

2SC5018

Silicon NPN triple diffusion planar type

For high breakdown voltage high-speed switching

■ Features

- High collector to base voltage V_{CBO}
- High emitter to base voltage V_{EBO}

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

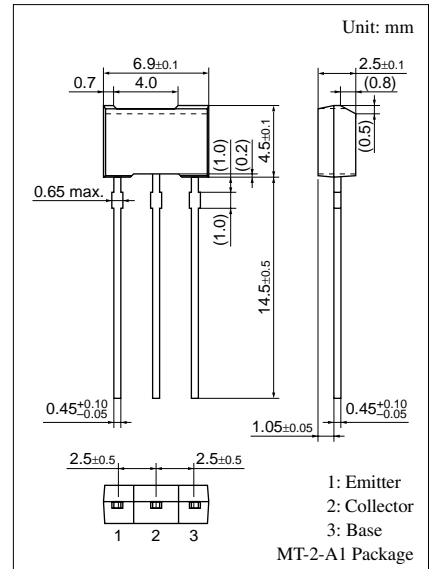
| Parameter | Symbol | Rating | Unit |
|-------------------------------|-----------|-------------|------------------|
| Collector to base voltage | V_{CBO} | 500 | V |
| Collector to emitter voltage | V_{CEO} | 400 | V |
| Emitter to base voltage | V_{EBO} | 7 | V |
| Peak collector current | I_{CP} | 1.5 | A |
| Collector current | I_C | 0.8 | A |
| Collector power dissipation * | P_C | 1 | W |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

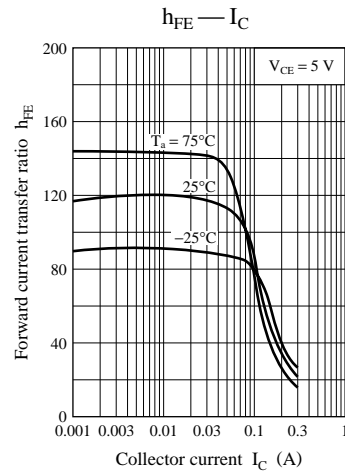
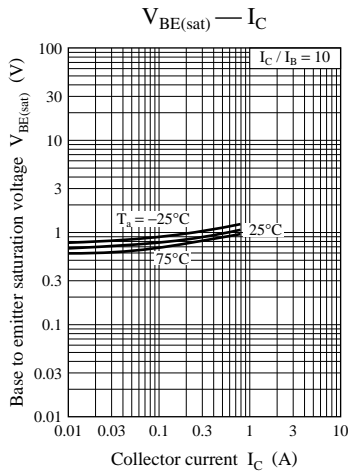
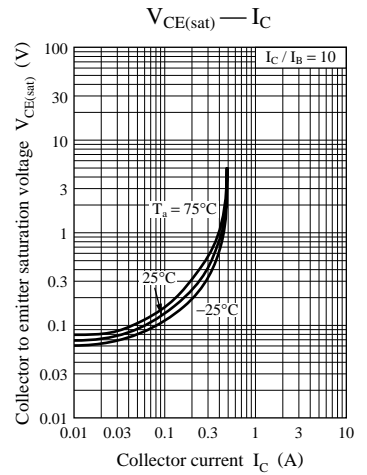
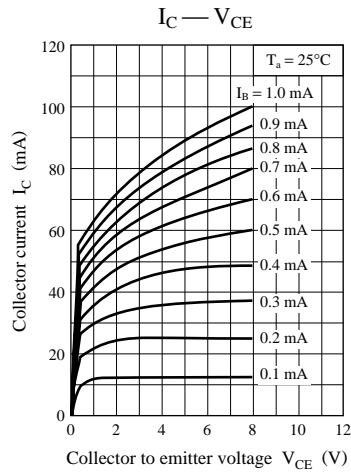
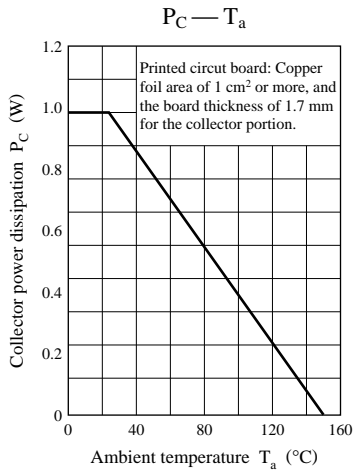
Note) *: Printed circuit board: Copper foil area of 1 cm² or more, and the board thickness of 1.7 mm for the collector portion

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|---|-----|-----|-----|---------------|
| Collector cutoff current | I_{CBO} | $V_{CB} = 500\text{ V}, I_E = 0$ | | | 100 | μA |
| Emitter cutoff current | I_{EBO} | $V_{EB} = 7\text{ V}, I_C = 0$ | | | 100 | μA |
| Forward current transfer ratio | h_{FE1} | $V_{CE} = 5\text{ V}, I_C = 10\text{ mA}$ | 50 | | 300 | |
| | h_{FE2}^* | $V_{CE} = 5\text{ V}, I_C = 300\text{ mA}$ | 10 | | | |
| Collector to emitter saturation voltage * | $V_{CE(sat)}$ | $I_C = 100\text{ mA}, I_B = 10\text{ mA}$ | | 0.1 | 0.5 | V |
| Base to emitter saturation voltage * | $V_{BE(sat)}$ | $I_C = 100\text{ mA}, I_B = 10\text{ mA}$ | | 0.8 | 1.0 | V |
| Transition frequency | f_T | $V_{CB} = 10\text{ V}, I_E = -50\text{ mA}, f = 10\text{ MHz}$ | | 20 | | MHz |
| Turn-on time | t_{on} | $I_C = 200\text{ mA}, I_{B1} = 40\text{ mA}$ $I_{B2} = -40\text{ mA}, V_{CC} = 150\text{ V}$ | | 0.7 | | μs |
| Storage time | t_{stg} | | | 4.0 | | μs |
| Fall time | t_f | | | 0.4 | | μs |

Note) *: Pulse measurement





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