

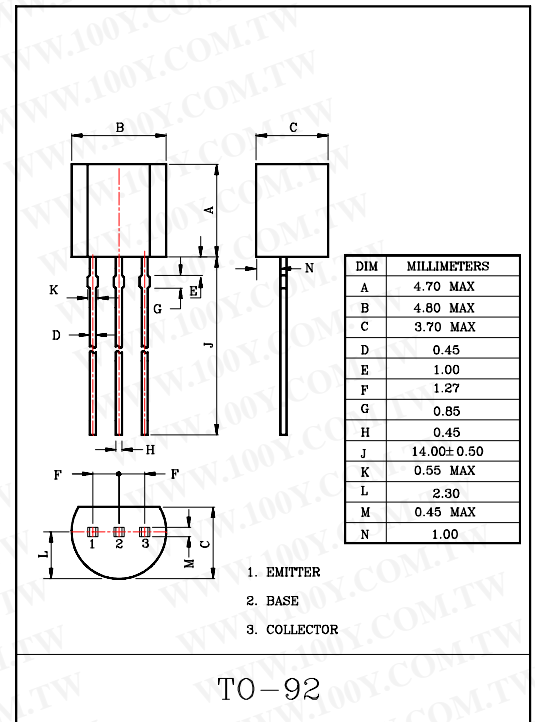
GENERAL PURPOSE APPLICATION.  
SWITCHING APPLICATION.

### FEATURES

- Excellent  $h_{FE}$  Linearity.
- Complementary to KTC9012

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

| CHARACTERISTIC              | SYMBOL    | RATING    | UNIT             |
|-----------------------------|-----------|-----------|------------------|
| Collector-Base Voltage      | $V_{CBO}$ | 40        | V                |
| Collector-Emitter Voltage   | $V_{CEO}$ | 30        | V                |
| Emitter-Base Voltage        | $V_{EBO}$ | 5         | V                |
| Collector Current           | $I_C$     | 500       | mA               |
| Emitter Current             | $I_E$     | -500      | mA               |
| Collector Power Dissipation | $P_C$     | 625       | mW               |
| 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            | $I_{CBO}$             | $V_{CB}=35\text{V}, I_E=0$                           | -    | -    | 0.1  | $\mu\text{A}$ |
| Emitter Cut-off Current              | $I_{EBO}$             | $V_{EB}=5\text{V}, I_C=0$                            | -    | -    | 0.1  | $\mu\text{A}$ |
| DC Current Gain                      | $h_{FE}(\text{Note})$ | $V_{CE}=1\text{V}, I_C=50\text{mA}$                  | 64   | -    | 246  |               |
| Collector-Emitter Saturation Voltage | $V_{CE(\text{sat})}$  | $I_C=100\text{mA}, I_B=10\text{mA}$                  | -    | 0.1  | 0.25 | V             |
| Base-Emitter Voltage                 | $V_{BE}$              | $I_C=100\text{mA}, V_{CE}=1\text{V}$                 | -    | 0.8  | 1.0  | V             |
| Transition Frequency                 | $f_T$                 | $V_{CE}=6\text{V}, I_C=20\text{mA}, f=100\text{MHz}$ | 140  | -    | -    | MHz           |
| Collector Output Capacitance         | $C_{ob}$              | $V_{CB}=6\text{V}, I_E=0, f=1\text{MHz}$             | -    | 7.0  | -    | pF            |

Note :  $h_{FE}$  Classification    D:64~91,    E:78~112,    F:96~135,  
    G:118~166,    H:144~202,    I:176~246

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