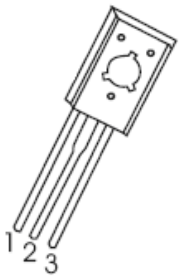
**TO-126**

1 . BASE

2. COLLECTOR

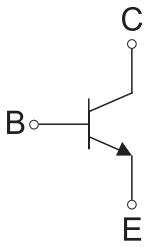
3. EMITTER




## FEATURES

- Power Switching Applications

**Equivalent Circuit**



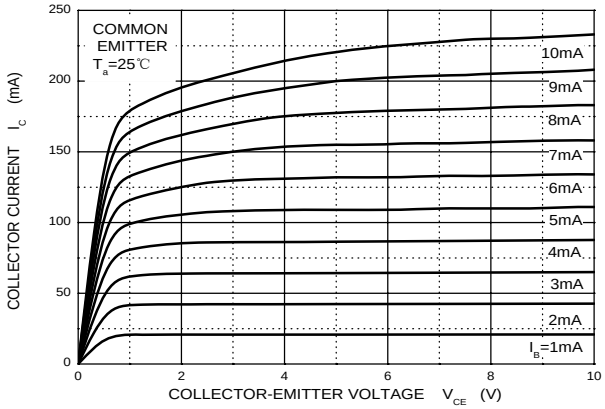

**MAXIMUM RATINGS ($T_a$=25℃ unless otherwise noted)**

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 600 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 400 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 6 | V |
| $I_C$ | Collector Current -Continuous | 1 | A |
| $P_C$ | Collector Power Dissipation | 1.25 | W |
| $R_{\theta JA}$ | Thermal Resistance from Junction to Ambient | 100 | ℃/W |
| $T_J$,$T_{stg}$ | Operation Junction and Storage Temperature Range | -55~+150 | ℃ |

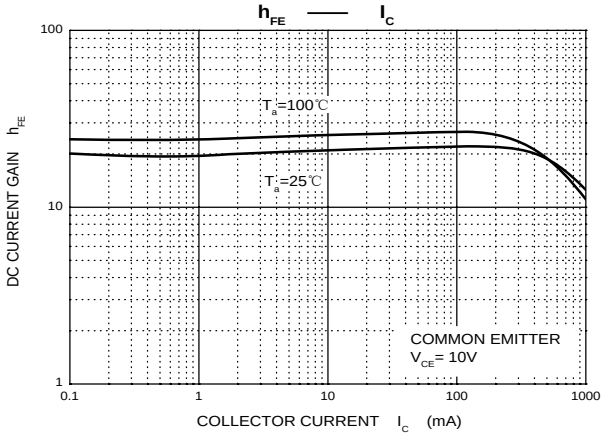
**$T_a$=25℃ unless otherwise specified**

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| **Collector-base breakdown voltage** | $V_{(BR)CBO}$ | $I_C$= 0.1mA,$I_E$=0 | 600 | | | V |
| **Collector-emitter breakdown voltage** | $V_{(BR)CEO}$ | $I_C$= 1mA,$I_B$=0 | 400 | | | V |
| **Emitter-base breakdown voltage** | $V_{(BR)EBO}$ | $I_E$=0.1mA,$I_C$=0 | 6 | | | V |
| **Collector cut-off current** | $I_{CBO}$ | $V_{CB}$=600V,$I_E$=0 | | | 100 | uA |
| **Collector cut-off current** | $I_{CEO}$ | $V_{CE}$=400V,$I_B$=0 | | | 100 | uA |
| **Emitter cut-off current** | $I_{EBO}$ | $V_{EB}$=7V,$I_C$=0 | | | 10 | uA |
| **DC current gain** | $h_{FE(1)}$* | $V_{CE}$=10V, $I_C$=200mA | 20 | | 30 | |
| | $h_{FE(2)}$ | $V_{CE}$=10V, $I_C$=250μA | 5 | | | |
| **Collector-emitter saturation voltage** | $V_{CE(sat)1}$ | $I_C$=200mA,$I_B$=40mA | | | 0.5 | V |
| **Base-emitter saturation voltage** | $V_{BE(sat)}$ | $I_C$=200mA,$I_B$=40mA | | | 1.1 | V |
| **Transition frequency** | $f_T$ | $V_{CE}$=10V, $I_C$=100mA,f=1MHz | 5 | | | MHz |
| **Fall time** | $t_f$ | $I_C$=100mA | | | 0.5 | μs |
| **Storage time** | $t_S$* | $I_C$=100mA | 2 | | 4 | |

