

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

2SB908

Switching Applications

Hammer Drive, Pulse Motor Drive Applications

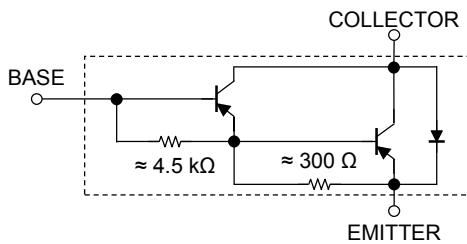
Power Amplifier Applications

- High DC current gain: $h_{FE(1)} = 2000$ (min) ($V_{CE} = -2$ V, $I_C = -1$ A)
- Low saturation voltage: $V_{CE(sat)} = -1.5$ V (max) ($I_C = -3$ A)
- Complementary to 2SD1223.

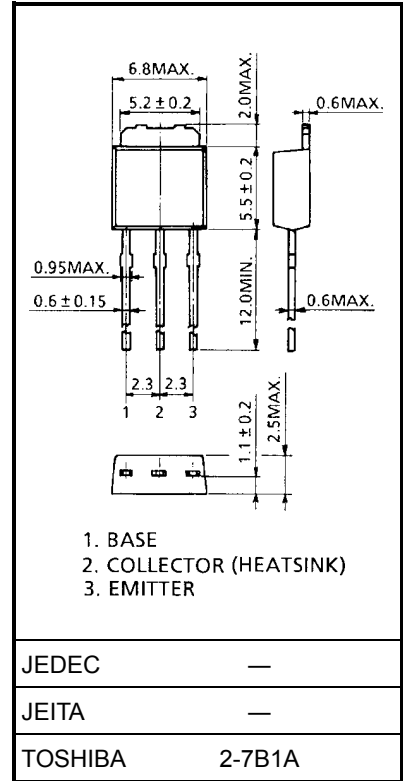
Maximum Ratings (Ta = 25°C)

| Characteristics | | Symbol | Rating | Unit |
|-----------------------------|-----------|-----------|------------|------|
| Collector-base voltage | | V_{CBO} | -100 | V |
| Collector-emitter voltage | | V_{CEO} | -80 | V |
| Emitter-base voltage | | V_{EBO} | -5 | V |
| Collector current | | I_C | -4 | A |
| Base current | | I_B | -0.4 | 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 |

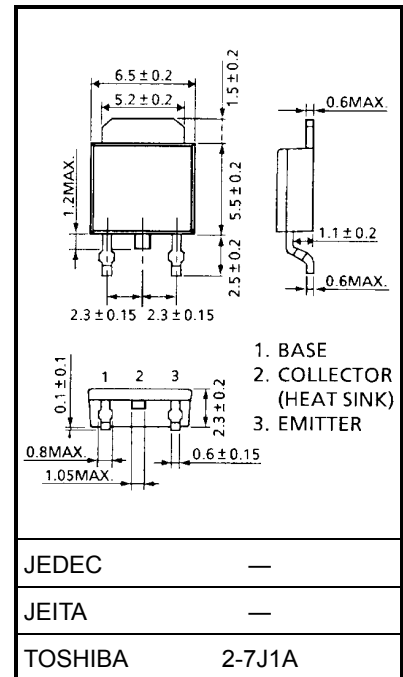
Equivalent Circuit



Unit: mm



Weight: 0.36 g (typ.)

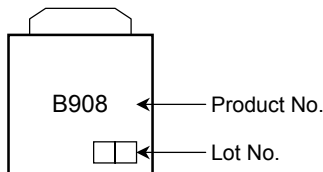


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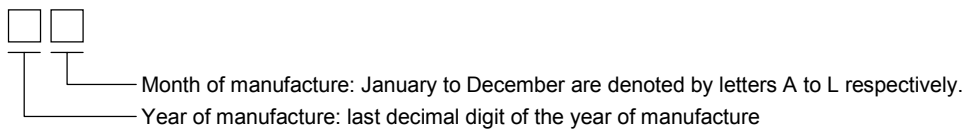
Electrical Characteristics (Ta = 25°C)

