

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

2SC3279

Strobe Flash Applications
Medium Power Amplifier Applications

- High DC current gain and excellent h_{FE} linearity
: $h_{FE} (1) = 140\sim 600$ ($V_{CE} = 1\text{ V}$, $I_C = 0.5\text{ A}$)
: $h_{FE} (2) = 70$ (min), 200 (typ.) ($V_{CE} = 1\text{ V}$, $I_C = 2\text{ A}$)
- Low saturation voltage: $V_{CE} (sat) = 0.5\text{ V}$ (max)
($I_C = 2\text{ A}$, $I_B = 50\text{ mA}$)

Maximum Ratings ($T_a = 25^\circ\text{C}$)

| Characteristics | | Symbol | Rating | Unit |
|-----------------------------|--------------------|-----------|---------|------------------|
| Collector-base voltage | | V_{CBO} | 30 | V |
| Collector-emitter voltage | | V_{CES} | 30 | V |
| | | V_{CEO} | 10 | |
| Emitter-base voltage | | V_{EBO} | 6 | V |
| Collector current | DC | I_C | 2 | A |
| | Pulsed (Note 1) | I_{CP} | 5 | |
| Base current | | I_B | 0.2 | A |
| Collector power dissipation | | P_C | 750 | mW |
| Junction temperature | | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature range | | T_{stg} | -55~150 | $^\circ\text{C}$ |

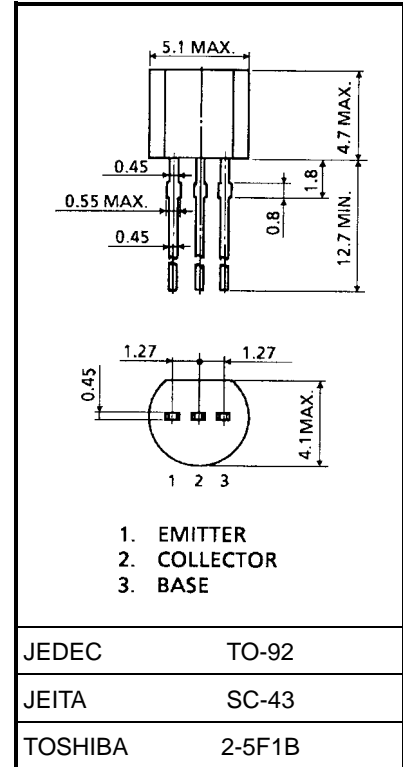
Note 1: Pulse width = 10 ms (max), duty cycle = 30% (max)

Electrical Characteristics ($T_a = 25^\circ\text{C}$)

