

2SB1071, 2SB1071A

Silicon PNP epitaxial planar type

For low-voltage switching

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- High-speed switching
- Full-pack package which can be installed to the heat sink with one screw

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

| Parameter | Symbol | Rating | Unit |
|--|-----------|--------------------------|------------------|
| Collector-base voltage (Emitter open) | 2SB1071 | -40 | V |
| | 2SB1071A | -50 | |
| Collector-emitter voltage (Base open) | 2SB1071 | -20 | V |
| | 2SB1071A | -40 | |
| Emitter-base voltage (Collector open) | V_{EBO} | -5 | V |
| Collector current | I_C | -4 | A |
| Peak collector current | I_{CP} | -8 | A |
| Collector power dissipation | P_C | 25 | W |
| | | $T_a = 25^\circ\text{C}$ | 2 |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

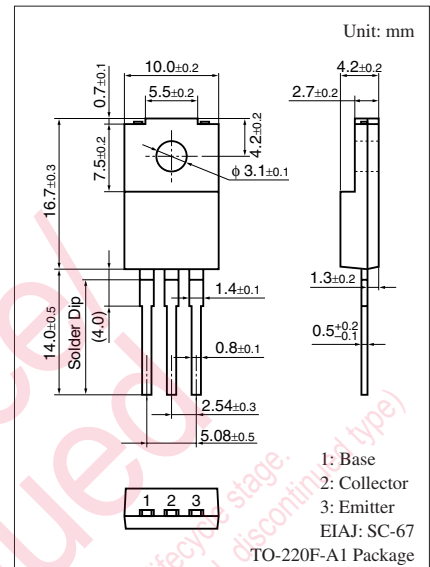
■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

