

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

2SC2983

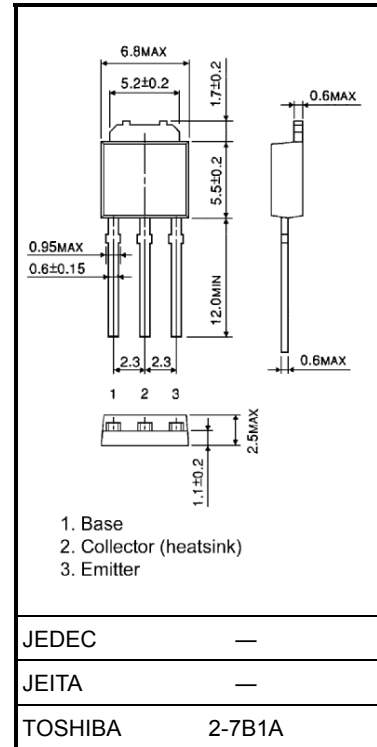
Power Amplifier Applications
 Driver Stage Amplifier Applications

- High transition frequency: $f_T = 100 \text{ MHz (typ.)}$
- Complementary to 2SA1225

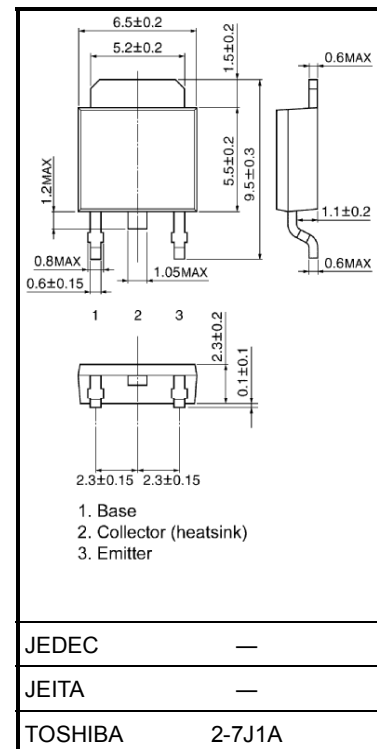
Maximum Ratings (Ta = 25°C)

| Characteristics | Symbol | Rating | Unit |
|-----------------------------|--------------------------|------------|------|
| Collector-base voltage | V_{CB0} | 160 | V |
| Collector-emitter voltage | V_{CEO} | 160 | V |
| Emitter-base voltage | V_{EBO} | 5 | V |
| Collector current | I_C | 1.5 | A |
| Base current | I_B | 0.3 | A |
| Collector power dissipation | $T_a = 25^\circ\text{C}$ | 1.0 | W |
| | $T_c = 25^\circ\text{C}$ | 15 | |
| Junction temperature | T_j | 150 | °C |
| Storage temperature range | T_{stg} | -55 to 150 | °C |

Unit: mm



Weight: 0.36 g (typ.)



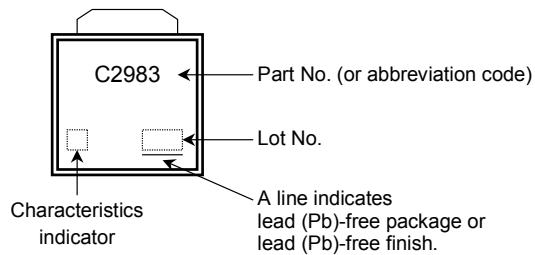
Weight: 0.36 g (typ.)

