

2SC3354

Silicon NPN epitaxial planer type

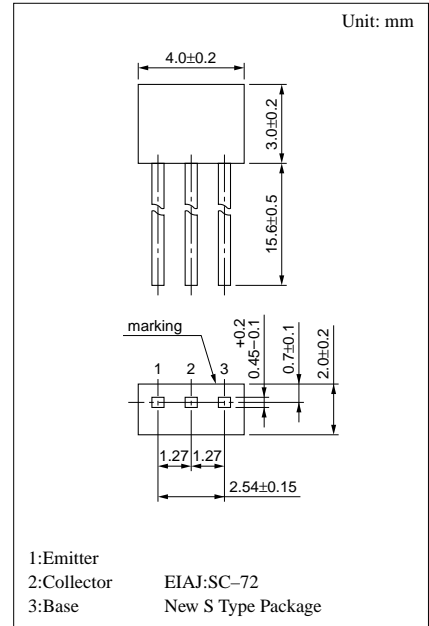
For high-frequency amplification/oscillation/mixing

Features

- Optimum for high-density mounting.
- Allowing supply with the radial taping.
- High transition frequency f_T .

Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Ratings | Unit |
|------------------------------|-----------|------------|------|
| Collector to base voltage | V_{CBO} | 30 | V |
| Collector to emitter voltage | V_{CEO} | 20 | V |
| Emitter to base voltage | V_{EBO} | 3 | V |
| Collector current | I_C | 50 | mA |
| Collector power dissipation | P_C | 300 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 ~ +150 | °C |



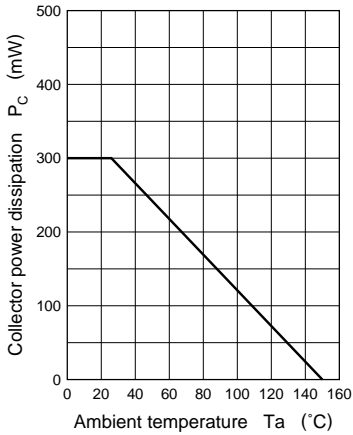
Electrical Characteristics (Ta=25°C)

| Parameter | Symbol | Conditions | min | typ | max | Unit |
|---|-----------|---|-----|------|------|------|
| Collector to base voltage | V_{CBO} | $I_C = 100\mu A, I_E = 0$ | 30 | | | V |
| Emitter to base voltage | V_{EBO} | $I_E = 10\mu A, I_C = 0$ | 3 | | | V |
| Forward current transfer ratio | h_{FE} | $V_{CB} = 10V, I_E = -2mA$ | 25 | | 250 | |
| Base to emitter voltage | V_{BE} | $V_{CB} = 10V, I_E = -2mA$ | | 720 | | mV |
| Common base reverse transfer capacitance | C_{rb} | $V_{CE} = 6V, I_C = 0, f = 1MHz$ | | 0.8 | | pF |
| Common emitter reverse transfer capacitance | C_{re} | $V_{CE} = 10V, I_C = 1mA, f = 10.7MHz$ | | 1 | 1.5 | pF |
| Transition frequency | f_T^* | $V_{CB} = 10V, I_E = -15mA, f = 200MHz$ | 600 | 1200 | 1600 | MHz |
| Power gain | PG | $V_{CB} = 10V, I_E = -1mA, f = 100MHz$ | | 17 | | dB |

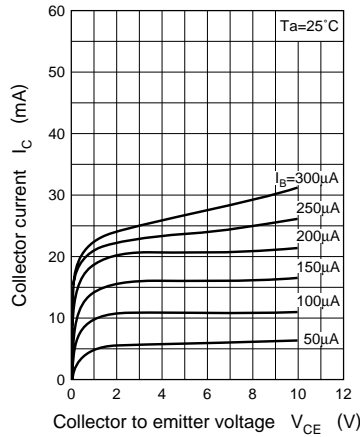
* h_{FE} Rank classification

| Rank | T | S |
|-------------|------------|------------|
| f_T (MHz) | 600 ~ 1300 | 900 ~ 1600 |

