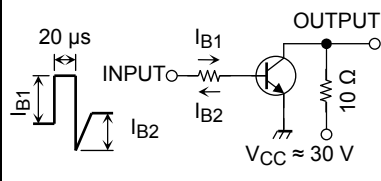
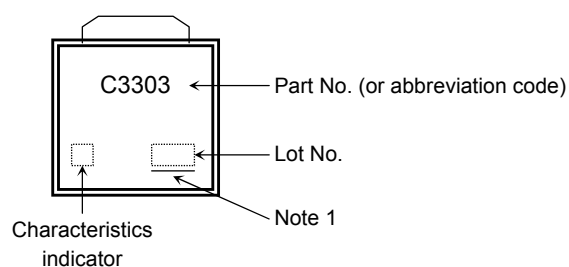


Electrical Characteristics (Ta = 25°C)

| Characteristics | | Symbol | Test Condition | Min | Typ. | Max | Unit |
|--------------------------------------|------------------------|----------------|--|-----|------|-----|---------------|
| Collector cut-off current | | I_{CBO} | $V_{CB} = 100\text{ V}, I_E = 0$ | — | — | 1 | μA |
| Emitter cut-off current | | I_{EBO} | $V_{EB} = 7\text{ V}, I_C = 0$ | — | — | 1 | μA |
| Collector-emitter breakdown voltage | | $V_{(BR) CEO}$ | $I_C = 10\text{ mA}, I_B = 0$ | 80 | — | — | V |
| DC current gain | $h_{FE (1)}$ (Note) | | $V_{CE} = 1\text{ V}, I_C = 1\text{ A}$ | 70 | — | 240 | |
| | $h_{FE (2)}$ | | $V_{CE} = 1\text{ V}, I_C = 3\text{ A}$ | 40 | — | — | |
| Collector-emitter saturation voltage | | $V_{CE (sat)}$ | $I_C = 3\text{ A}, I_B = 0.15\text{ A}$ | — | 0.2 | 0.4 | V |
| Base-emitter saturation voltage | | $V_{BE (sat)}$ | $I_C = 3\text{ A}, I_B = 0.15\text{ A}$ | — | 0.9 | 1.2 | V |
| Transition frequency | | f_T | $V_{CE} = 4\text{ V}, I_C = 1\text{ A}$ | — | 120 | — | MHz |
| Collector output capacitance | | C_{ob} | $V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$ | — | 80 | — | pF |
| Switching time | Turn-on time | t_{on} |  | — | 0.2 | — | μs |
| | Storage time | t_{stg} | | — | 1.0 | — | |
| | Fall time | t_f | | — | 0.1 | — | |

Note: $h_{FE (1)}$ classification O: 70 to 140, Y: 120 to 240

Marking

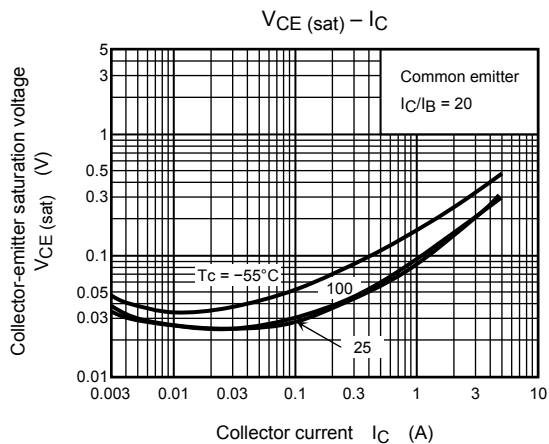
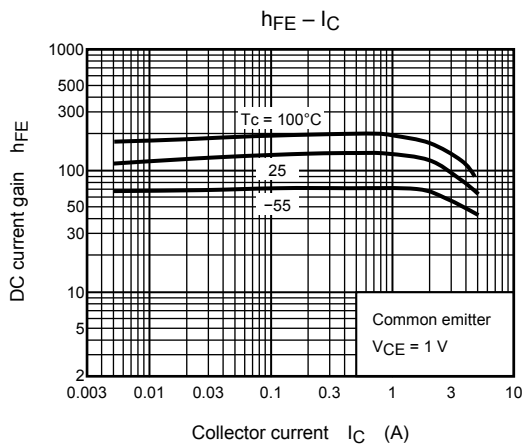
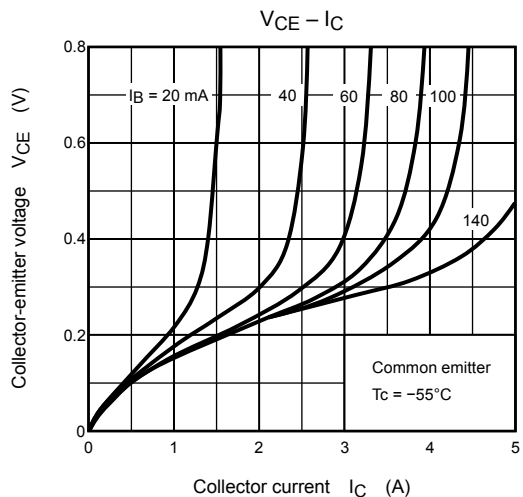
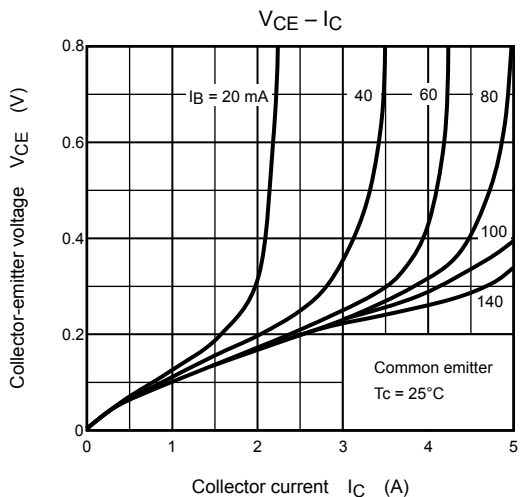
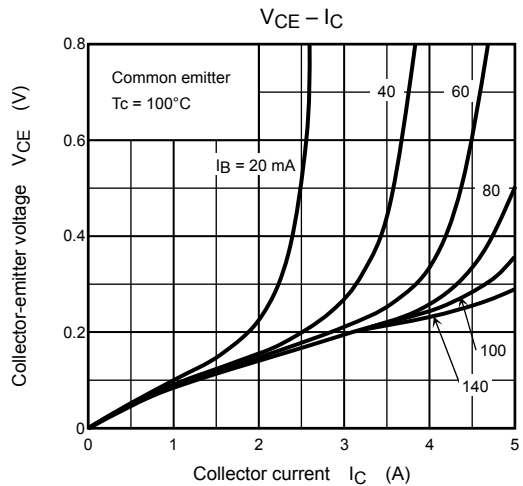
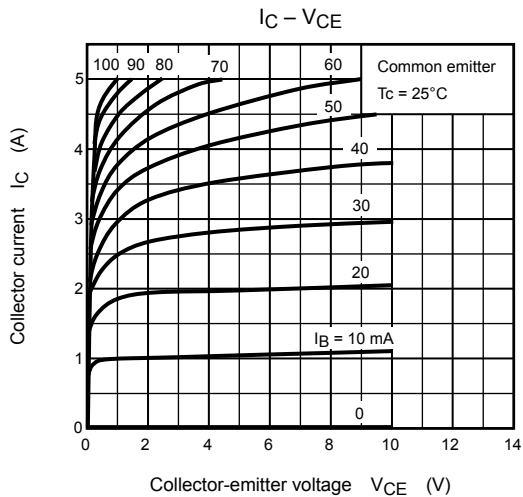


