

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

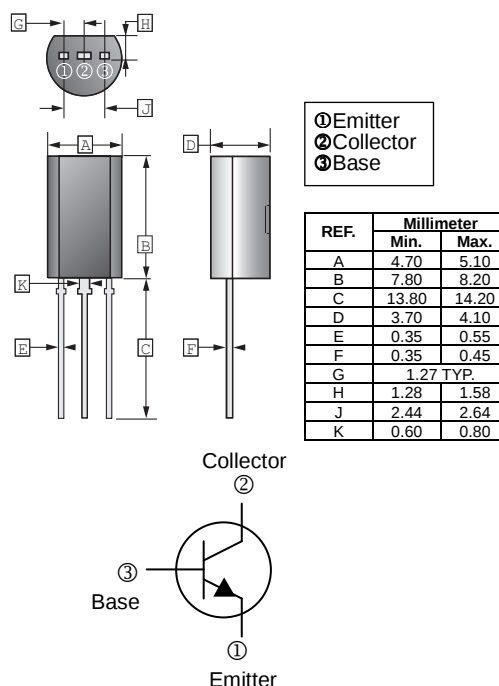
## FEATURE

- Low collector to emitter saturation voltage  $V_{CE(sat)}$ .
- Audio power amplifier
- High Current

## CLASSIFICATION OF $h_{FE}$

| Product-Rank | KTC3205-O | KTC3205-Y |
|--------------|-----------|-----------|
| Range        | 100~200   | 160~320   |

## TO-92L



## ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter                     | Symbol         | Rating       | Unit             |
|-------------------------------|----------------|--------------|------------------|
| Collector to Base Voltage     | $V_{CBO}$      | 30           | V                |
| Collector to Emitter Voltage  | $V_{CEO}$      | 30           | V                |
| Emitter to Base Voltage       | $V_{EBO}$      | 5            | V                |
| Continuous Collector Current  | $I_C$          | 2            | A                |
| Collector Power Dissipation   | $P_C$          | 1            | W                |
| Junction, Storage Temperature | $T_J, T_{STG}$ | 150, -55~150 | $^\circ\text{C}$ |

## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter                               | Symbol        | Min. | Typ. | Max. | Unit          | Test Conditions                           |
|-----------------------------------------|---------------|------|------|------|---------------|-------------------------------------------|
| Collector to Base Breakdown Voltage     | $V_{(BR)CBO}$ | 30   | -    | -    | V             | $I_C=1\text{mA}, I_E=0$                   |
| Collector to Emitter Breakdown Voltage  | $V_{(BR)CEO}$ | 30   | -    | -    | V             | $I_C=10\text{mA}, I_B=0$                  |
| Emitter to Base Breakdown Voltage       | $V_{(BR)EBO}$ | 5    | -    | -    | V             | $I_E=1\text{mA}, I_C=0$                   |
| Collector Cut - Off Current             | $I_{CBO}$     | -    | -    | 0.1  | $\mu\text{A}$ | $V_{CB}=30\text{V}, I_E=0$                |
| Emitter cut-off current                 | $I_{EBO}$     | -    | -    | 0.1  | $\mu\text{A}$ | $V_{EB}=5\text{V}, I_C=0$                 |
| DC Current Gain                         | $h_{FE}$      | 100  | -    | 320  |               | $V_{CE}=2\text{V}, I_C=500\text{mA}$      |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | -    | -    | 2    | V             | $I_C=1.5\text{A}, I_B=30\text{mA}$        |
| Base - Emitter Voltage                  | $V_{BE}$      | -    | -    | 1    | V             | $V_{CE}=2\text{V}, I_C=500\text{mA}$      |
| Transition Frequency                    | $f_T$         | -    | 120  | -    | MHz           | $V_{CE}=2\text{V}, I_C=500\text{mA}$      |
| Collector Output Capacitance            | $C_{ob}$      | -    | 13   | -    | pF            | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ |