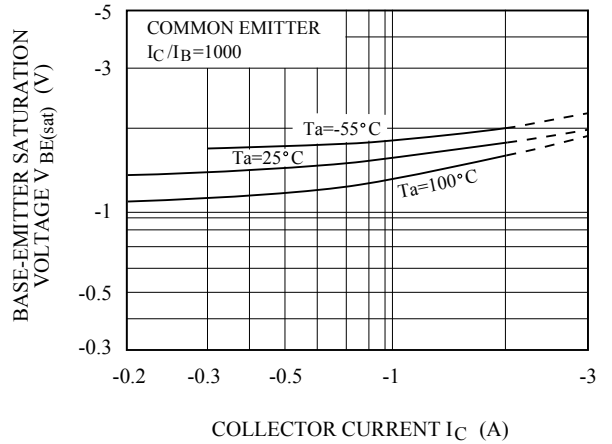
$h_{FE} - I_C$



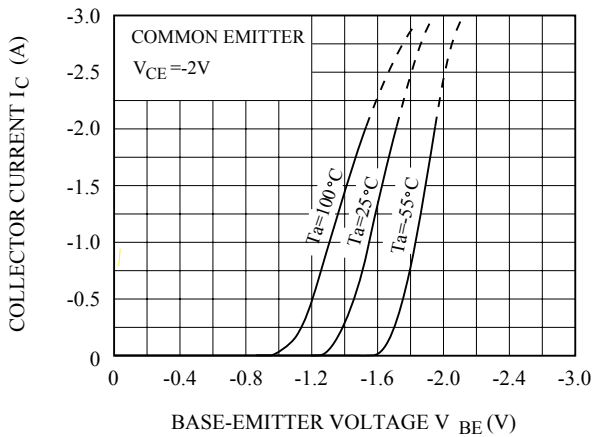
$V_{CE(sat)} - I_C$



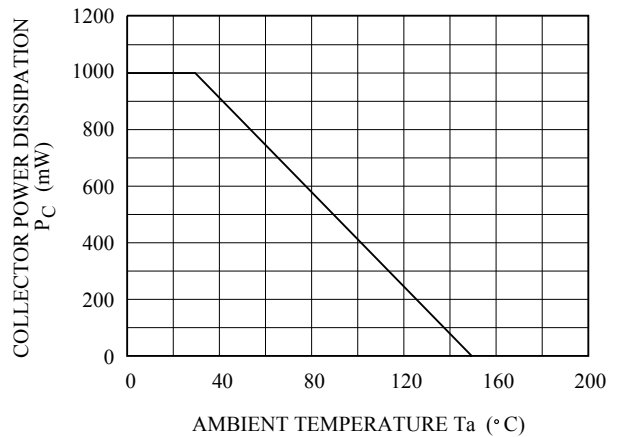
$V_{BE(sat)} - I_C$



$I_C - V_{BE}$



$P_C - T_a$



# KTB2234

## SAFE OPERATING AREA

