

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2SA1905

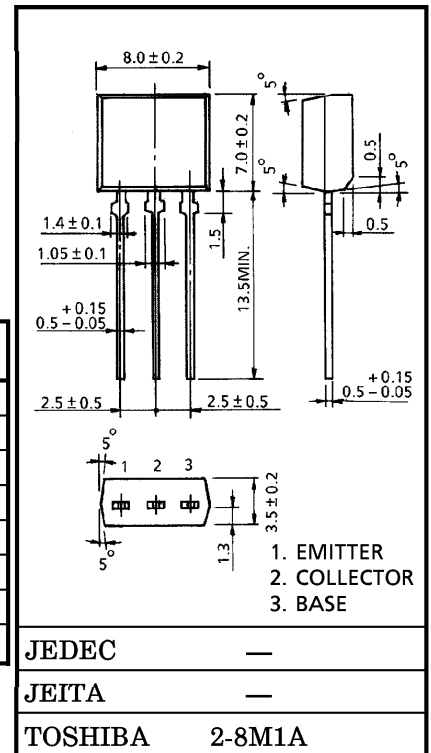
HIGH CURRENT SWITCHING APPLICATIONS

Unit in mm

- Low Collector Saturation Voltage
: $V_{CE(sat)} = -0.4V$ (Max.)
- High Speed Switching : $t_{stg} = 1.0\mu s$ (Typ.)
- Complementary to 2SC5076

MAXIMUM RATINGS ($T_a = 25^\circ C$)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|-----------|---------|------------|
| Collector-Base Voltage | V_{CBO} | -60 | V |
| Collector-Emitter Voltage | V_{CEO} | -50 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Collector Current | I_C | -5 | A |
| Base Current | I_B | -1 | A |
| Collector Power Dissipation | P_C | 1.3 | W |
| Junction Temperature | T_j | 150 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -55~150 | $^\circ C$ |