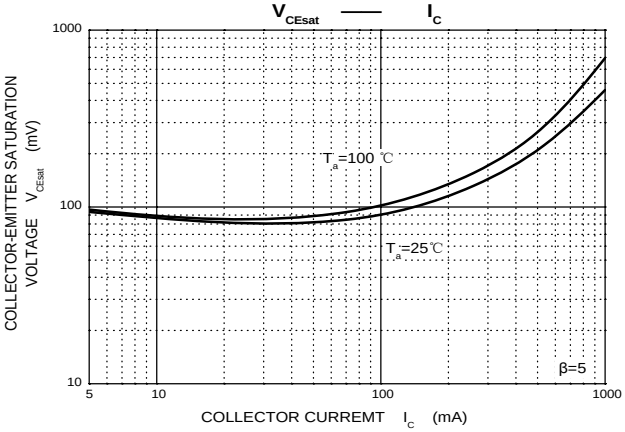
Static Characteristic



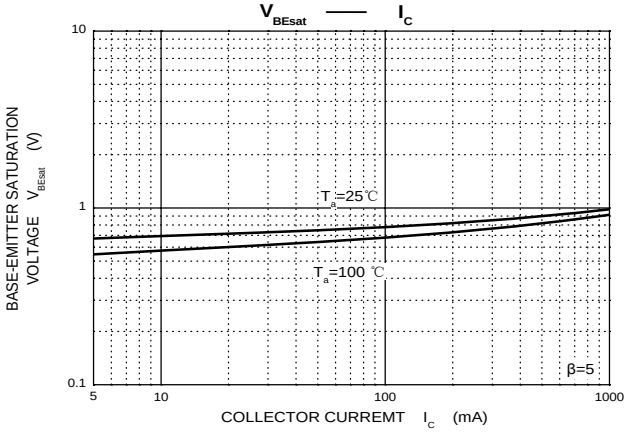

hFE —— IC



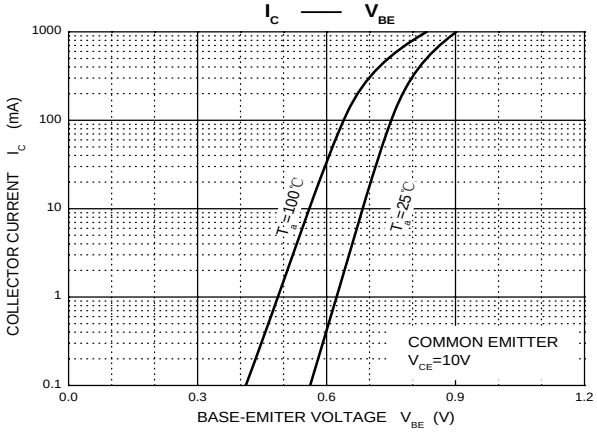

VCEsat —— IC



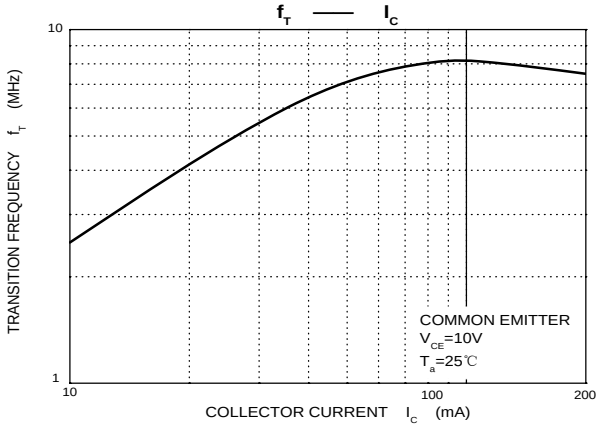

VBEsat —— IC



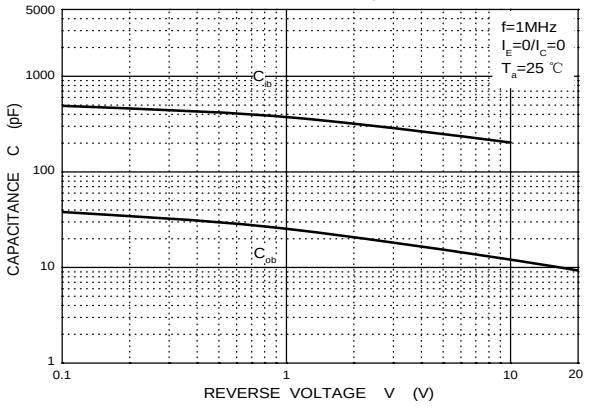

IC —— VBE



