

TOSHIBA Transistor Silicon PNP Triple Diffused Type

2SA949

Driver-Stage Audio Amplifier Applications

High-Voltage Switching Applications

- High breakdown voltage: $V_{CE0} = -150\text{ V}$
- Low output capacitance: $C_{ob} = 4.0\text{ pF (typ.)}$
- High transition frequency: $f_T = 120\text{ MHz (typ.)}$

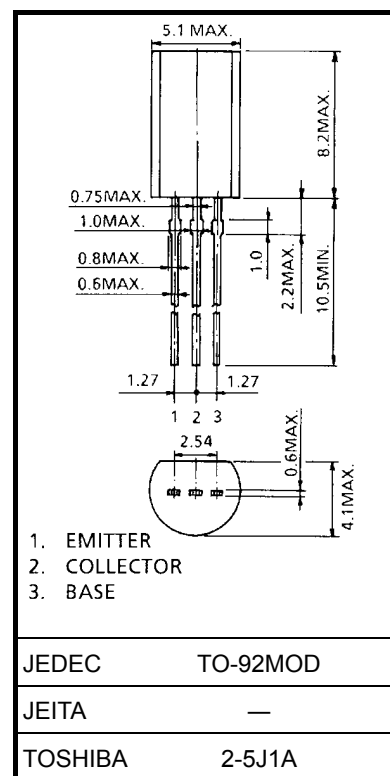
Absolute Maximum Ratings (Ta = 25°C)

| Characteristics | Symbol | Rating | Unit |
|-----------------------------|-----------|------------|------|
| Collector-base voltage | V_{CBO} | -150 | V |
| Collector-emitter voltage | V_{CEO} | -150 | V |
| Emitter-base voltage | V_{EBO} | -5 | V |
| Collector current | I_C | -50 | mA |
| Base current | I_B | 5 | mA |
| Collector power dissipation | P_C | 800 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature range | T_{stg} | -55 to 150 | °C |

Note1: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Unit: mm



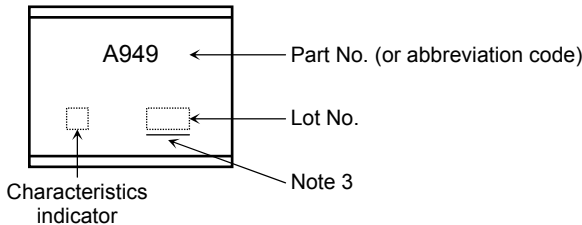
Weight: 0.36 g (typ.)

Electrical Characteristics (Ta = 25°C)

| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|--------------------------------------|-----------------------------|--|-----|------|------|------|
| Collector cut-off current | ICBO | V _{CB} = -150 V, I _E = 0 | — | — | -0.1 | μA |
| Emitter cut-off current | IEBO | V _{EB} = -5 V, I _C = 0 | — | — | -0.1 | μA |
| DC current gain | h _{FE} (Note 2) | V _{CE} = -5 V, I _C = -10 mA | 70 | — | 240 | |
| Collector-emitter saturation voltage | V _{CE (sat)} | I _C = -10 mA, I _B = -1 mA | — | — | -0.8 | V |
| Base-emitter voltage | V _{BE} | V _{CE} = -5 V, I _C = -30 mA | — | — | -0.9 | V |
| Transition frequency | f _T | V _{CE} = -30 V, I _C = -10 mA | — | 120 | — | MHz |
| Collector output capacitance | C _{ob} | V _{CB} = -10 V, I _E = 0, f = 1 MHz | — | 4.0 | 5.0 | pF |

