

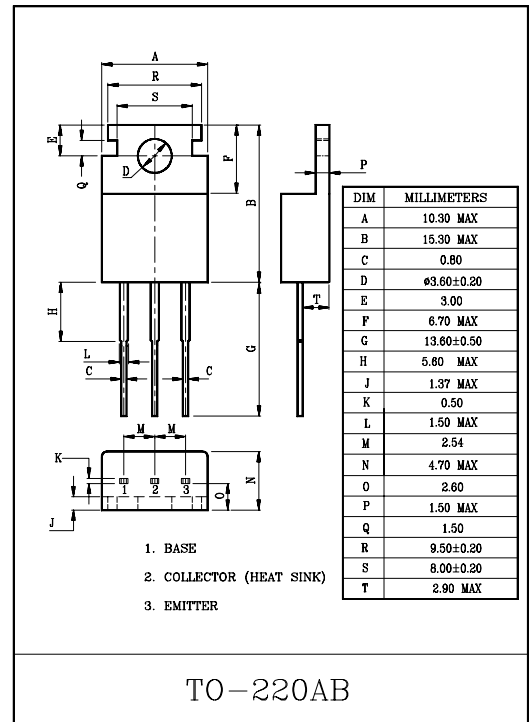
## GENERAL PURPOSE APPLICATION.

## FEATURES

- Low Collector Saturation Voltage  
:  $V_{CE(sat)} = -1.0V(\text{Max.})$  at  $I_C = -2A$ ,  $I_B = -0.2A$ .
- Complementary to KTC2016.

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

| CHARACTERISTIC              | SYMBOL    | RATING                   | UNIT             |
|-----------------------------|-----------|--------------------------|------------------|
| Collector-Base Voltage      | $V_{CBO}$ | -60                      | V                |
| Collector-Emitter Voltage   | $V_{CEO}$ | -60                      | V                |
| Emitter-Base Voltage        | $V_{EBO}$ | -7                       | V                |
| Collector Current           | $I_C$     | -3                       | A                |
| Base Current                | $I_B$     | -0.5                     | A                |
| Collector Power Dissipation | $P_C$     | $T_a = 25^\circ\text{C}$ | W                |
|                             |           | $T_c = 25^\circ\text{C}$ |                  |
| 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            | $I_{CBO}$             | $V_{CB} = -60V$ , $I_E = 0$              | -    | -    | -100 | $\mu A$ |
| Emitter Cut-off Current              | $I_{EBO}$             | $V_{EB} = -7V$ , $I_C = 0$               | -    | -    | -100 | $\mu A$ |
| Collector-Emitter Breakdown Voltage  | $V_{(BR)CEO}$         | $I_C = -50mA$ , $I_B = 0$                | -60  | -    | -    | V       |
| DC Current Gain                      | $h_{FE(1)}$<br>(Note) | $V_{CE} = -5V$ , $I_C = -0.5A$           | 100  | -    | 300  |         |
|                                      | $h_{FE(2)}$           | $V_{CE} = -5V$ , $I_C = -3A$             | 20   | -    | -    |         |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$         | $I_C = -2A$ , $I_B = -0.2A$              | -    | -0.5 | -1.0 | V       |
| Base-Emitter Voltage                 | $V_{BE}$              | $V_{CE} = -5V$ , $I_C = -0.5A$           | -    | -0.7 | -1.0 | V       |
| Transition Frequency                 | $f_T$                 | $V_{CE} = -5V$ , $I_C = -0.5A$           | -    | 30   | -    | MHz     |
| Collector Output Capacitance         | $C_{ob}$              | $V_{CB} = -10V$ , $I_E = 0$ , $f = 1MHz$ | -    | 45   | -    | pF      |
| Switching Time                       | Turn-on Time          |                                          | -    | 0.4  | -    | $\mu S$ |
|                                      | Storage Time          |                                          | -    | 1.7  | -    |         |
|                                      | Fall Time             |                                          | -    | 0.5  | -    |         |

Note :  $h_{FE(1)}$  Classification Y:100~200, GR:150~300

