

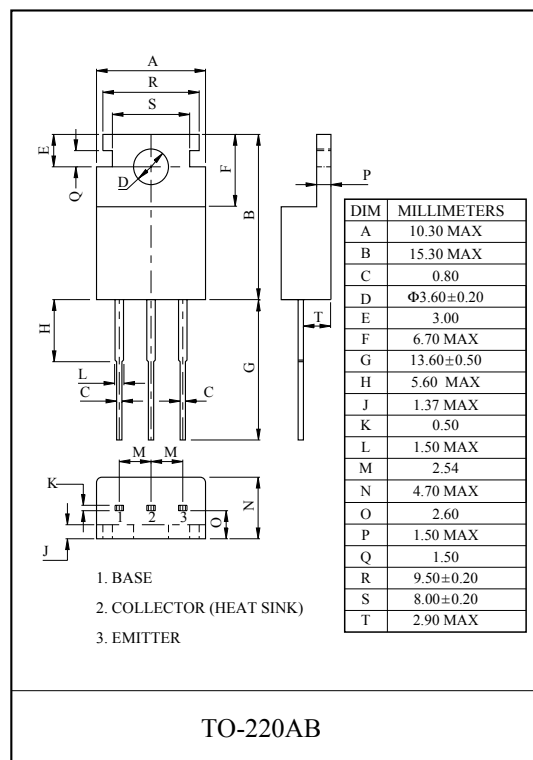
## GENERAL PURPOSE APPLICATION.

## FEATURES

- High Breakdown Voltage :  $V_{CEO}=-100V$ .
- Low Collector-Emitter Saturation Voltage.  
:  $V_{CE(sat)}=-2.0V(\text{Max.})$
- Complementary to KTC2018.

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

| CHARACTERISTIC  | SYMBOL    | RATING    | UNIT             |
|---|-----------|-----------|------------------|
| Collector-Base Voltage                                    | $V_{CBO}$ | -100      | V                |
| Collector-Emitter Voltage                                 | $V_{CEO}$ | -100      | V                |
| Emitter-Base Voltage                                      | $V_{EBO}$ | -5        | V                |
| Collector Current   | $I_C$     | -5        | A                |
| Emitter Current   | $I_E$     | 5         | A                |
| Base Current  | $I_B$     | -0.5      | A                |
| Collector Power Dissipation<br>( $T_c=25^\circ\text{C}$ ) | $P_C$     | 40        | W                |
| Junction Temperature                                      | $T_j$     | 150       | $^\circ\text{C}$ |
| Storage Temperature Range                                 | $T_{stg}$ | -55 ~ 150 | $^\circ\text{C}$ |

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

| CHARACTERISTIC                       | SYMBOL                   | TEST CONDITION                      | MIN. | TYP. | MAX. | UNIT          |
|--------------------------------------|--------------------------|-------------------------------------|------|------|------|---------------|
| Collector Cut-off Current            | $I_{CBO}$                | $V_{CB}=-100V, I_E=0$               | -    | -    | -100 | $\mu\text{A}$ |
| Emitter Cut-off Current              | $I_{EBO}$                | $V_{EB}=-5V, I_C=0$                 | -    | -    | -1.0 | mA            |
| Collector-Emitter Breakdown Voltage  | $V_{(BR)CEO}$            | $I_C=-50\text{mA}, I_B=0$           | -100 | -    | -    | V             |
| Emitter-Base Breakdown Voltage       | $V_{(BR)EBO}$            | $I_E=-10\text{mA}, I_C=0$           | -5.0 | -    | -    | V             |
| DC Current Gain                      | $h_{FE(1)}(\text{Note})$ | $V_{CE}=-5V, I_C=-1A$               | 70   | -    | 240  |               |
|                                      | $h_{FE(2)}$              | $V_{CE}=-5V, I_C=-4A$               | 20   | -    | -    |               |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$            | $I_C=-4A, I_B=-0.4A$                | -    | -    | -2.0 | V             |
| Base-Emitter Voltage                 | $V_{BE}$                 | $V_{CE}=-5V, I_C=-4A$               | -    | -    | -1.5 | V             |
| Transition Frequency                 | $f_T$                    | $V_{CE}=-5V, I_C=-1A$               | -    | 30   | -    | MHz           |
| Collector Output Capacitance         | $C_{ob}$                 | $V_{CB}=-10V, I_E=0, f=1\text{MHz}$ | -    | 90   | -    | pF            |

Note :  $h_{FE(1)}$  Classification O:70 ~ 140 , Y:120 ~ 240

