

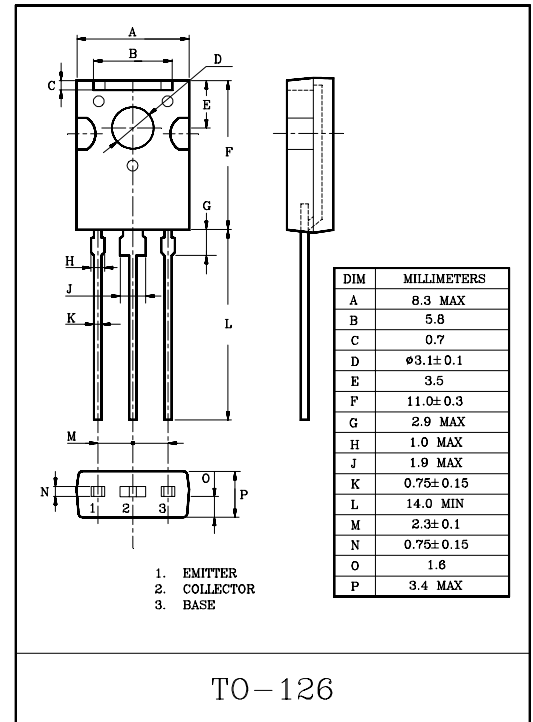
SWITCHING REGULATOR APPLICATION.
HIGH VOLTAGE AND HIGH SPEED
SWITCHING APPLICATION.

FEATURES

- Excellent Switching Times
: $t_{on}=1.1\mu S(\text{Max.})$, $t_f=0.7\mu S(\text{Max.})$, at $I_C=1A$
- High Collector Voltage : $V_{CBO}=700V$.

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

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------------------------------|-----------|----------|------------|
| Collector-Base Voltage | V_{CBO} | 700 | V |
| Collector-Emitter Voltage | V_{CEO} | 400 | V |
| Emitter-Base Voltage | V_{EBO} | 9 | V |
| Collector Current | DC | I_C | A |
| | Pulse | I_{CP} | |
| Base Current | I_B | 0.75 | A |
| Collector Power Dissipation ($T_c=25^\circ C$) | P_C | 20 | W |
| Junction Temperature | T_j | 150 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -65~150 | $^\circ C$ |