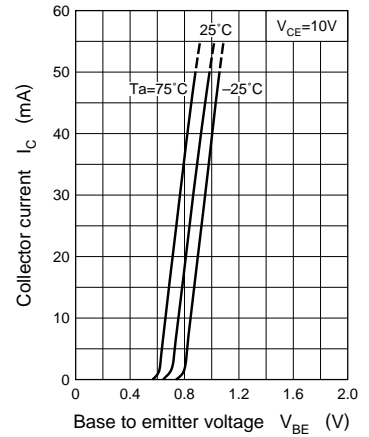
$P_C - T_a$



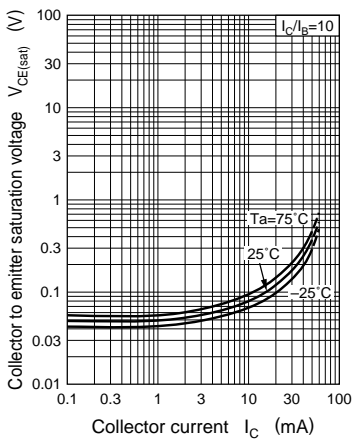
$I_C - V_{CE}$



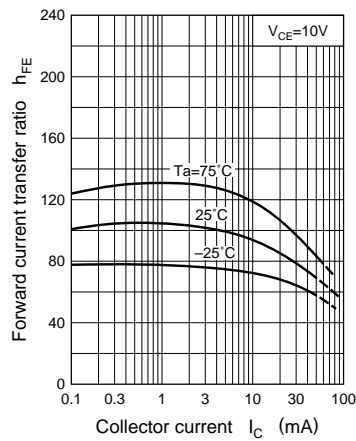
$I_C - V_{BE}$



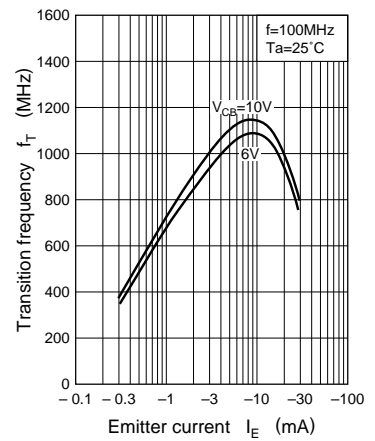
$V_{CE(sat)} - I_C$



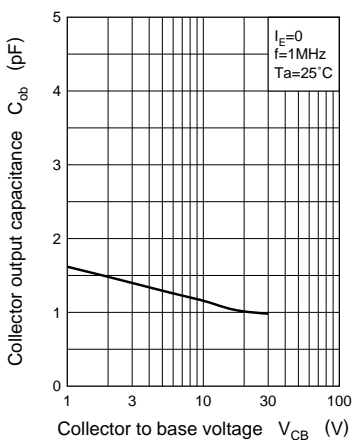
$h_{FE} - I_C$



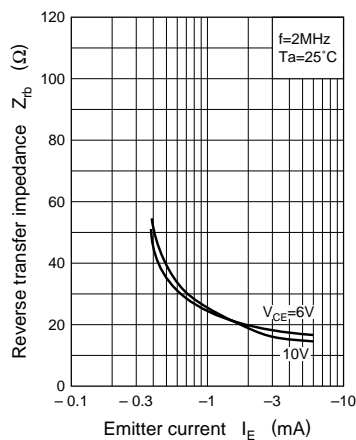
$f_T - I_E$



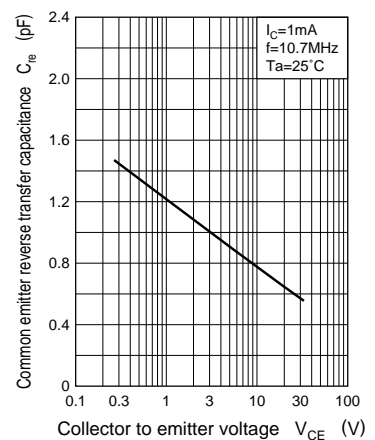
$C_{ob} - V_{CB}$



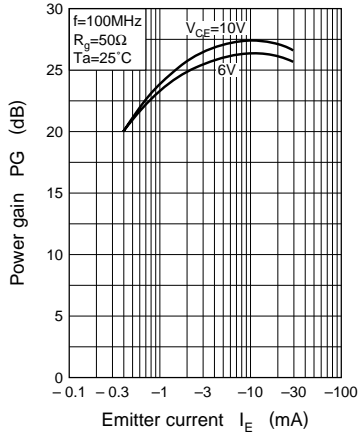
$Z_{rb} - I_E$



$C_{re} - V_{CE}$



PG — I_E



NF — I_E