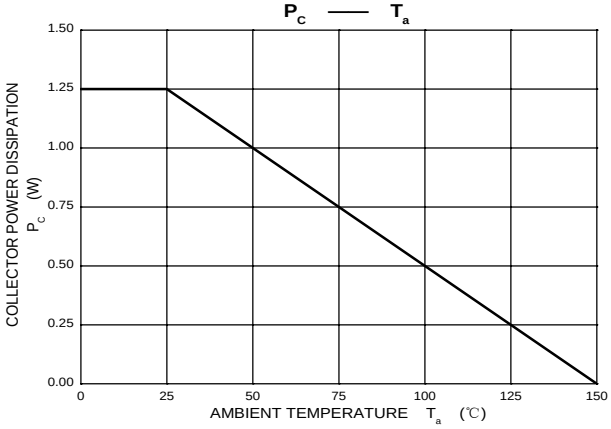

fT —— IC

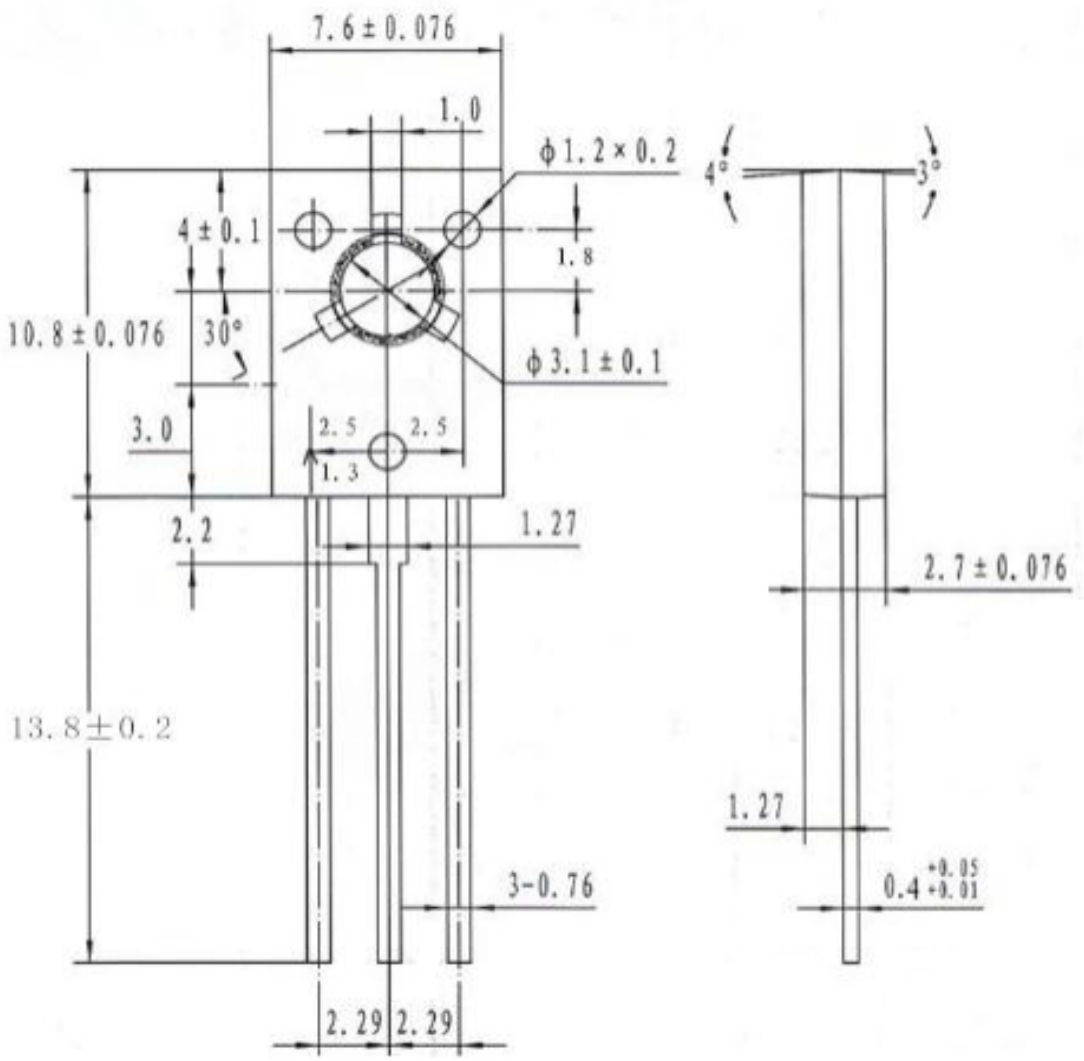


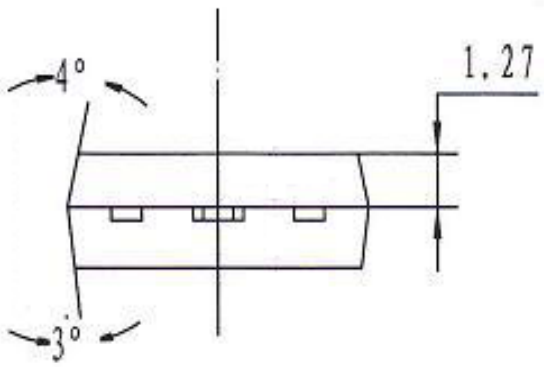

Cob/Cib —— VCB/VEB




PC —— Ta




7.6±0.076
1.0
φ1.2×0.2
4±0.1
1.8
10.8±0.076
30°
φ3.1±0.1
3.0
2.5
2.5
1.3
2.2
1.27
13.8±0.2
3-0.76
2.29
2.29
4°
3°
2.7±0.076
1.27
0.4 +0.05 +0.01


4°
1.27
3°