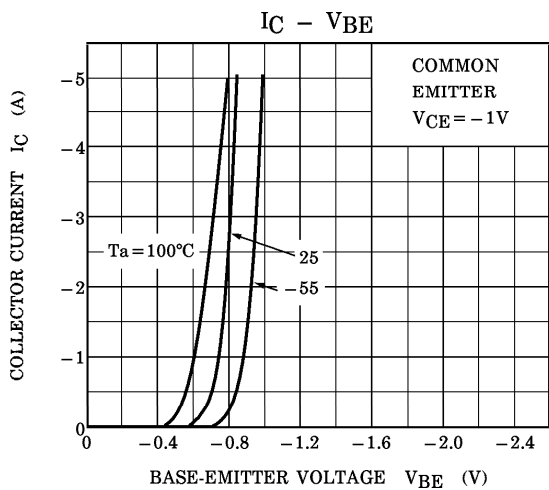
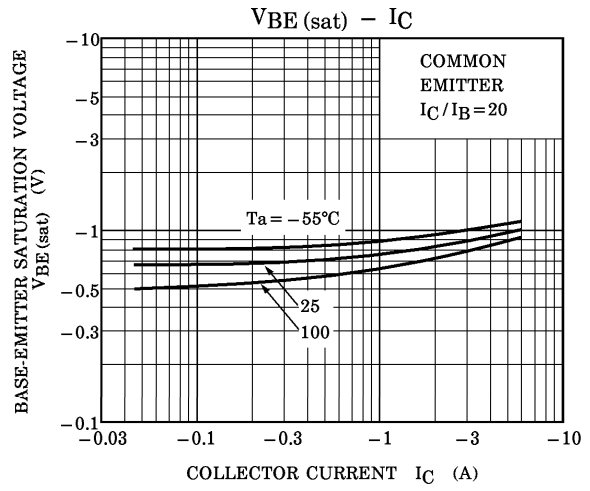
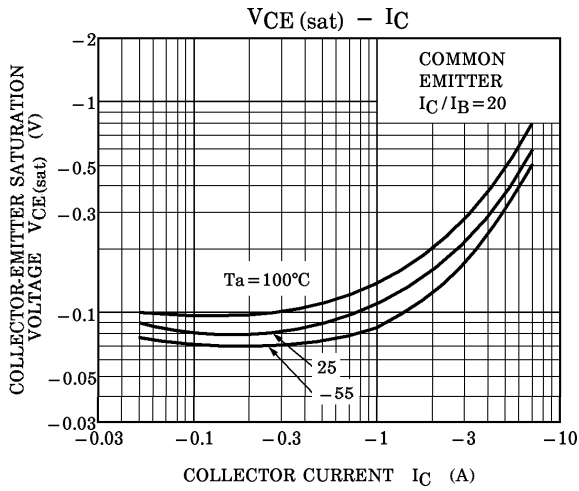
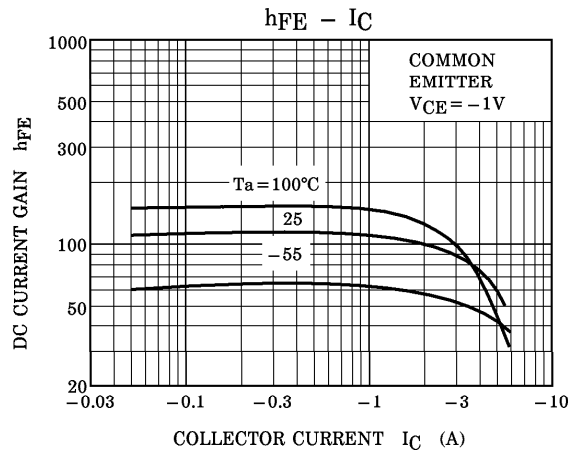
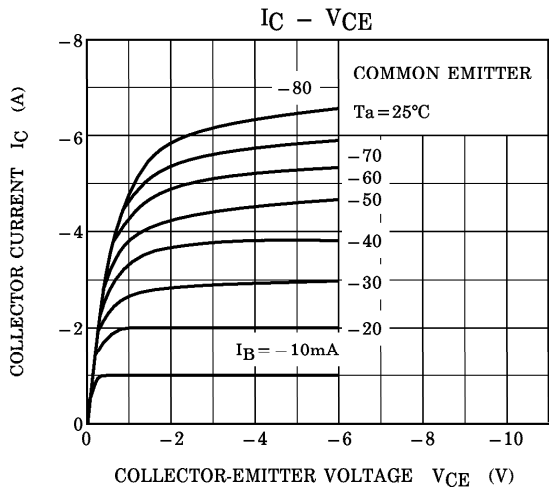


