

# XP01554 (XP1554)

Silicon NPN epitaxial planer transistor

For high speed switching

## Features

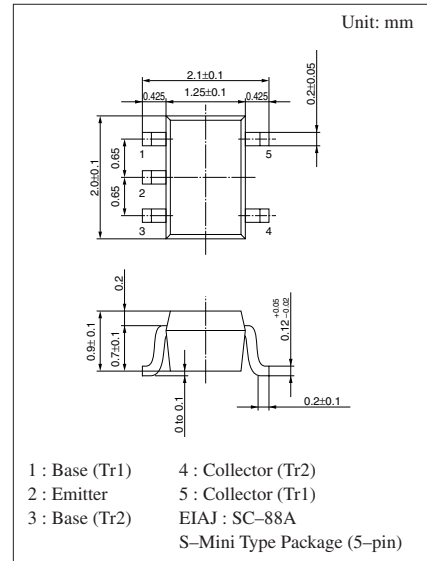
- Two elements incorporated into one package.  
(Emitter-coupled transistors)
- Reduction of the mounting area and assembly cost by one half.
- Low  $V_{CE(sat)}$ .

## Basic Part Number of Element

- 2SC3757 × 2 elements

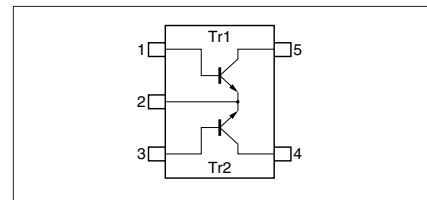
## Absolute Maximum Ratings (Ta=25°C)

| Parameter         | Symbol                       | Ratings   | Unit        |    |
|-------------------|------------------------------|-----------|-------------|----|
| Rating of element | Collector to base voltage    | $V_{CBO}$ | 40          | V  |
|                   | Collector to emitter voltage | $V_{CES}$ | 40          | V  |
|                   | Emitter to base voltage      | $V_{EBO}$ | 5           | V  |
|                   | Collector current            | $I_C$     | 100         | mA |
|                   | Peak collector current       | $I_{CP}$  | 300         | mA |
| Overall           | Total power dissipation      | $P_T$     | 150         | mW |
|                   | Junction temperature         | $T_j$     | 150         | °C |
|                   | Storage temperature          | $T_{stg}$ | -55 to +150 | °C |



