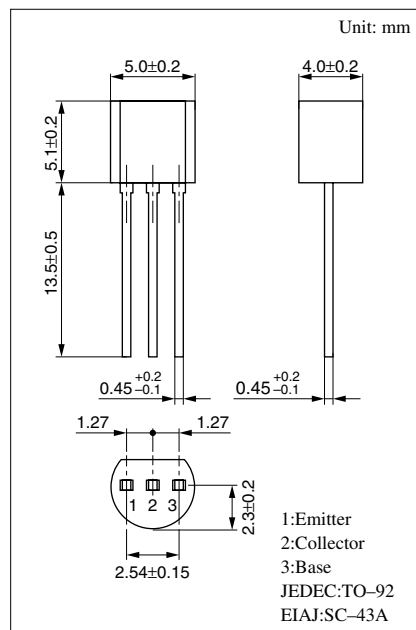


## Silicon NPN epitaxial planer type

For stroboscope

- Low collector to emitter saturation voltage  $V_{CE(sat)}$ .
- Satisfactory operation performances at high efficiency with the low-voltage power supply.

| Parameter                    | Symbol    | Ratings    | Unit |
|------------------------------|-----------|------------|------|
| Collector to base voltage    | $V_{CBO}$ | 40         | V    |
| Collector to emitter voltage | $V_{CEO}$ | 20         | V    |
| Emitter to base voltage      | $V_{EBO}$ | 7          | V    |
| Peak collector current       | $I_{CP}$  | 8          | A    |
| Collector current            | $I_C$     | 5          | A    |
| Collector power dissipation  | $P_C$     | 0.75       | W    |
| Junction temperature         | $T_j$     | 150        | °C   |
| Storage temperature          | $T_{stg}$ | -55 ~ +150 | °C   |

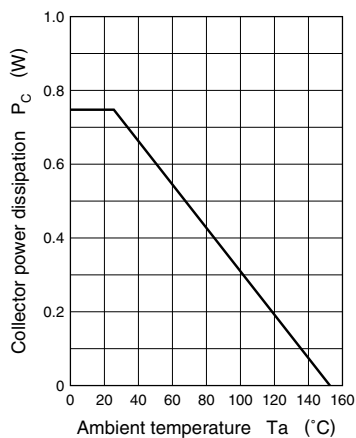
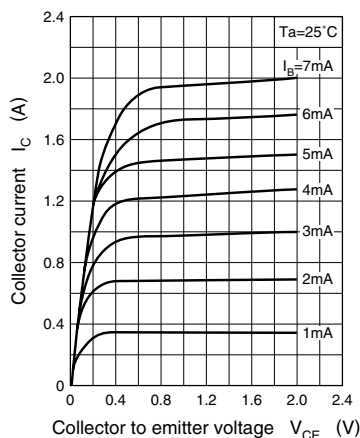
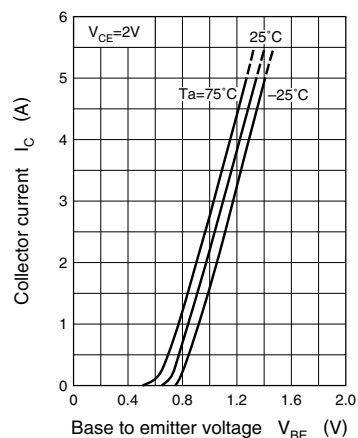
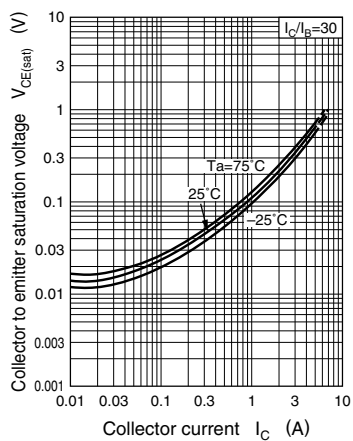
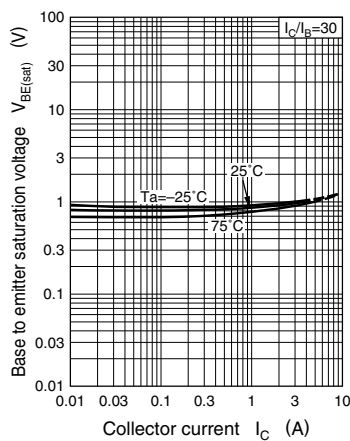
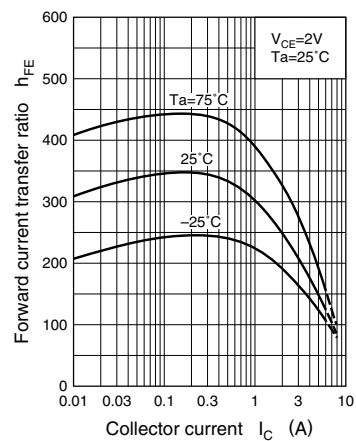
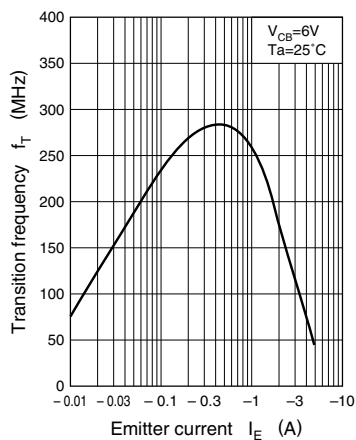
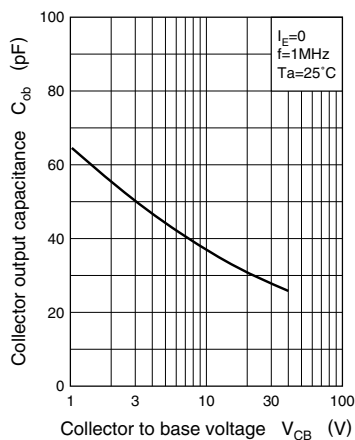