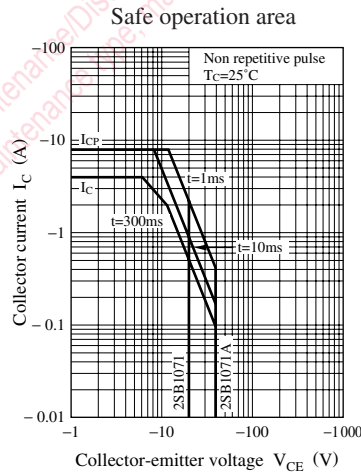
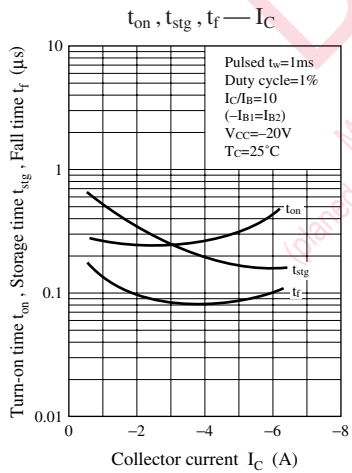
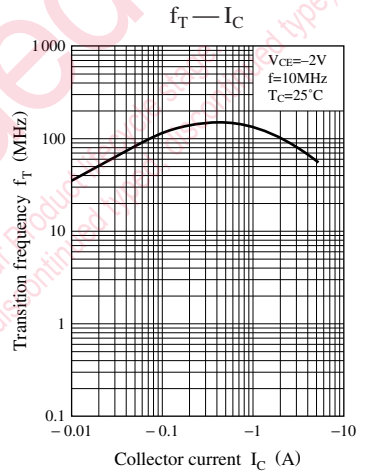
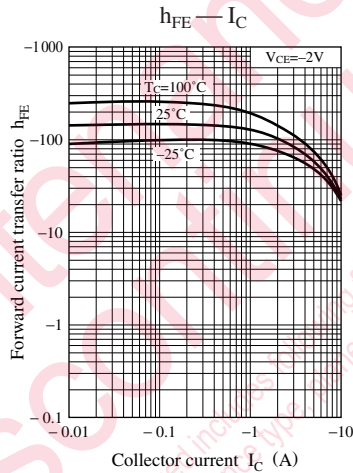
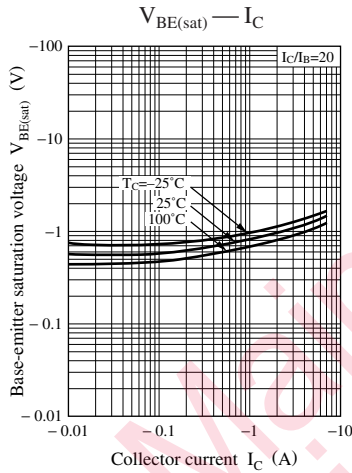
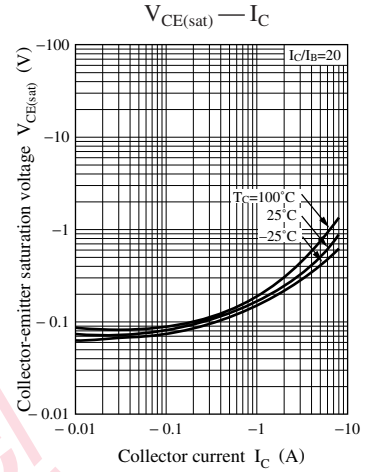
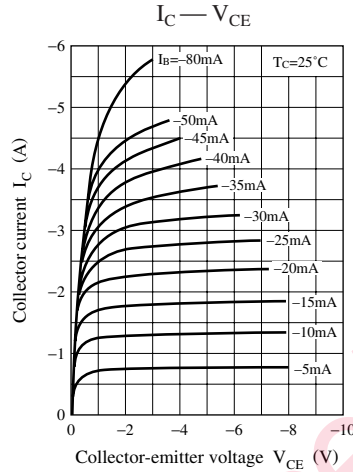
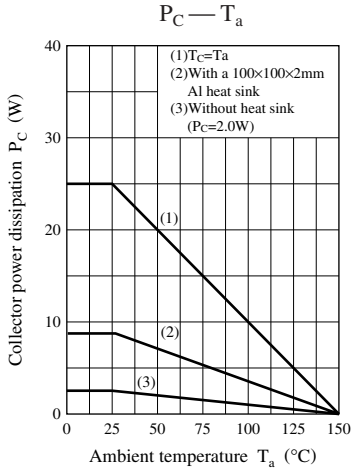
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|---|-----------------------------------|-----|------|---------------|
| Collector-emitter voltage (Base open) | 2SB1071 | $I_C = -10 \text{ mA}, I_B = 0$ | -20 | | | V |
| | 2SB1071A | | -40 | | | |
| Collector-base cutoff current (Emitter open) | 2SB1071 | $V_{CB} = -40 \text{ V}, I_E = 0$ | | | -50 | μA |
| | 2SB1071A | | $V_{CB} = -50 \text{ V}, I_E = 0$ | | | -50 |
| Emitter-base cutoff current (Collector open) | I_{EBO} | $V_{EB} = -5 \text{ V}, I_C = 0$ | | | -50 | μA |
| Forward current transfer ratio | h_{FE1} | $V_{CE} = -2 \text{ V}, I_C = -0.1 \text{ A}$ | 45 | | | — |
| | h_{FE2}^* | | 60 | 260 | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -2 \text{ A}, I_B = -0.1 \text{ A}$ | | | -0.5 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -2 \text{ A}, I_B = -0.1 \text{ A}$ | | | -1.5 | V |
| Transition frequency | f_T | $V_{CE} = -5 \text{ V}, I_C = -0.5 \text{ A}, f = 10 \text{ MHz}$ | | 150 | | MHz |
| Turn-on time | t_{on} | $V_{CC} = -20 \text{ V}$ | | 0.3 | | μs |
| Storage time | t_{stg} | | | 0.4 | | μs |
| Fall time | t_f | | | 0.1 | | μs |

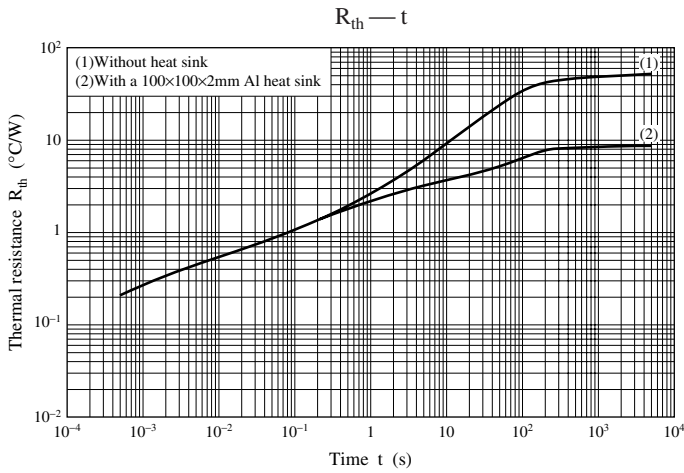
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Rank classification

| Rank | R | Q | P |
|-----------|-----------|-----------|------------|
| h_{FE2} | 60 to 120 | 90 to 180 | 130 to 260 |







Maintenance/Discontinued

Maintenance/Discontinued includes following four Product lifecycle stage.
 (planned maintenance type, maintenance type, planned discontinued type, discontinued type)

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