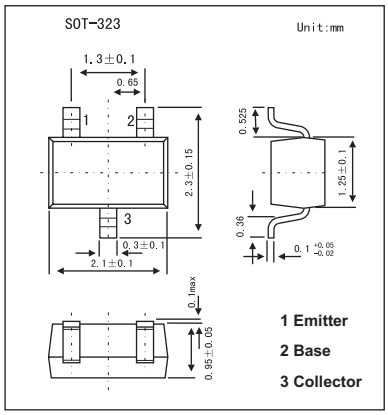
TY Semicondutor®

**Product specification**

# 2SC4117




## ■ Features

- High voltage
- High hFE
- Low noise
- Small package

## ■ Absolute Maximum Ratings Ta = 25℃

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Collector-base voltage | $V_{CBO}$ | 120 | V |
| Collector-emitter voltage | $V_{CEO}$ | 120 | V |
| Emitter-base voltage | $V_{EBO}$ | 5 | V |
| Collector current | $I_C$ | 100 | mA |
| Base current | $I_B$ | 20 | mA |
| Collector power dissipation | $P_C$ | 100 | mW |
| Junction temperature | Tj | 125 | ℃ |
| Storage temperature range | $T_{stg}$ | -55 to +125 | ℃ |

## ■ Electrical Characteristics Ta = 25℃

| Parameter | Symbol | Testconditons | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector cut-off current | $I_{CBO}$ | $V_{CB}$ = 120 V, $I_E$ = 0 | | | 0.1 | μA |
| Emitter cut-off current | $I_{EBO}$ | $V_{EB}$ = 5 V, $I_C$ = 0 | | | 0.1 | μA |
| DC current gain | $h_{FE}$ | $V_{CE}$ =6 V, $I_C$ = 2 mA | 200 | | 700 | |
| Collector-emitter saturation voltage | $V_{CE\ (sat)}$ | $I_C$ = 10 mA, $I_B$ = 1 mA | | | 0.3 | V |
| Transition frequency | $f_T$ | $V_{CE}$ = 6 V, $I_C$ = 1 mA | | 100 | | MHz |
| Collector output capacitance | $C_{ob}$ | $V_{CB}$ = 10 V, $I_E$ = 0, f = 1 MHz | | 3.0 | | pF |
| Noise figure | NF | $V_{CE}$=6 V, $I_C$=0.1 mA, f=1kHz,$R_G$=10 KΩ | | 1.0 | 10 | dB |

## ■ $h_{FE}$ Classification

| Marking | DG | DL |
|---|---|---|
| Rank | GR | BL |
| hFE | 200～400 | 350～700 |