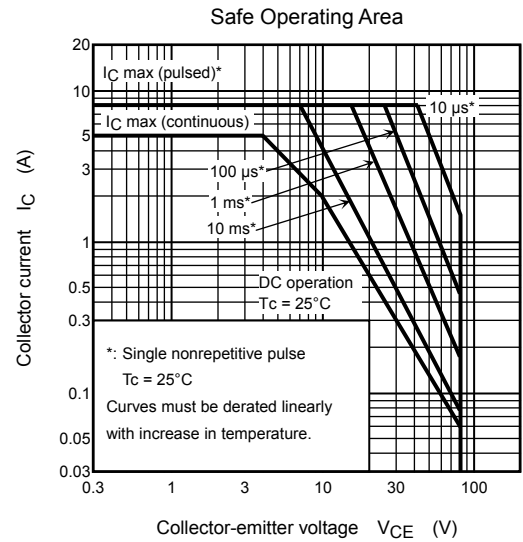
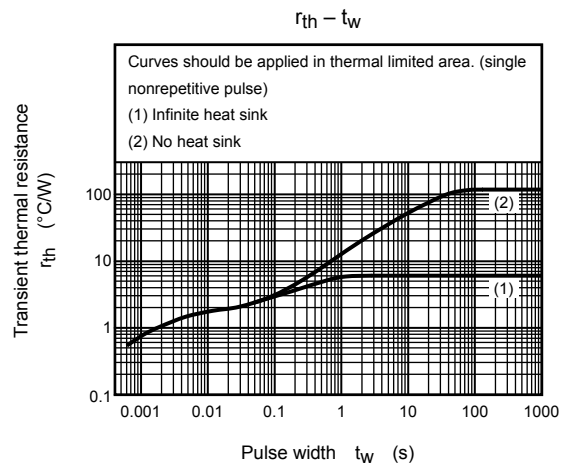
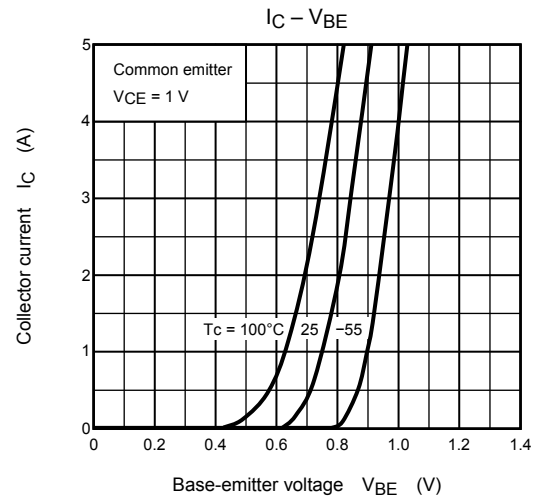
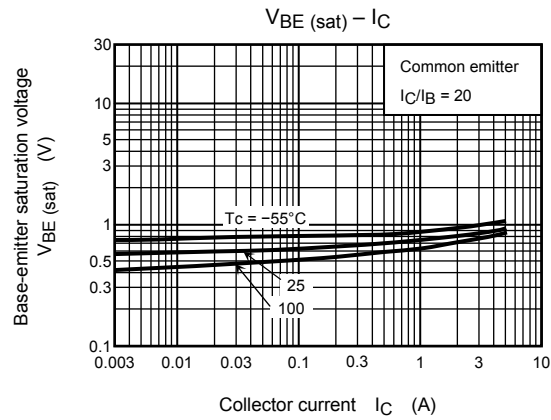
Note 1: A line under a Lot No. identifies the indication of product Labels.

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

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

Please contact your TOSHIBA sales representative for details as to environmental matters such as the RoHS compatibility of Product. The RoHS is the Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.





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