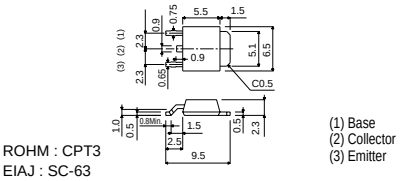
# Power Transistor (–80V, –4A)

## 2SB1474

### ●Features

1) Darlington connection for a high $h_{FE}$.
2) Built-in resistor between base and emitter.
3) Built-in damper doide.

### ●External dimensions (Units : mm)




ROHM : CPT3
EIAJ : SC-63

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

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

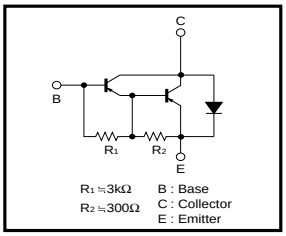
| Parameter | Symbol | Limits | Unit |
|---|---|---|---|
| Collector-base voltage | $V_{CBO}$ | -80 | V |
| Collector-emitter voltage | $V_{CEO}$ | -80 | V |
| Emitter-base voltage | $V_{EBO}$ | -7 | V |
| Collector current | $I_C$ | -4 | A(DC) |
| | | -6 | A * |
| Collector power dissipation | $P_C$ | 1 | W |
| | | 10 | W (Tc=25˚C) |
| Junction temperature | Tj | 150 | ˚C |
| Storage temperature | Tstg | -55~+150 | ˚C |

* Single pulse, Pw=100ms

### ●Packaging specifications and $h_{FE}$

| Type | 2SB1474 |
|---|---|
| Package | CPT3 |
| $h_{FE}$ | 1k~10k |
| Code | TL |
| Basic ordering unit (pieces) | 2500 |

### ●Equivalent circuit




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

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|---|---|---|---|---|---|---|
| Collector-base breakdown voltage | $BV_{CBO}$ | -80 | - | - | V | $I_C$=-50μA |
| Collector-emitter breakdown voltage | $BV_{CEO}$ | -80 | - | - | V | $I_C$=-1mA |
| Collector cutoff current | $I_{CBO}$ | - | - | -100 | μA | $V_{CB}$=-80V |
| Emitter cutoff current | $I_{EBO}$ | - | - | -3 | mA | $V_{EB}$=-5V |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | - | -1 | -1.5 | V | $I_C/I_B$=-2A/-4mA *1 |
| DC current transfer ratio | $h_{FE}$ | 1000 | 5000 | 10000 | - | $V_{CE}/I_C$=-3V/-2A *1 |
| Transition frequency | $f_T$ | - | 12 | - | MHz | $V_{CE}$=-5V, $I_E$=0.5A, f=10MHz *2 |
| Output capacitance | Cob | - | 45 | - | pF | $V_{CB}$=-10V, $I_E$=0A, f=1MHz |

*1 Measured using pulse current. *2 Transition frequency of the device.