Note 2: h_{FE} classification O: 70 to 140, Y: 120 to 240

Marking

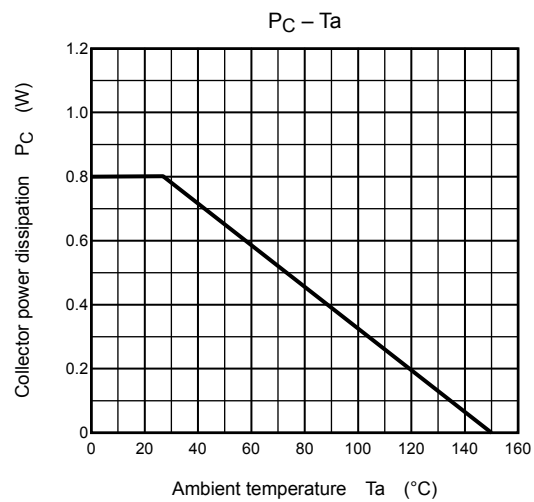
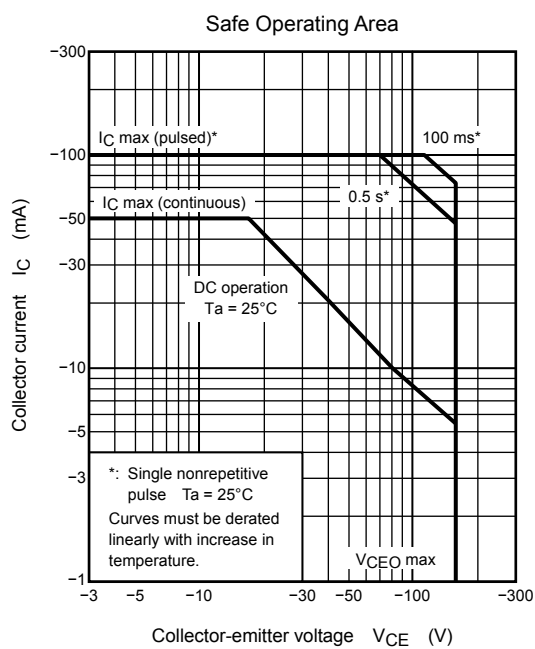
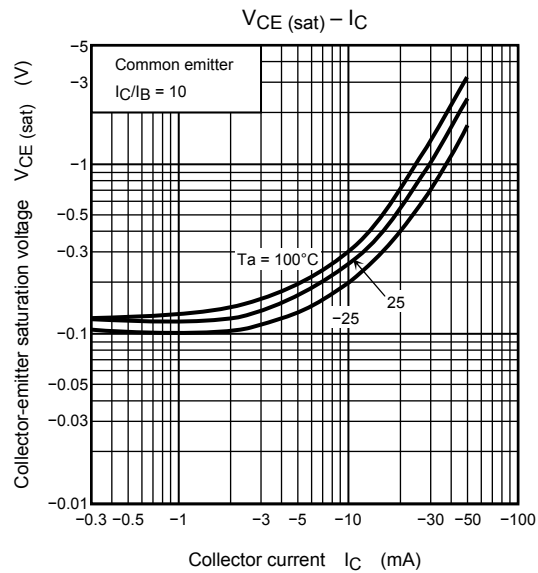
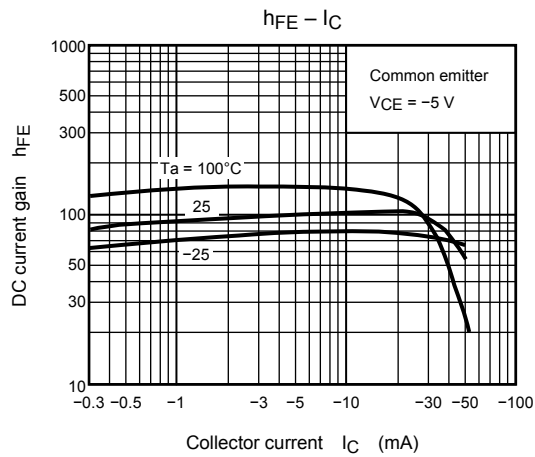
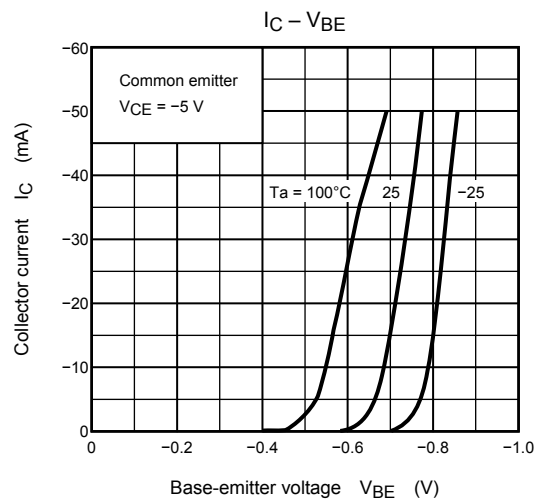
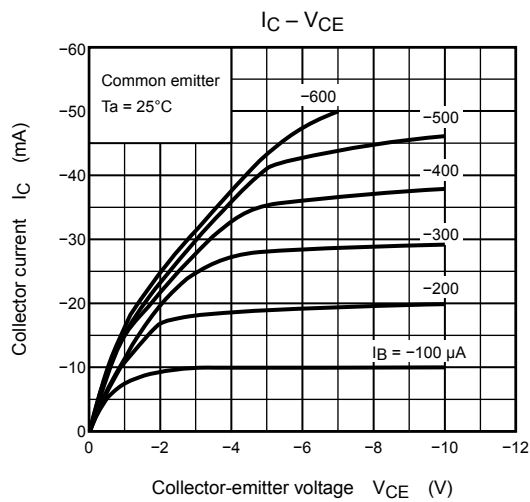


Note 3: A line under a Lot No. identifies the indication of product Labels.

Not underlined: [[Pb]]/INCLUDES > MCV

Underlined: [[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

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