| Parameter                               | Symbol         | Conditions                             | min | typ | max | Unit    |
|-----------------------------------------|----------------|----------------------------------------|-----|-----|-----|---------|
| Collector cutoff current                | $I_{CBO}$      | $V_{CB} = 10V, I_E = 0$                |     |     | 0.1 | $\mu A$ |
|                                         | $I_{CEO}$      | $V_{CE} = 10V, I_B = 0$                |     |     | 1.0 | $\mu A$ |
| Emitter cutoff current                  | $I_{EBO}$      | $V_{EB} = 7V, I_C = 0$                 |     |     | 0.1 | $\mu A$ |
| Collector to emitter voltage            | $V_{CEO}$      | $I_C = 1mA, I_B = 0$                   | 20  |     |     | V       |
| Emitter to base voltage                 | $V_{EBO}$      | $I_E = 10\mu A, I_C = 0$               | 7   |     |     | V       |
| Forward current transfer ratio          | $h_{FE1}^{*1}$ | $V_{CE} = 2V, I_C = 0.5A^{*2}$         | 230 |     | 600 |         |
|                                         | $h_{FE2}$      | $V_{CE} = 2V, I_C = 2A^{*2}$           | 150 |     |     |         |
| Collector to emitter saturation voltage | $V_{CE(sat)}$  | $I_C = 3A, I_B = 0.1A^{*2}$            |     |     | 1   | V       |
| Transition frequency                    | $f_T$          | $V_{CB} = 6V, I_E = -50mA, f = 200MHz$ |     | 150 |     | MHz     |
| Collector output capacitance            | $C_{ob}$       | $V_{CB} = 20V, I_E = 0, f = 1MHz$      |     |     | 50  | pF      |

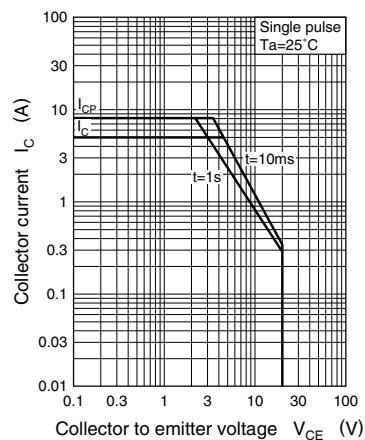
\*2 Pulse measurement

| Rank      | Q         | R         |
|-----------|-----------|-----------|
| $h_{FEI}$ | 230 ~ 380 | 340 ~ 600 |

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

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

Area of safe operation (ASO)



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