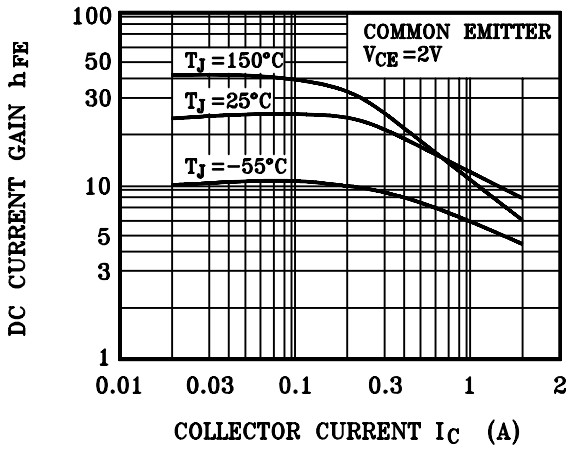


ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

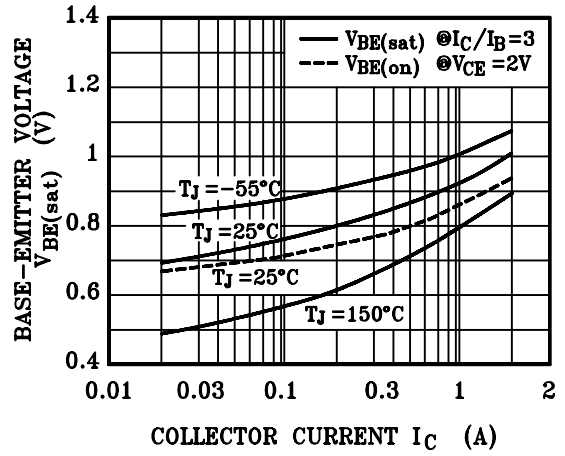
| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT | |
|--------------------------------------|------------------|---------------------------------------------------------------------------------|------|------|------|---------|---------|
| Emitter Cut-off Current | I_{EBO} | $V_{EB}=9V$, $I_C=0$ | - | - | 10 | μA | |
| DC Current Gain | $h_{FE(1)}$ Note | $V_{CE}=2V$, $I_C=0.5A$ | 19 | - | 36 | | |
| | $h_{FE(2)}$ | $V_{CE}=2V$, $I_C=1A$ | 5 | - | 25 | | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=0.5A$, $I_B=0.1A$ | - | - | 0.5 | V | |
| | | $I_C=1A$, $I_B=0.25A$ | - | - | 1 | | |
| | | $I_C=1.5A$, $I_B=0.5A$ | - | - | 3 | | |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=0.5A$, $I_B=0.1A$ | - | - | 1 | V | |
| | | $I_C=1A$, $I_B=0.25A$ | - | - | 1.2 | | |
| Collector Output Capacitance | C_{ob} | $V_{CB}=10V$, $f=0.1MHz$ | - | 21 | - | pF | |
| Transition Frequency | f_T | $V_{CE}=10V$, $I_C=0.1A$ | 4 | - | - | MHz | |
| Turn-On Time | t_{on} | <p>$I_{B1} = I_{B2} = 0.2A$ DUTY CYCLE $\leq 2\%$</p> | - | - | 1.1 | μS | |
| Storage Time | t_{stg} | | - | - | - | 4.0 | μS |
| Fall Time | t_f | | - | - | - | 0.7 | μS |

Note : $h_{FE(1)}$ Classification : O:19~28 , Y:26~36

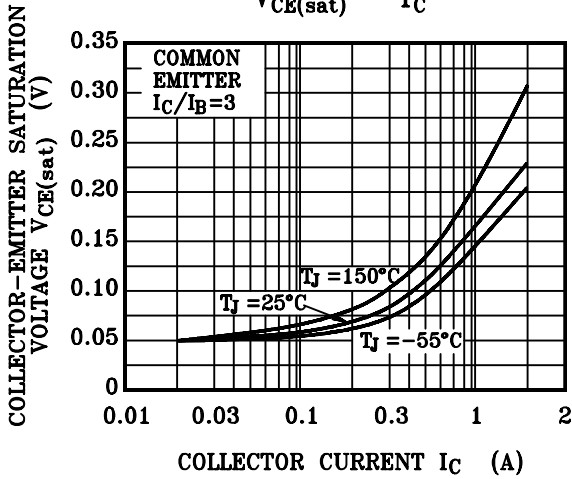
DC CURRENT GAIN



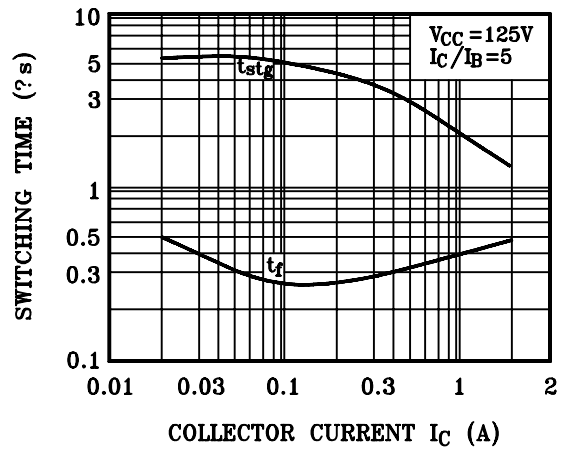
$V_{BE(sat)} - I_C$



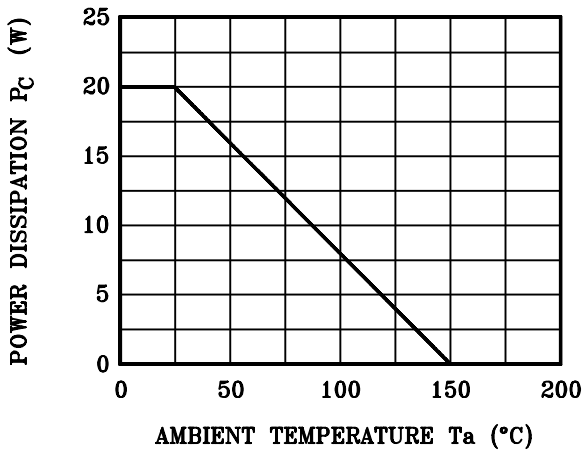
$V_{CE(sat)} - I_C$



SWITCHING CHARACTERISTIC



$P_c - T_a$



SAFE OPERATING AREA

