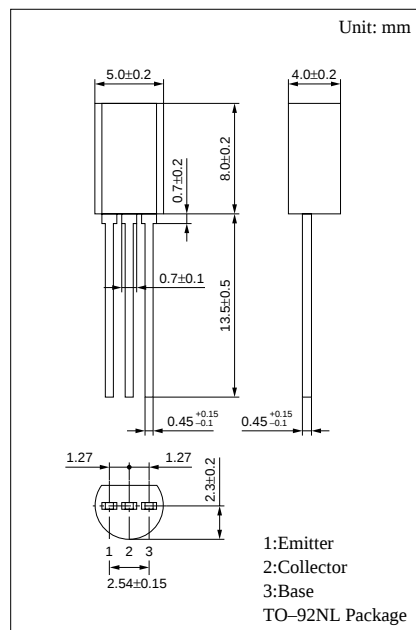


## Silicon NPN epitaxial planer type

Complementary to 2SA1533

- High collector to emitter voltage  $V_{CEO}$ .
- Optimum for the driver stage of a low-frequency and 25 to 30W output amplifier.
- Allowing supply with the radial taping.

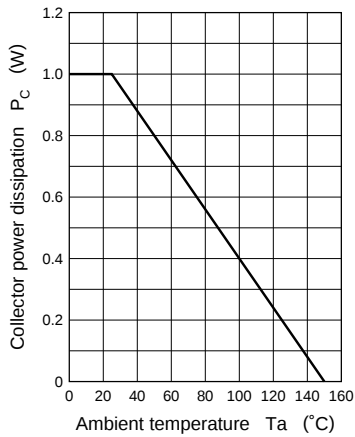
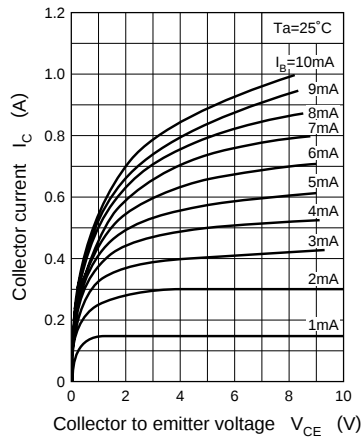
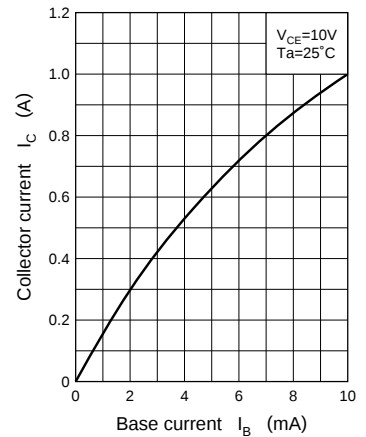
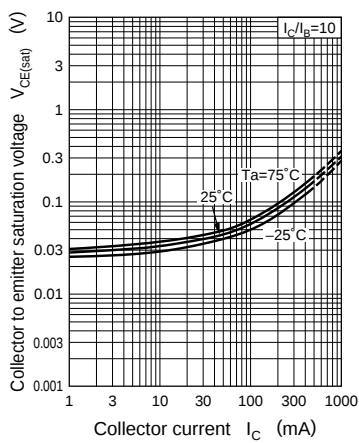
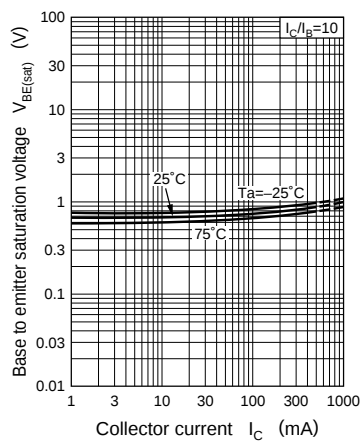
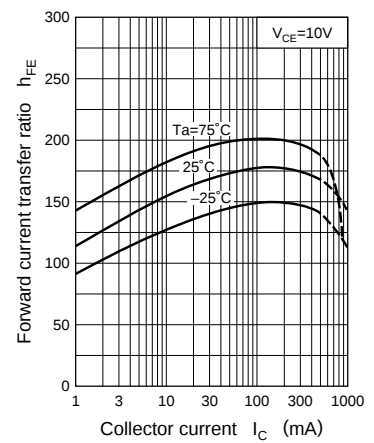
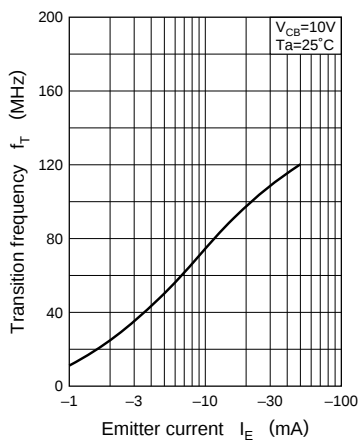
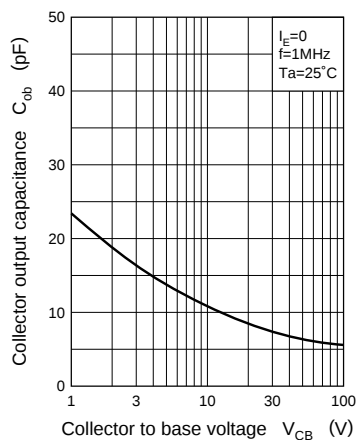
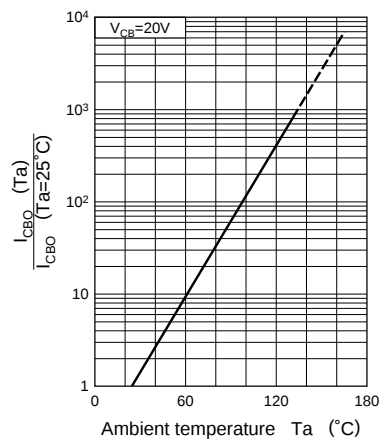
| Parameter                    | Symbol    | Ratings    | Unit |
|------------------------------|-----------|------------|------|
| Collector to base voltage    | $V_{CBO}$ | 80         | V    |
| Collector to emitter voltage | $V_{CEO}$ | 80         | V    |
| Emitter to base voltage      | $V_{EBO}$ | 5          | V    |
| Peak collector current       | $I_{CP}$  | 1          | A    |
| Collector current            | $I_C$     | 0.5        | A    |
| Collector power dissipation  | $P_C$     | 1          | W    |
| Junction temperature         | $T_j$     | 150        | °C   |
| Storage temperature          | $T_{stg}$ | -55 ~ +150 | °C   |