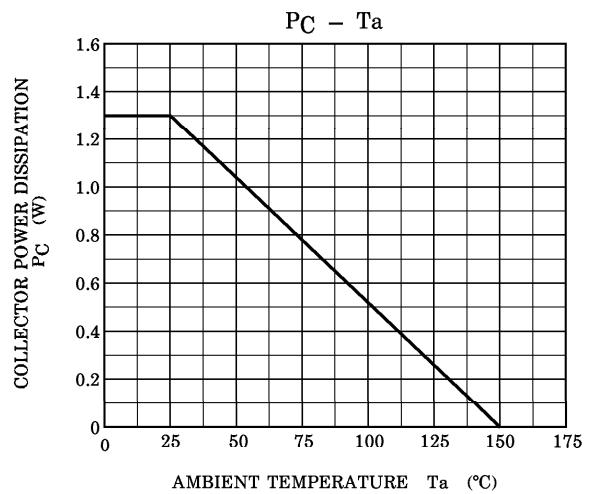
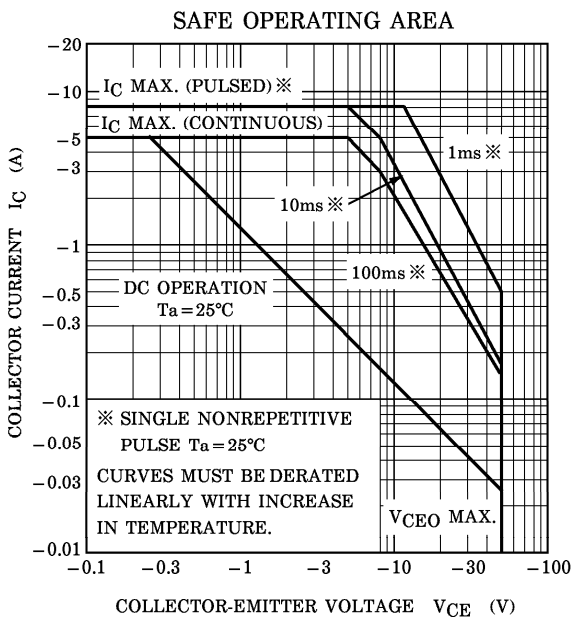
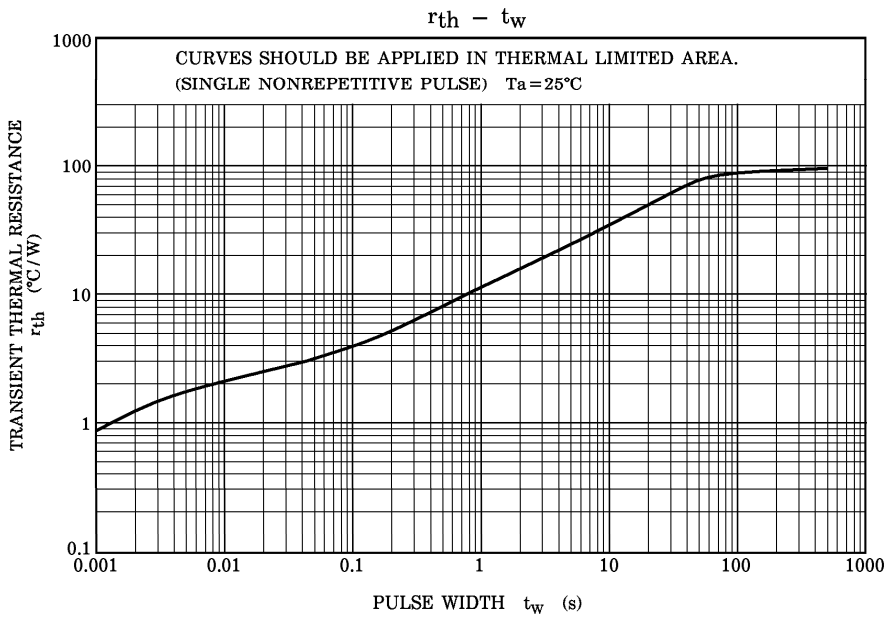
Weight : 0.55g (Typ.)

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|-------------------------------------|-------------------|--------------------|------------------------------------|------|------|------|---------|
| Collector Cut-off Current | | I_{CBO} | $V_{CB} = -50V, I_E = 0$ | — | — | -1 | μA |
| Emitter Cut-off Current | | I_{EBO} | $V_{EB} = -5V, I_C = 0$ | — | — | -1 | μA |
| Collector-Emitter Breakdown Voltage | | $V_{(BR)CEO}$ | $I_C = -10mA, I_B = 0$ | -50 | — | — | V |
| DC Current Gain | | $h_{FE(1)}$ (Note) | $V_{CE} = -1V, I_C = -1A$ | 70 | — | 240 | |
| | | $h_{FE(2)}$ | $V_{CE} = -1V, I_C = -3A$ | 30 | — | — | |
| Saturation Voltage | Collector-Emitter | $V_{CE(sat)}$ | $I_C = -3A, I_B = -0.15A$ | — | -0.2 | -0.4 | V |
| | Base-Emitter | $V_{BE(sat)}$ | $I_C = -3A, I_B = -0.15A$ | — | -0.9 | -1.2 | |
| Transition Frequency | | f_T | $V_{CE} = -4V, I_C = -1A$ | — | 60 | — | MHz |
| Collector Output Capacitance | | C_{ob} | $V_{CB} = -10V, I_E = 0, f = 1MHz$ | — | 170 | — | pF |
| Switching Time | Turn-on Time | t_{on} | | — | 0.1 | — | μs |
| | Storage Time | t_{stg} | | — | 1.0 | — | |
| | Fall Time | t_f | | — | 0.1 | — | |

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





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