

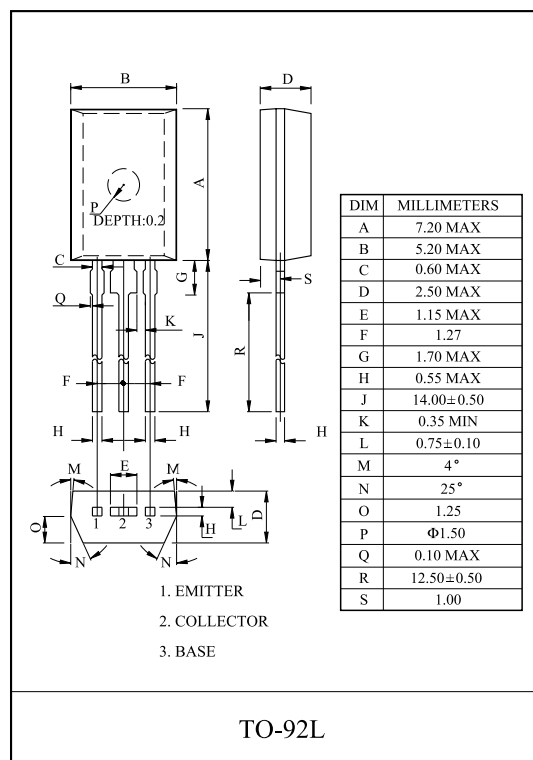
HIGH CURRENT APPLICATION.

FEATURES

- High DC Current Gain
: $h_{FE}=800 \sim 3200$ ($V_{CE}=5.0V, I_C=300mA$).
- Wide Area of Safe Operation.
- Low Collector Saturation Voltage.
: $V_{CE(sat)}=0.17V$ ($I_C=500mA, I_B=5.0mA$).

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

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|-----------|-----------|------------|
| Collector-Base Voltage | V_{CBO} | 60 | V |
| Collector-Emitter Voltage | V_{CEO} | 50 | V |
| Emitter-Base Voltage | V_{EBO} | 8 | V |
| Collector Current | I_C | 1.0 | A |
| Base Current | I_B | 200 | mA |
| Collector Power Dissipation | P_C | 1 | W |
| Junction Temperature | T_j | 150 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -55 ~ 150 | $^\circ C$ |



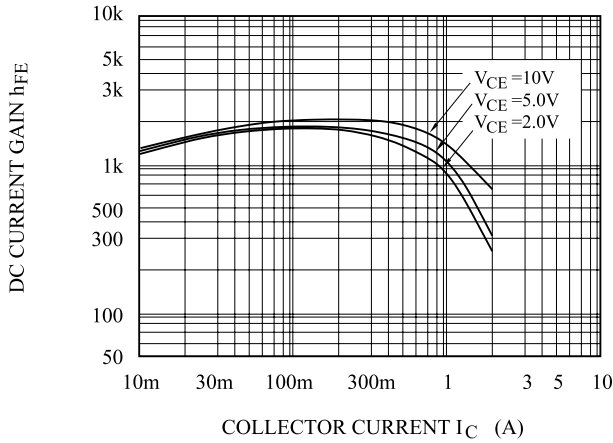
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|--------------------|-------------------------------|------|------|------|------|
| Collector Cut-off Current | I_{CBO} | $V_{CB}=60V, I_E=0$ | - | - | 100 | nA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB}=8V, I_C=0$ | - | - | 100 | nA |
| DC Current Gain | $h_{FE(1)}$ (Note) | $V_{CE}=5.0V, I_C=300mA$ | 800 | 1500 | 3200 | |
| | $h_{FE(2)}$ | $V_{CE}=5.0V, I_C=1.0A$ | 400 | - | - | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=500mA, I_B=5.0mA$ | - | 0.17 | 0.30 | V |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=500mA, I_B=5.0mA$ | - | 0.80 | 1.2 | V |
| Collector Output Capacitance | C_{ob} | $V_{CB}=10V, I_E=0, f=1.0MHz$ | - | 18 | 30 | pF |
| Transition Frequency | f_T | $V_{CE}=10V, I_C=500mA$ | 150 | 250 | - | MHz |
| Base-Emitter Voltage | V_{BE} | $V_{CE}=5V, I_C=100mA$ | - | 630 | 700 | mV |

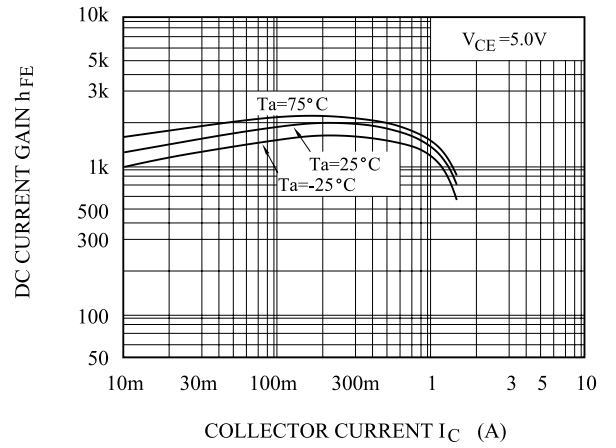
Note: h_{FE} Classification A:800 ~ 1600, B:1200 ~ 2400, C:2000 ~ 3200

KTD1028

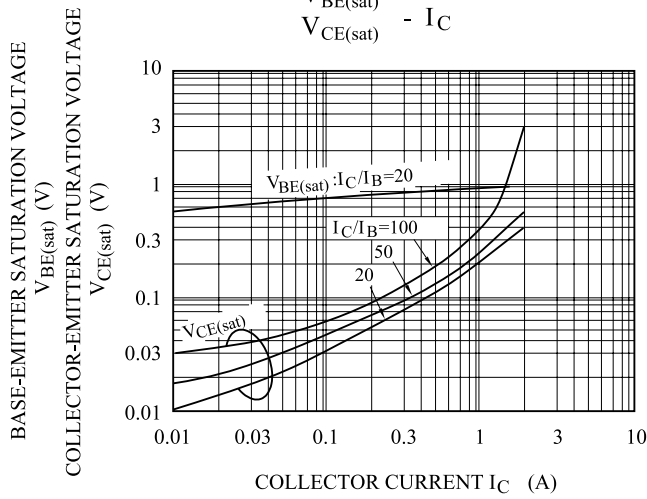
$h_{FE} - I_C$



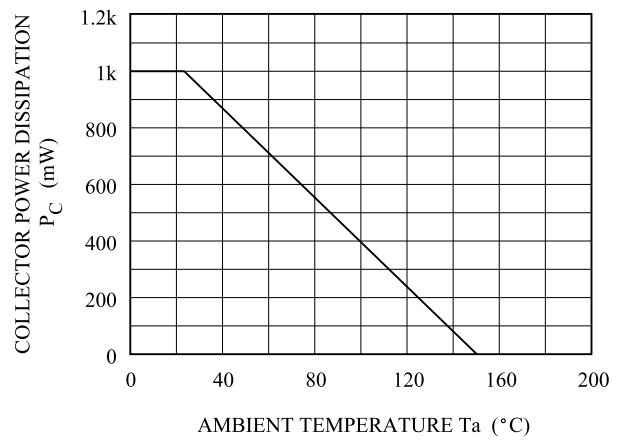
$h_{FE} - I_C$



$V_{BE(sat)}$
 $V_{CE(sat)}$ - I_C



$P_C - T_a$



$I_C - V_{CE}$

