

TOSHIBA Transistor Silicon NPN Triple Diffused Type

2SC5548A

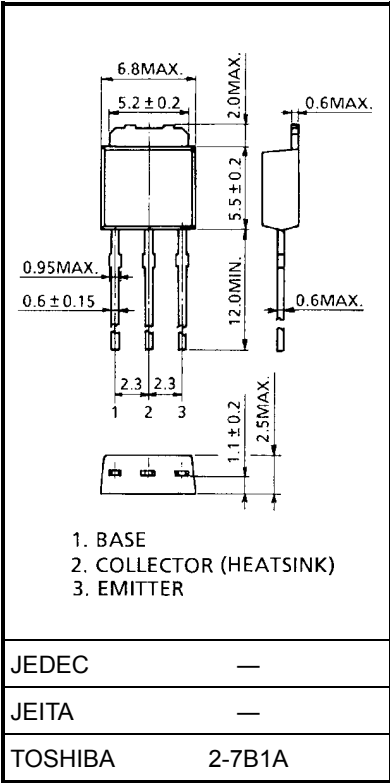
High Voltage Switching Applications
Switching Regulator Applications
DC-DC Converter Applications

- High speed switching: $t_r = 0.5 \mu s$ (max), $t_f = 0.3 \mu s$ (max) ($I_C = 0.8 A$)
- High collector breakdown voltage: $V_{CEO} = 400 V$
- High DC current gain: $h_{FE} = 40$ (min) ($I_C = 0.2 A$)

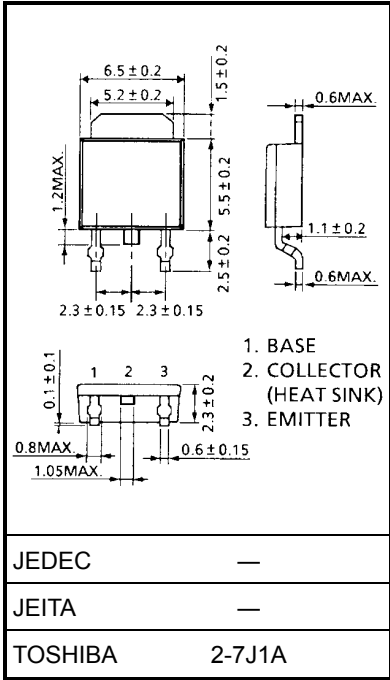
Maximum Ratings (Ta = 25°C)

| Characteristics | | Symbol | Rating | Unit |
|-----------------------------|-----------|-----------|------------|------|
| Collector-base voltage | | V_{CBO} | 600 | V |
| Collector-emitter voltage | | V_{CEO} | 400 | V |
| Emitter-base voltage | | V_{EBO} | 7 | V |
| Collector current | DC | I_C | 2 | A |
| | Pulse | I_{CP} | 4 | |
| Base current | | I_B | 0.5 | A |
| Collector power dissipation | Ta = 25°C | P_C | 1.0 | W |
| | Tc = 25°C | | 15 | |
| Junction temperature | | T_j | 150 | °C |
| Storage temperature range | | T_{stg} | -55 to 150 | °C |

Unit: mm

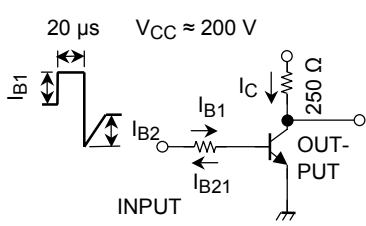


Weight: 0.36 g (typ.)

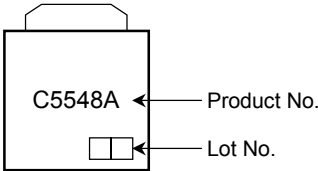


Weight: 0.36 g (typ.)

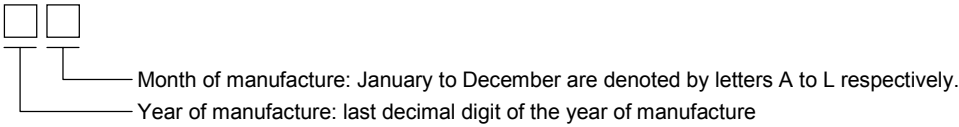
Electrical Characteristics (Ta = 25°C)