Marking Symbol: EU

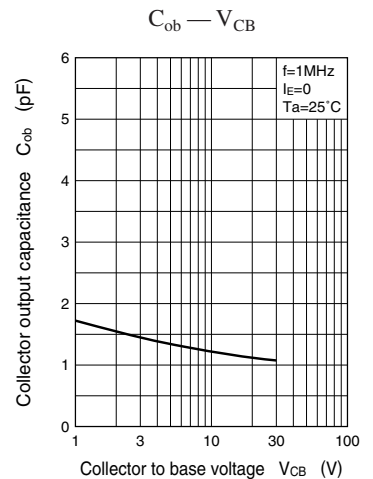
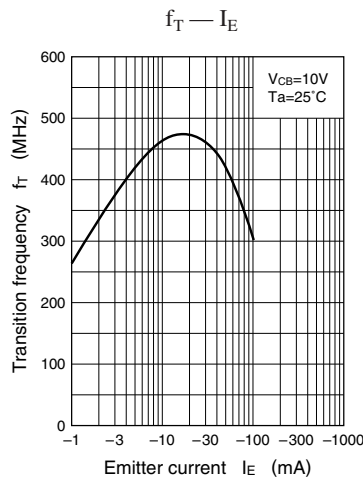
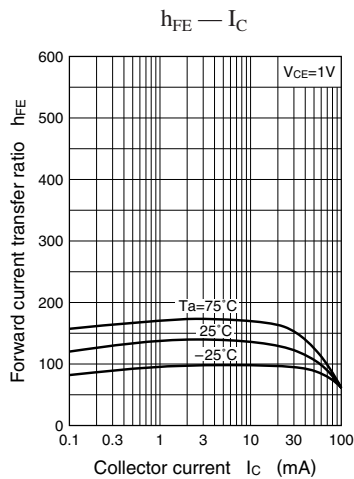
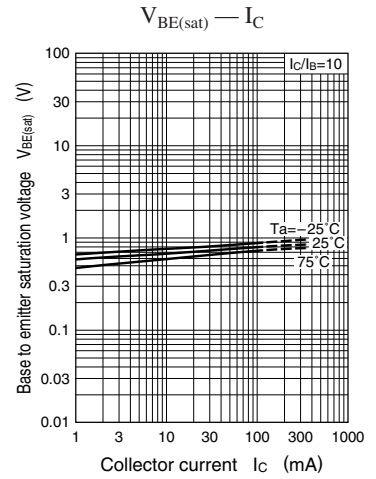
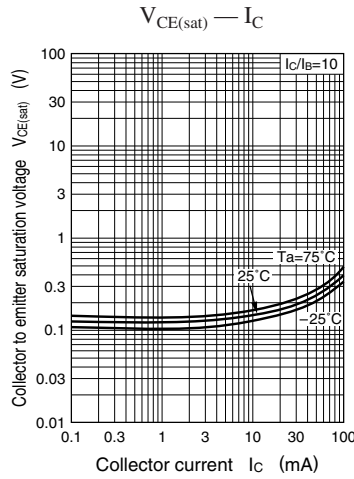
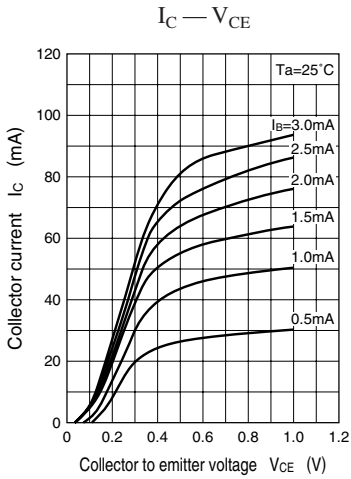
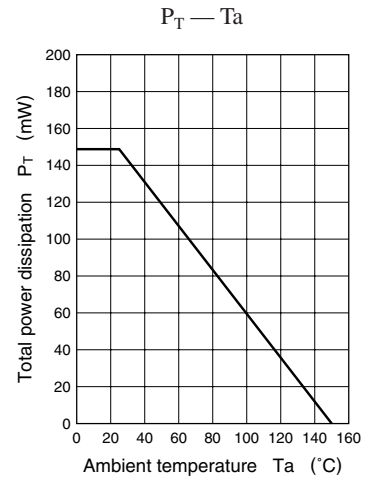
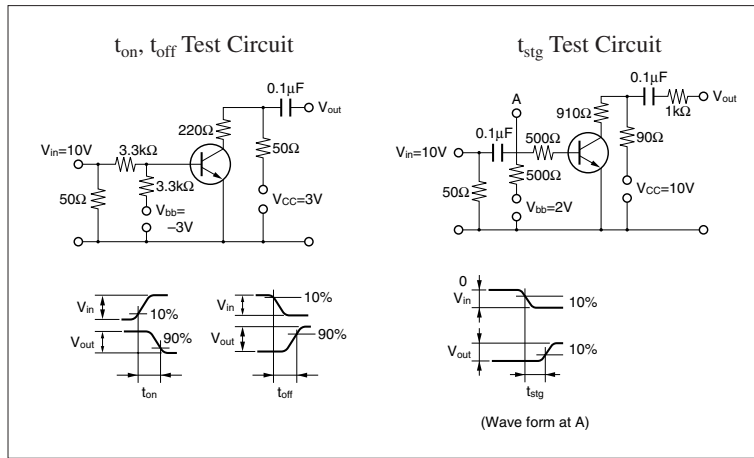
Internal Connection



## Electrical Characteristics (Ta=25°C)

| Parameter                               | Symbol        | Conditions                              | min | typ  | max  | Unit    |
|---|---------------|---|-----|------|------|---------|
| Collector cutoff current                | $I_{CBO}$     | $V_{CB} = 15V, I_E = 0$                 |     |      | 0.1  | $\mu A$ |
| Emitter cutoff current                  | $I_{EBO}$     | $V_{EB} = 4V, I_C = 0$                  |     |      | 0.1  | $\mu A$ |
| Forward current transfer ratio          | $h_{FE}$      | $V_{CE} = 1V, I_C = 10mA$               | 60  |      | 200  |         |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 10mA, I_B = 1mA$                 |     | 0.17 | 0.25 | V       |
| Base to emitter saturation voltage      | $V_{BE(sat)}$ | $I_C = 10mA, I_B = 1mA$                 |     |      | 1.0  | V       |
| Transition frequency                    | $f_T$         | $V_{CB} = 10V, I_E = -10mA, f = 200MHz$ |     | 450  |      | MHz     |
| Collector output capacitance            | $C_{ob}$      | $V_{CB} = 10V, I_E = 0, f = 1MHz$       |     | 2    | 6    | pF      |
| Turn-on time                            | $t_{on}$      |   |     | 17   |      | ns      |
| Turn-off time                           | $t_{off}$     |   |     | 17   |      | ns      |
| Storage time                            | $t_{stg}$     |   |     | 10   |      | ns      |

Note.) The Part number in the Parenthesis shows conventional part number.



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