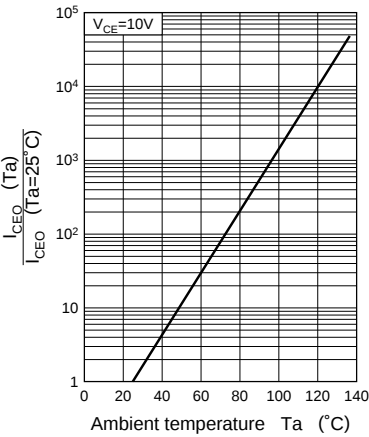
| Parameter                               | Symbol         | Conditions                              | min | typ  | max | Unit    |
|-----------------------------------------|----------------|-----------------------------------------|-----|------|-----|---------|
| Collector cutoff current                | $I_{CBO}$      | $V_{CB} = 20V, I_E = 0$                 |     |      | 0.1 | $\mu A$ |
| Collector to base voltage               | $V_{CBO}$      | $I_C = 10\mu A, I_E = 0$                | 80  |      |     | V       |
| Collector to emitter voltage            | $V_{CEO}$      | $I_C = 100\mu A, I_B = 0$               | 80  |      |     | V       |
| Emitter to base voltage                 | $V_{EBO}$      | $I_E = 10\mu A, I_C = 0$                | 5   |      |     | V       |
| Forward current transfer ratio          | $h_{FE1}^{*1}$ | $V_{CE} = 10V, I_C = 150mA^{*2}$        | 130 |      | 330 |         |
|                                         | $h_{FE2}$      | $V_{CE} = 5V, I_C = 500mA^{*2}$         | 50  | 100  |     |         |
| Collector to emitter saturation voltage | $V_{CE(sat)}$  | $I_C = 300mA, I_B = 30mA^{*2}$          |     | 0.2  | 0.4 | V       |
| Base to emitter saturation voltage      | $V_{BE(sat)}$  | $I_C = 300mA, I_B = 30mA^{*2}$          |     | 0.85 | 1.2 | V       |
| Transition frequency                    | $f_T$          | $V_{CB} = 10V, I_E = -50mA, f = 200MHz$ |     | 120  |     | MHz     |
| Collector output capacitance            | $C_{ob}$       | $V_{CB} = 10V, I_E = 0, f = 1MHz$       |     | 11   | 20  | pF      |

<sup>\*</sup>1h<sub>FF1</sub> Rank classification

| Rank      | R         | S         |
|-----------|-----------|-----------|
| $h_{FE1}$ | 130 ~ 220 | 185 ~ 330 |

$P_C - T_a$  $I_C - V_{CE}$  $I_C - I_B$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$  $I_{CBO} - T_a$ 

$I_{CEO} - T_a$



Area of safe operation (ASO)