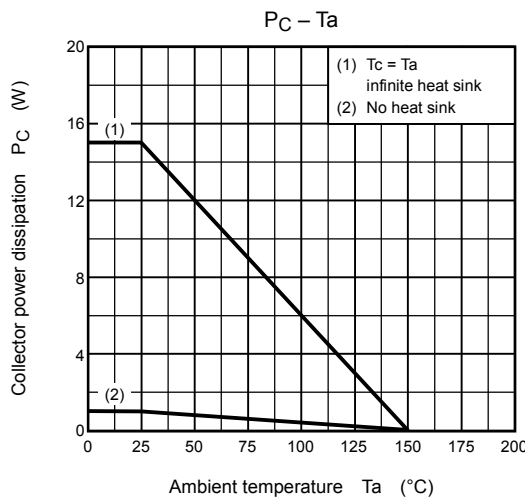
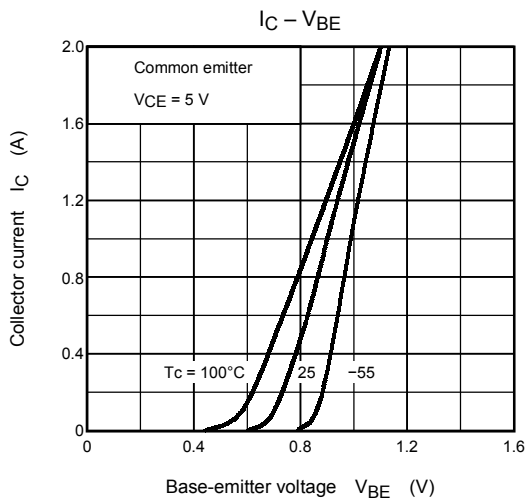
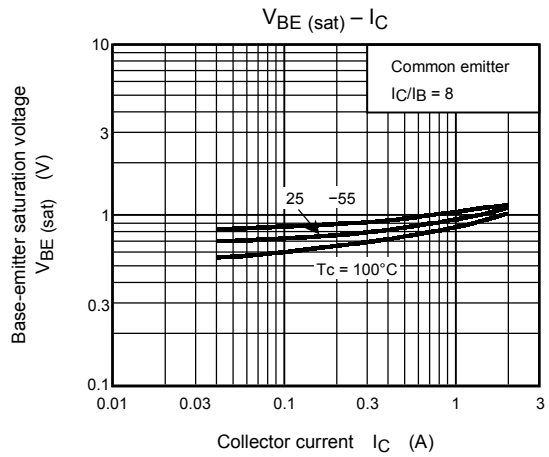
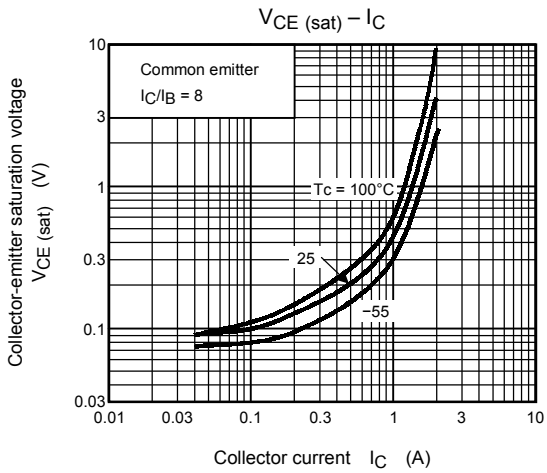
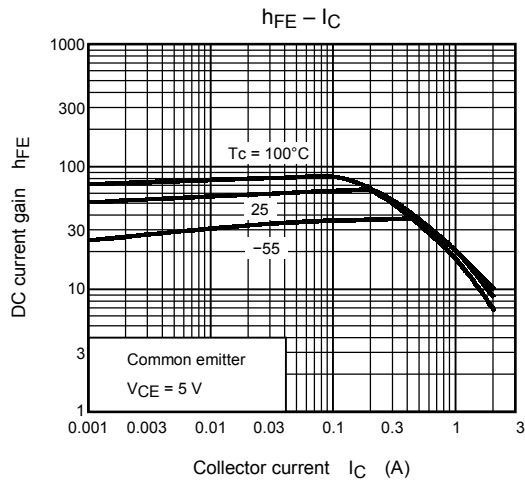
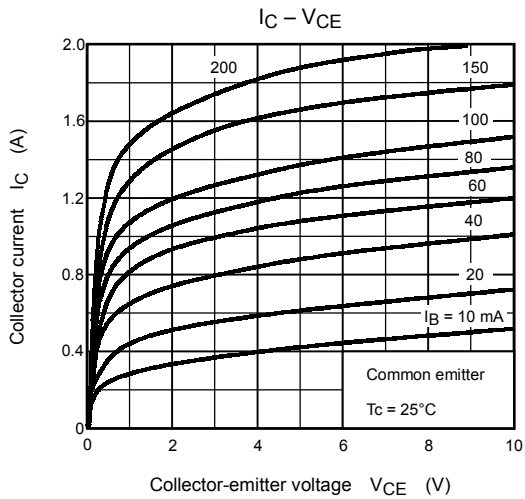
| Characteristics | | Symbol | Test Condition | Min | Typ. | Max | Unit |
|--------------------------------------|--------------|---------------|--|-----|------|-----|---------------|
| Collector cut-off current | | I_{CBO} | $V_{CB} = 480\text{ V}, I_E = 0$ | — | — | 20 | μA |
| Emitter cut-off current | | I_{EBO} | $V_{EB} = 7\text{ V}, I_C = 0$ | — | — | 10 | μA |
| Collector-base breakdown voltage | | $V_{(BR)CBO}$ | $I_C = 1\text{ mA}, I_E = 0$ | 600 | — | — | V |
| Collector-emitter breakdown voltage | | $V_{(BR)CEO}$ | $I_C = 10\text{ mA}, I_B = 0$ | 400 | — | — | V |
| DC current gain | | $h_{FE(1)}$ | $V_{CE} = 5\text{ V}, I_C = 1\text{ mA}$ | 20 | — | — | |
| | | $h_{FE(2)}$ | $V_{CE} = 5\text{ V}, I_C = 0.2\text{ A}$ | 40 | — | 100 | |
| Collector emitter saturation voltage | | $V_{CE(sat)}$ | $I_C = 0.8\text{ A}, I_B = 0.1\text{ A}$ | — | — | 1.0 | V |
| Base-emitter saturation voltage | | $V_{BE(sat)}$ | $I_C = 0.8\text{ A}, I_B = 0.1\text{ A}$ | — | — | 1.3 | V |
| Switching time | Rise time | t_r |  $I_{B1} = 0.1\text{ A}, I_{B2} = -0.2\text{ A}$ DUTY CYCLE $\leq 1\%$ | — | — | 0.5 | μs |
| | Storage time | t_{stg} | | — | — | 3.0 | |
| | Fall time | t_f | | — | — | 0.3 | |