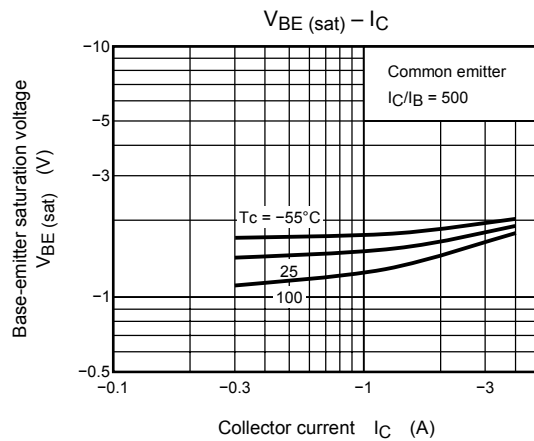
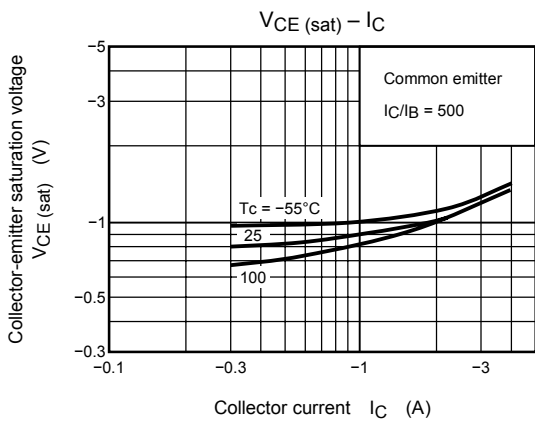
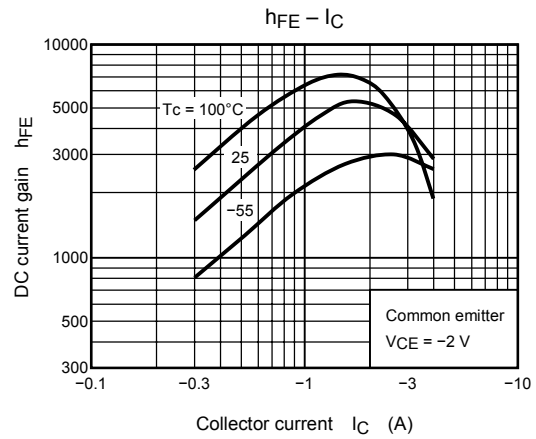
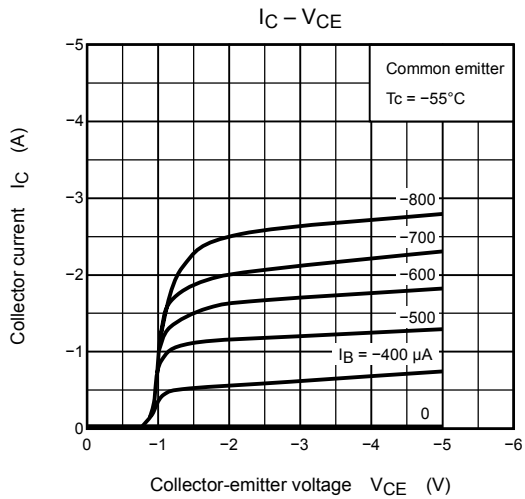
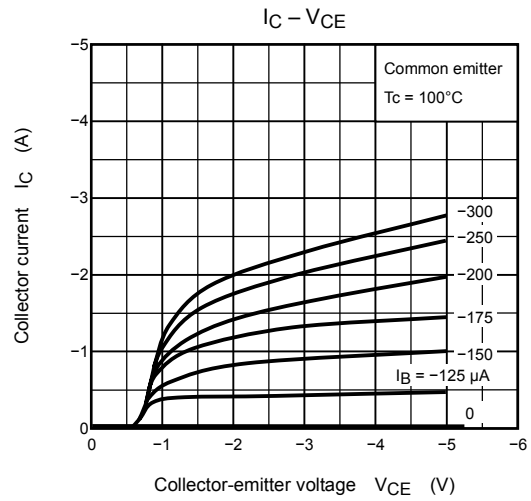
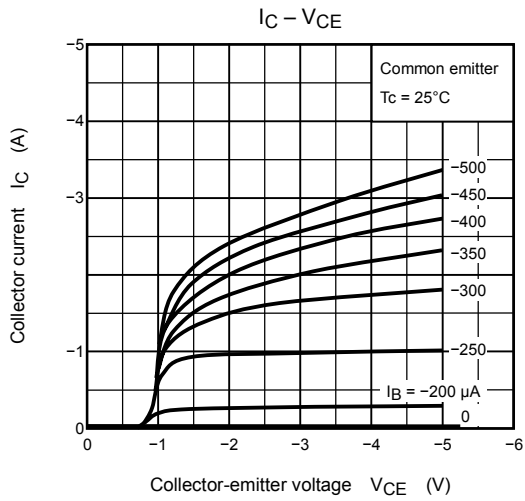
| Characteristics | | Symbol | Test Condition | Min | Typ. | Max | Unit |
|--------------------------------------|--------------|---------------|--|------|------|------|---------------|
| Collector cut-off current | | I_{CBO} | $V_{CB} = -100\text{ V}, I_E = 0$ | — | — | -20 | μA |
| Emitter cut-off current | | I_{EBO} | $V_{EB} = -5\text{ V}, I_C = 0$ | — | — | -2.5 | mA |
| Collector-emitter breakdown voltage | | $V_{(BR)CEO}$ | $I_C = -10\text{ mA}, I_B = 0$ | -80 | — | — | V |
| DC current gain | | $h_{FE(1)}$ | $V_{CE} = -2\text{ V}, I_C = -1\text{ A}$ | 2000 | — | — | |
| | | $h_{FE(2)}$ | $V_{CE} = -2\text{ V}, I_C = -3\text{ A}$ | 1000 | — | — | |
| Collector-emitter saturation voltage | | $V_{CE(sat)}$ | $I_C = -3\text{ A}, I_B = -6\text{ mA}$ | — | — | -1.5 | V |
| Base-emitter saturation voltage | | $V_{BE(sat)}$ | $I_C = -3\text{ A}, I_B = -6\text{ mA}$ | — | — | -2.0 | V |
| Switching time | Turn-on time | t_{on} | <p style="text-align: center;">$-I_{B1} = I_{B2} = 6\text{ mA}, \text{DUTY CYCLE} \leq 1\%$</p> | — | 0.15 | — | μs |
| | Storage time | t_{stg} | | — | 0.80 | — | |
| | Fall time | t_f | | — | — | 0.40 | |