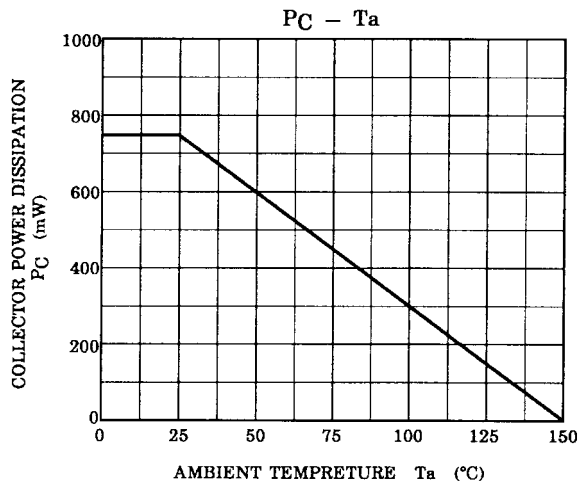
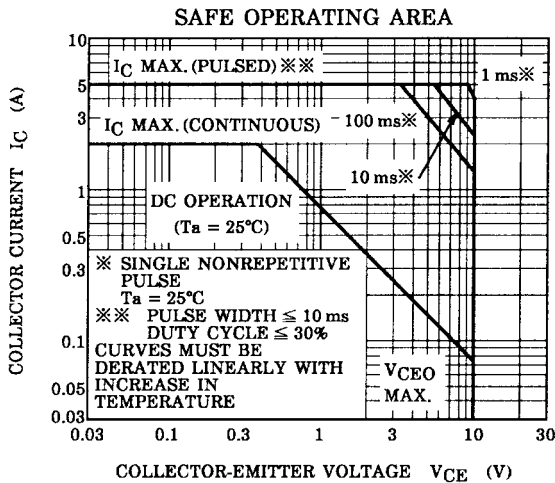
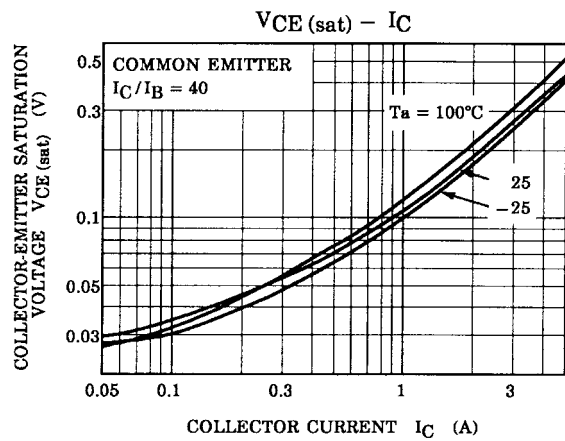
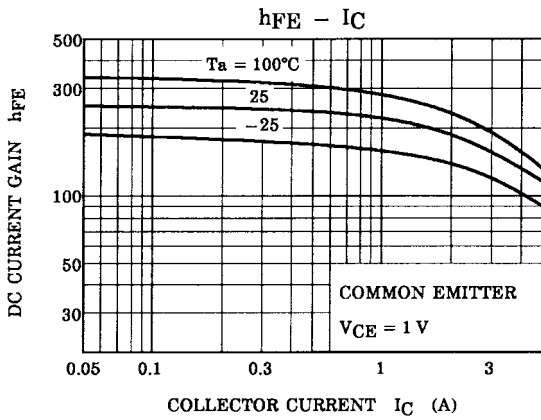
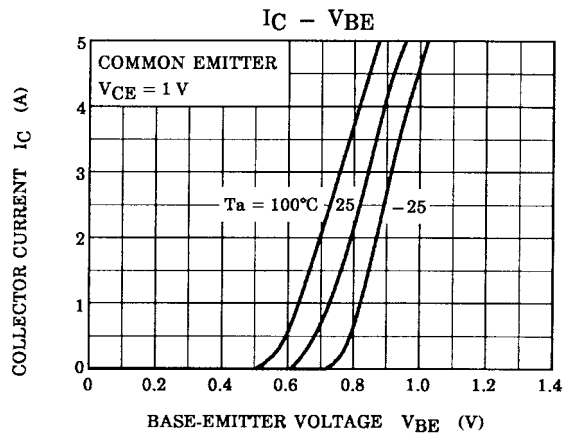
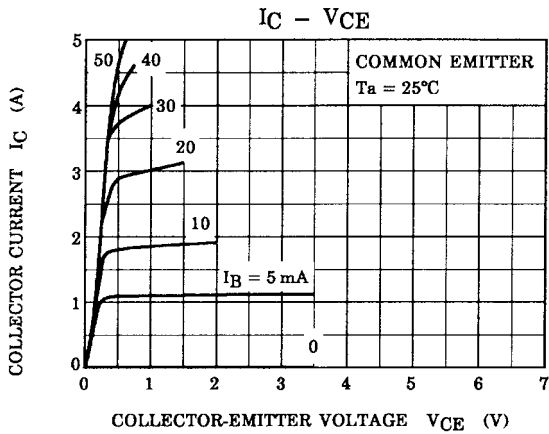
| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|--------------------------------------|--------------------------|---|-----|------|-----|---------------|
| Collector cut-off current | I_{CBO} | $V_{CB} = 30\text{ V}$, $I_E = 0$ | — | — | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = 6\text{ V}$, $I_C = 0$ | — | — | 0.1 | μA |
| Collector-emitter breakdown voltage | $V_{(BR) CEO}$ | $I_C = 10\text{ mA}$, $I_B = 0$ | 10 | — | — | V |
| Emitter-base breakdown voltage | $V_{(BR) EBO}$ | $I_E = 1\text{ mA}$, $I_C = 0$ | 6 | — | — | V |
| DC current gain | $h_{FE} (1)$ (Note 2) | $V_{CE} = 1\text{ V}$, $I_C = 0.5\text{ A}$ | 140 | — | 600 | |
| | $h_{FE} (2)$ | $V_{CE} = 1\text{ V}$, $I_C = 2\text{ A}$ | 70 | 200 | — | |
| Collector-emitter saturation voltage | $V_{CE} (sat)$ | $I_C = 2\text{ A}$, $I_B = 50\text{ mA}$ | — | 0.2 | 0.5 | V |
| Base-emitter voltage | V_{BE} | $V_{CE} = 1\text{ V}$, $I_C = 2\text{ A}$ | — | 0.86 | 1.5 | V |
| Transition frequency | f_T | $V_{CE} = 1\text{ V}$, $I_C = 0.5\text{ A}$ | — | 150 | — | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$ | — | 27 | — | pF |

Note 2: $h_{FE} (1)$ classification L: 140~240, M: 200~330, N: 300~450, P: 420~600

Unit: mm



Weight: 0.21 g (typ.)



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