

# 2SC5363(Tentative)

Silicon NPN epitaxial planer type

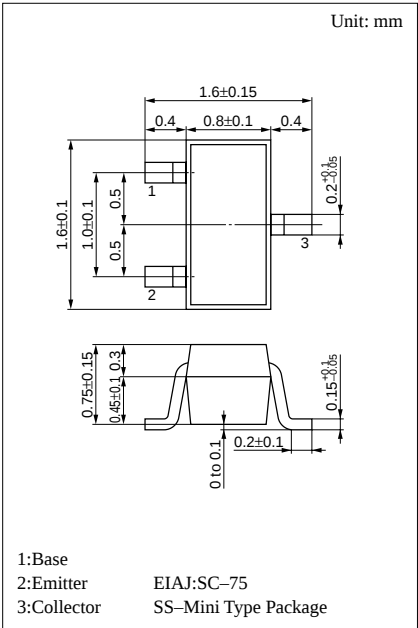
For low-voltage high-frequency amplification

## Features

- High transition frequency  $f_T$ .
- Small collector output capacitance  $C_{ob}$ .
- SS-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing.

## Absolute Maximum Ratings (Ta=25°C)

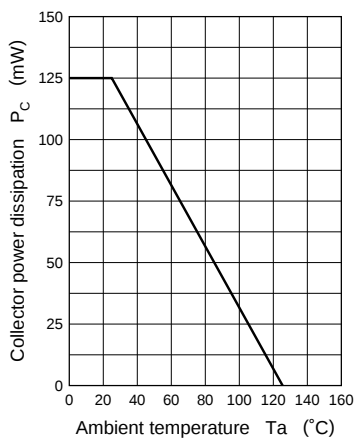
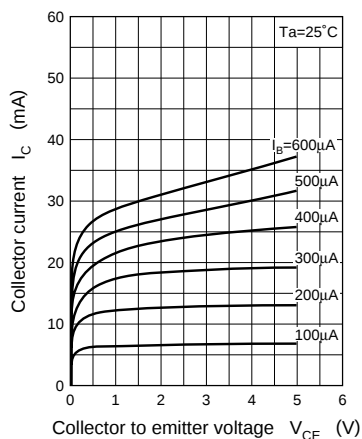
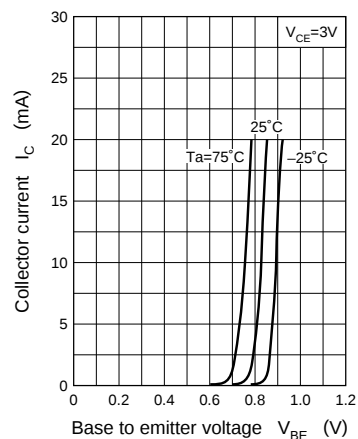
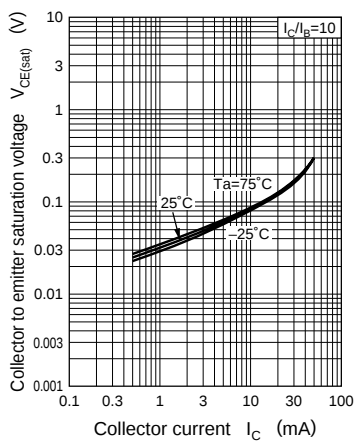
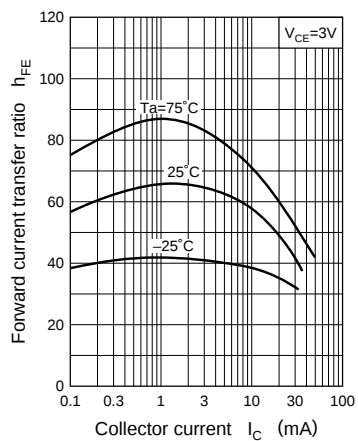
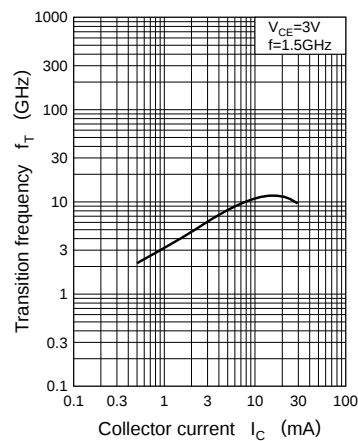
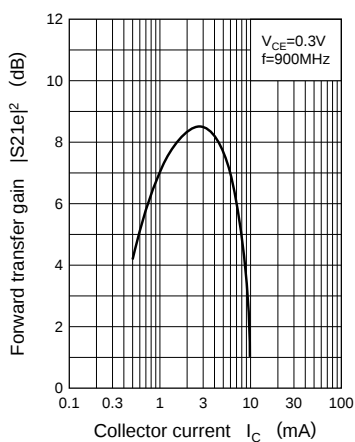
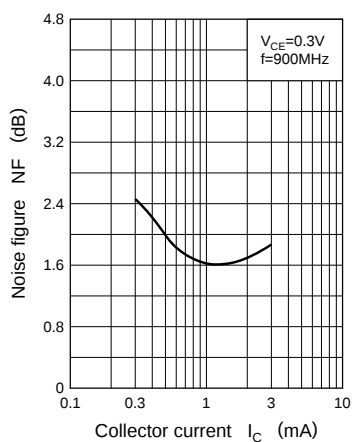
| Parameter                    | Symbol    | Ratings    | Unit |
|------------------------------|-----------|------------|------|
| Collector to base voltage    | $V_{CBO}$ | 9          | V    |
| Collector to emitter voltage | $V_{CEO}$ | 6          | V    |
| Emitter to base voltage      | $V_{EBO}$ | 2          | V    |
| Collector current            | $I_C$     | 30         | mA   |
| Collector power dissipation  | $P_C$     | 125        | mW   |
| Junction temperature         | $T_j$     | 125        | °C   |
| Storage temperature          | $T_{stg}$ | -55 ~ +125 | °C   |



Marking symbol : 3Y

## Electrical Characteristics (Ta=25°C)

| Parameter                      | Symbol        | Conditions                             | min | typ | max | Unit    |
|--------------------------------|---------------|----------------------------------------|-----|-----|-----|---------|
| Collector cutoff current       | $I_{CBO}$     | $V_{CB} = 5V, I_E = 0$                 |     |     | 1   | $\mu A$ |
| Emitter cutoff current         | $I_{EBO}$     | $V_{EB} = 1V, I_C = 0$                 |     |     | 1   | $\mu A$ |
| Forward current transfer ratio | $h_{FE}$      | $V_{CE} = 3V, I_C = 10mA$              | 40  | 100 | 200 |         |
| Collector output capacitance   | $C_{ob}$      | $V_{CB} = 3V, I_E = 0, f = 1MHz$       |     | 0.4 | 0.7 | pF      |
| Transition frequency           | $f_T$         | $V_{CE} = 3V, I_C = 10mA, f = 1.5GHz$  |     | 10  |     | GHz     |
| Foward transfer gain           | $ S_{21e} ^2$ | $V_{CE} = 0.3V, I_C = 1mA, f = 0.9GHz$ |     | 6.5 |     | dB      |
| Noise figure                   | NF            | $V_{CE} = 0.3V, I_C = 1mA, f = 0.9GHz$ |     | 1.7 |     | dB      |

$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_C$  $|S_{21e}|^2 - I_C$ NF —  $I_C$  $C_{ob} - V_{CB}$ 