

## Power Transistor (−160V , −1.5A) 2SB1275 / 2SB1236A

## ● Features

- 1) High breakdown voltage. ( $V_{CE0} = -160V$ )
- 2) Low collector output capacitance.  
(Typ. 30pF at  $V_{CB} = 10V$ )
- 3) High transition frequency. ( $f_T = 50MHz$ )
- 4) Complements the 2SD1918 / 2SD1857A.

● **Absolute maximum ratings** (Ta = 25°C)

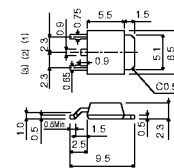
| Parameter                   |          | Symbol    | Limits    | Unit        |
|-----------------------------|----------|-----------|-----------|-------------|
| Collector-base voltage      |          | $V_{CB0}$ | -160      | V           |
| Collector-emitter voltage   |          | $V_{CE0}$ | -160      | V           |
| Emitter-base voltage        |          | $V_{EB0}$ | -5        | V           |
| Collector current           |          | $I_C$     | -1.5      | A(DC)       |
|                             |          |           | -3        | A(Pulse) *1 |
| Collector power dissipation | 2SB1275  | $P_C$     | 1         | W(Tc=25°C)  |
|                             | 2SB1236A |           | 10        |             |
| Junction temperature        |          | $T_j$     | 150       | W *2        |
| Junction temperature        |          | $T_{stg}$ | -55--+150 | °C          |

\* 1 Single pulse Pw=100ms

\* 2 Printed circuit board 1.7mm thick, collector plating 1cm<sup>2</sup> or larger.

●External dimensions (Units : mm)

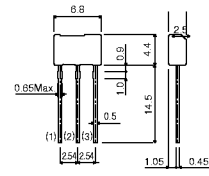
2SB1275



ROHM : CPT3  
EIAJ : SC-63

- (1) Base/Gate
- (2) Collector/Drain
- (3) Emitter/Source

2SB1236A



### Taping specifications

ROHM : ATV

- (1) Emitter
- (2) Collector
- (3) Base

### ●Packaging specifications and hFE

| Type                         | 2SB1275 | 2SB1236A |
|------------------------------|---------|----------|
| Package                      | CPT3    | ATV      |
| h <sub>FE</sub>              | NP      | PQ       |
| Code                         | TL      | TV2      |
| Basic ordering unit (pieces) | 2500    | 2500     |

### ●Electrical characteristics (Ta = 25°C)

| Parameter                            | Symbol              | Min.            | Typ.     | Max.     | Unit    | Conditions                            |
|--------------------------------------|---------------------|-----------------|----------|----------|---------|---------------------------------------|
| Collector-base breakdown voltage     | $BV_{CBO}$          | -160            | —        | —        | V       | $I_C = -50\mu A$                      |
| Collector-emitter breakdown voltage  | $BV_{CEO}$          | -160            | —        | —        | V       | $I_C = -1mA$                          |
| Emitter-base breakdown voltage       | $BV_{EBO}$          | -5              | —        | —        | V       | $I_E = -50\mu A$                      |
| Collector cutoff current             | $I_{CBO}$           | —               | —        | -1       | $\mu A$ | $V_{CB} = -120V$                      |
| Emitter cutoff current               | $I_{EBO}$           | —               | —        | -1       | $\mu A$ | $V_{EB} = -4V$                        |
| Collector-emitter saturation voltage | $V_{CE(sat)}$       | —               | —        | -2       | V       | $I_C/I_B = -1A/-0.1A$                 |
| Base-emitter saturation voltage      | $V_{BE(sat)}$       | —               | —        | -1.5     | V       | $I_C/I_B = -1A/-0.1A$                 |
| DC current transfer ratio            | 2SB1275<br>2SB1236A | h <sub>FE</sub> | 56<br>82 | —<br>270 | —       | $V_{CE} = -5V, I_C = -0.1A$           |
| Transition frequency                 | f <sub>T</sub>      | —               | 50       | —        | MHz     | $V_{CE} = -5V, I_E = 0.1A, f = 30MHz$ |
| Output capacitance                   | C <sub>ob</sub>     | —               | 30       | —        | pF      | $V_{CB} = -10V, I_E = 0A, f = 1MHz$   |

\*Measured using pulse current.