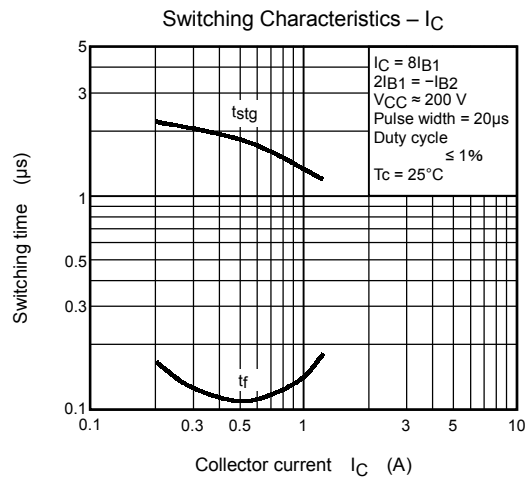
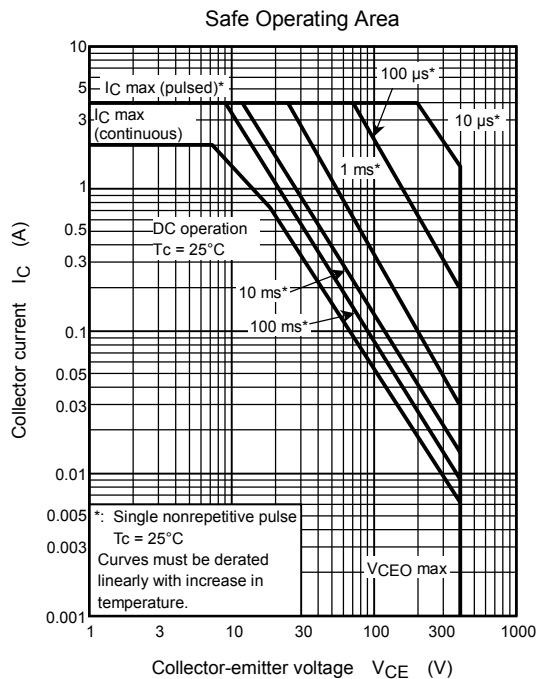
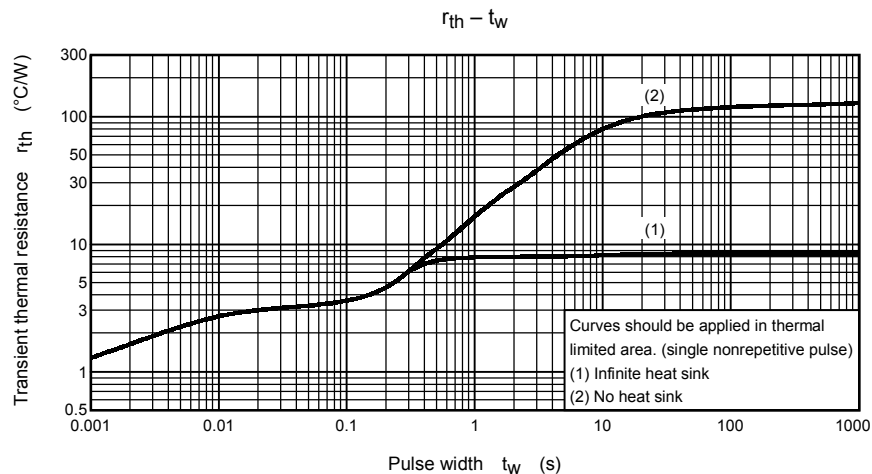
Marking



Explanation of Lot No.







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