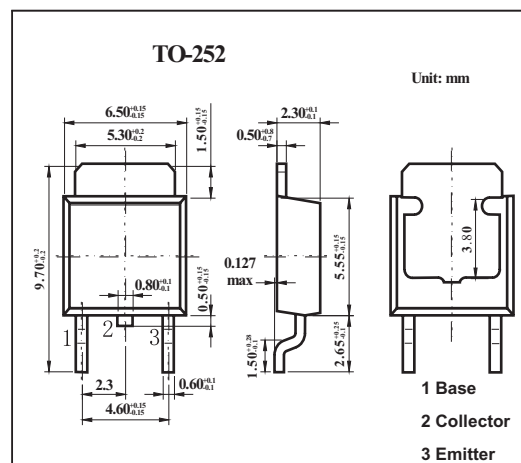


## Power Transistor

## 2SB1275

## ■ Features

- High breakdown voltage.( $B_{V_{CE0}} = -160V$ )
- Low collector output capacitance.  
Typ. 30pF at  $V_{CB} = 10V$
- High transition frequency.( $f_T = 50MHz$ )

■ Absolute Maximum Ratings  $T_a = 25^\circ C$ 

| Parameter                   | Symbol    | Rating      | Unit                  |
|-----------------------------|-----------|-------------|-----------------------|
| Collector-base voltage      | $V_{CBO}$ | -160        | V                     |
| Collector-emitter voltage   | $V_{CEO}$ | -160        | V                     |
| Emitter-base voltage        | $V_{EBO}$ | -5          | V                     |
| Collector current           | $I_C$     | -1.5        | A(DC)                 |
|                             |           | -3          | A(Pulse)              |
| Collector power dissipation | $P_C$     | 1           | W( $T_c=25^\circ C$ ) |
|                             |           | 10          |                       |
| Junction temperature        | $T_j$     | 150         | $^\circ C$            |
| Storage temperature         | $T_{stg}$ | -55 to +150 | $^\circ C$            |

■ Electrical Characteristics  $T_a = 25^\circ C$ 

| Parameter                            | Symbol        | Testconditions                        | Min  | Typ | Max | Unit    |
|--------------------------------------|---------------|---------------------------------------|------|-----|-----|---------|
| Collector-base breakdown voltage     | $B_{V_{CBO}}$ | $I_C = -50\mu A$                      | -160 |     |     | V       |
| Collector-emitter breakdown voltage  | $B_{V_{CEO}}$ | $I_C = -1mA$                          | -160 |     |     | V       |
| Emitter-base breakdown voltage       | $B_{V_{EBO}}$ | $I_E = -50\mu A$                      | -5   |     |     | V       |
| Collector cutoff current             | $I_{CBO}$     | $V_{CB} = -120V$                      |      |     | -1  | $\mu A$ |
| Emitter cutoff current               | $I_{EBO}$     | $V_{EB} = -4V$                        |      |     | -1  | $\mu A$ |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C/I_B = -1A/-0.1A$                 |      |     | -2  | V       |
| DC current transfer ratio            | $h_{FE}$      | $V_{CE} = -5V, I_C = -0.1A$           | 82   |     | 180 |         |
| Transition frequency                 | $f_T$         | $V_{CE} = -5V, I_E = 0.1A, f = 30MHz$ |      | 50  |     | MHz     |
| Output capacitance                   | $C_{ob}$      | $V_{CB} = -10V, I_E = 0A, f = 1MHz$   |      | 30  |     | pF      |

■  $h_{FE}$  Classification

| TYPE     | P         |
|----------|-----------|
| $h_{FE}$ | 82 to 180 |