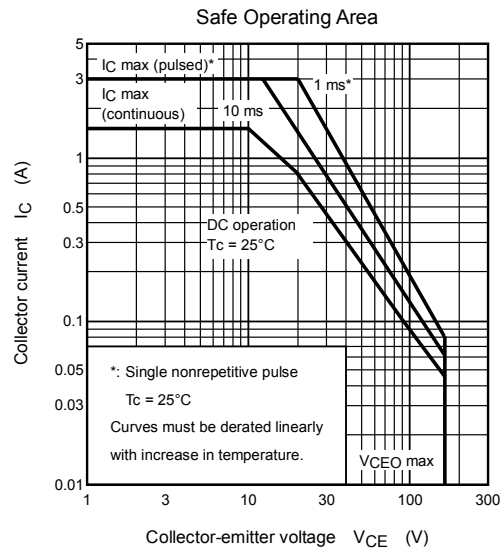
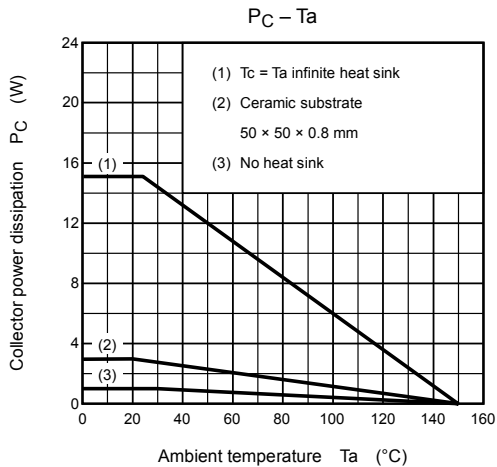
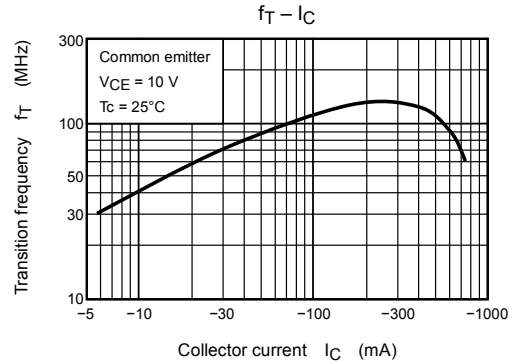
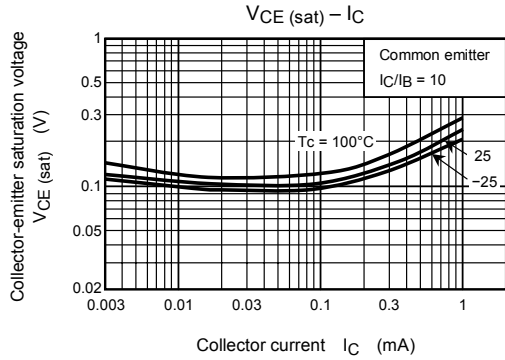
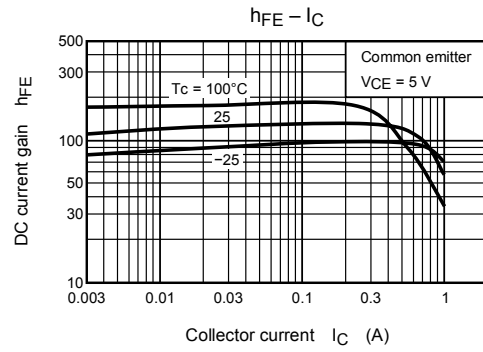
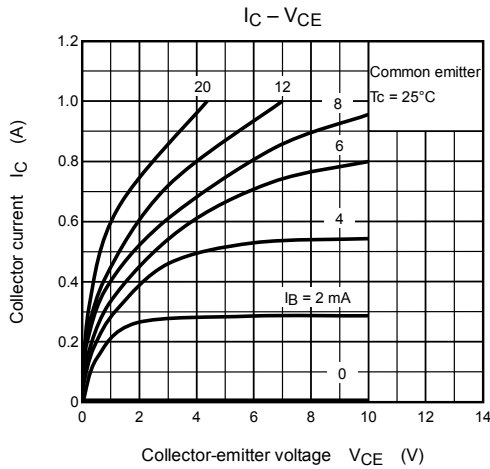
Electrical Characteristics (Ta = 25°C)

| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|--------------------------------------|--------------------|---|-----|------|-----|---------------|
| Collector cut-off current | I_{CBO} | $V_{CB} = 160\text{ V}, I_E = 0$ | — | — | 1.0 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = 5\text{ V}, I_C = 0$ | — | — | 1.0 | μA |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = 10\text{ A}, I_B = 0$ | 160 | — | — | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E = 1\text{ mA}, I_C = 0$ | 5 | — | — | V |
| DC current gain | h_{FE} (Note) | $V_{CE} = 5\text{ V}, I_C = 100\text{ mA}$ | 70 | — | 240 | |
| Collector emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 500\text{ mA}, I_B = 50\text{ mA}$ | — | — | 1.5 | V |
| Base-emitter voltage | V_{BE} | $V_{CE} = 5\text{ V}, I_C = 500\text{ mA}$ | — | — | 1.0 | V |
| Transition frequency | f_T | $V_{CE} = 10\text{ V}, I_C = 100\text{ mA}$ | — | 100 | — | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$ | — | 25 | — | pF |

Note: h_{FE} classification O: 70 to 140, Y: 120 to 240

Marking





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