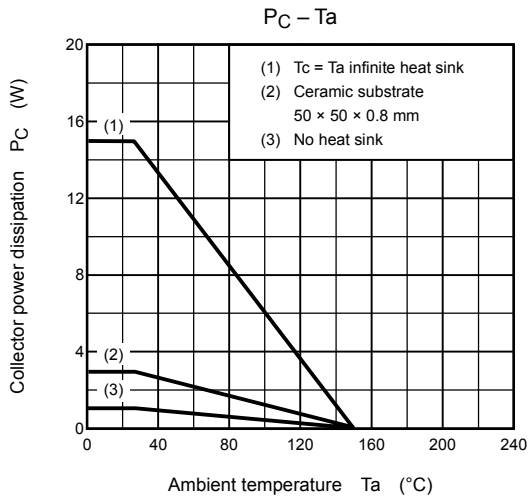
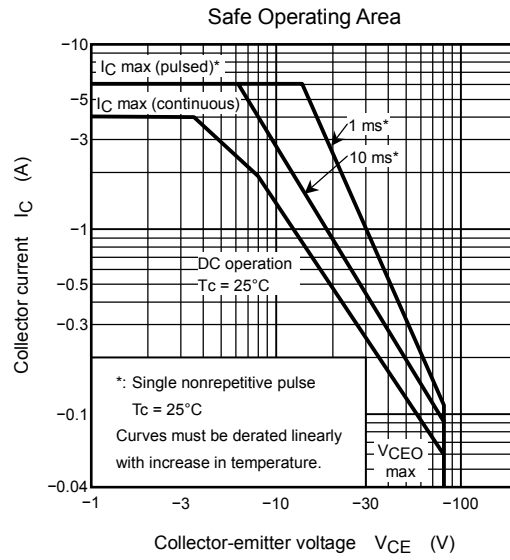
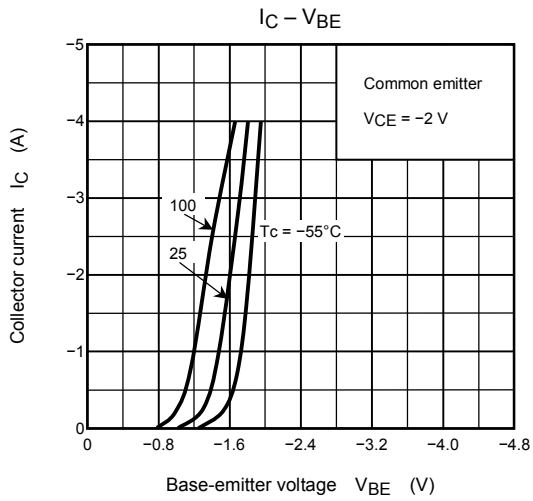
Marking



Explanation of Lot No.







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