

Power Transistor (−120V, −1.5A)

2SB1236

●Features

- 1) High breakdown voltage. ($BV_{CEO} = -120V$)
- 2) Low collector output capacitance.
(Typ. 30pF at $V_{CB} = -10V$)
- 3) High transition frequency. ($f_T = 50MHz$)
- 4) Complements the 2SD1857.

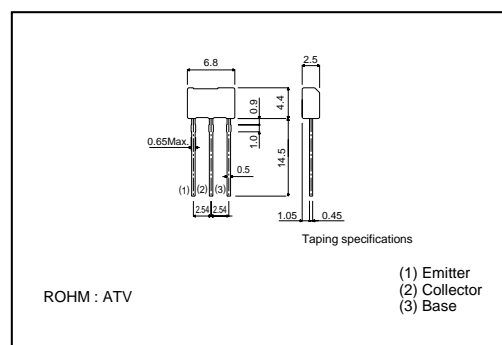
●Absolute maximum ratings ($T_a = 25^\circ C$)

| Parameter | Symbol | Limits | 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 | −1.5 | A (DC) |
| | | −3 | A (Pulse) ^{*1} |
| Collector power dissipation | P_C | 1 | W ^{*2} |
| Junction temperature | T_J | 150 | $^\circ C$ |
| Storage temperature | T_{stg} | −55~+150 | $^\circ C$ |

^{*1} Single pulse $P_w = 100ms$

^{*2} Printed circuit board 1.7mm thick, collector plating 1cm² or larger.

●External dimensions (Units : mm)



●Packaging specifications and h_{FE}

| Type | 2SB1236 |
|------------------------------|---------|
| Package | ATV |
| h_{FE} | QR |
| Code | TV2 |
| Basic ordering unit (pieces) | 2500 |

●Electrical characteristics ($T_a = 25^\circ C$)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|--------------------------------------|---------------|------|------|------|---------|---|
| Collector-base breakdown voltage | BV_{CBO} | −120 | — | — | V | $I_C = -50\mu A$ |
| Collector-emitter breakdown voltage | BV_{CEO} | −120 | — | — | V | $I_{CV} = -1mA$ |
| Emitter-base breakdown voltage | BV_{EBO} | −5 | — | — | V | $I_E = -50\mu A$ |
| Collector cutoff current | I_{CBO} | — | — | −1 | μA | $V_{CB} = -100V$ |
| Emitter cutoff current | I_{EBO} | — | — | −1 | μA | $V_{EB} = -4V$ |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | — | — | −2 | V | $I_C/I_E = -1A/-0.1A$ [*] |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | — | — | −1.5 | V | $I_C/I_E = -1A/-0.1A$ [*] |
| DC current transfer ratio | h_{FE} | 120 | — | 390 | — | $V_{CE} = -5V$, $I_C = -0.1A$ |
| Transition frequency | f_T | — | 50 | — | MHz | $V_{CE} = -5V$, $I_E = 0.1A$, $f = 30MHz$ |
| Output capacitance | C_{ob} | — | 30 | — | pF | $V_{CB} = -10V$, $I_E = 0A$, $f = 1MHz$ |

^{*} Measured using pulse current.