

2SA2067

Silicon PNP epitaxial planar type

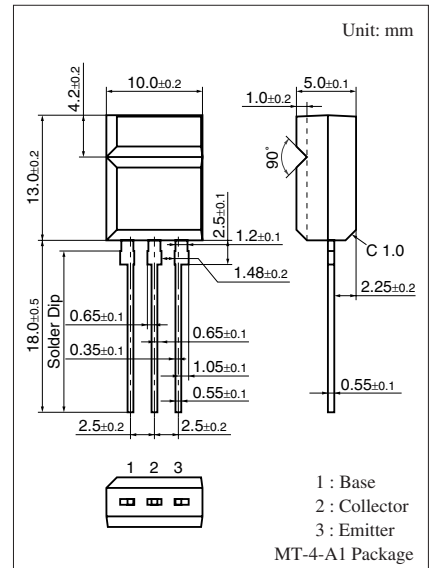
Power supply for audio & visual equipments
such as TVs and VCRs
Industrial equipments such as DC-DC converters

■ Features

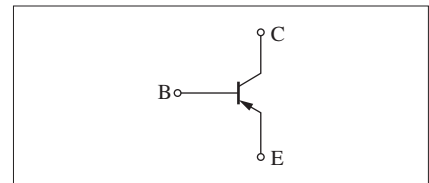
- High speed switching (t_{stg} : storage time/ t_f : fall time is short)
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Superior forward current transfer ratio h_{FE} linearity
- Allowing automatic insertion eith radial taping

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

| Parameter | Symbol | Rating | Unit |
|---------------------------------------|-----------|-------------|------------------|
| Collector-base voltage (Emitter open) | V_{CBO} | -60 | V |
| Collector-emitter voltage (Base open) | V_{CEO} | -60 | V |
| Emitter-base voltage (Collector open) | V_{EBO} | -6 | V |
| Collector current | I_C | -3 | A |
| Peak collector current | I_{CP} | -6 | A |
| Collector power dissipation | P_C | 15 | W |
| | | 2.0 | |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |



Internal Connection



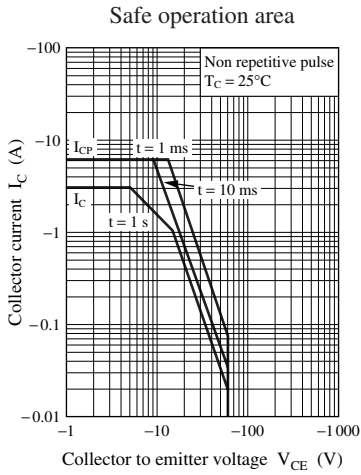
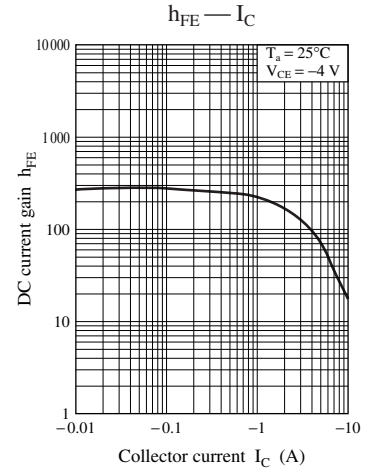
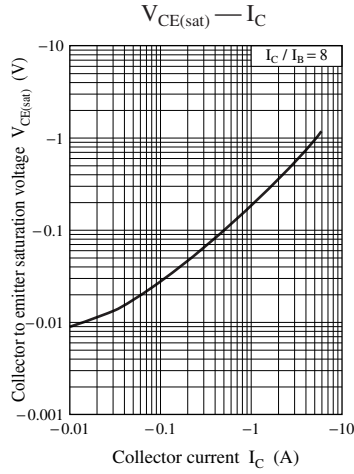
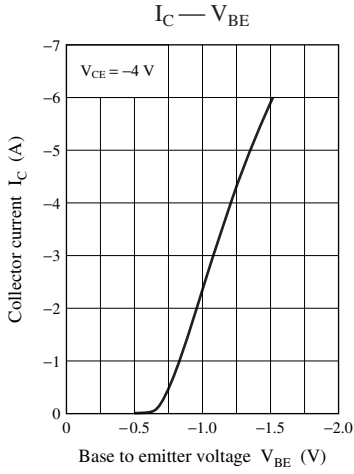
■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|--|---------------|--|-----|-----|------|---------------|
| Collector-emitter voltage (Base open) | V_{CEO} | $I_C = -10 \text{ mA}, I_B = 0$ | -60 | | | V |
| Collector-base cutoff current (Emitter open) | I_{CBO} | $V_{CB} = -60 \text{ V}, I_E = 0$ | | | -100 | μA |
| Collector-emitter cutoff current (Base open) | I_{CEO} | $V_{CE} = -60 \text{ V}, I_B = 0$ | | | -100 | μA |
| Emitter-base cutoff current (Collector open) | I_{EBO} | $V_{EB} = -6 \text{ V}, I_C = 0$ | | | -1 | mA |
| Forward current transfer ratio | h_{FE1}^* | $V_{CE} = -4 \text{ V}, I_C = -1 \text{ A}$ | 120 | | 320 | — |
| | h_{FE2} | $V_{CE} = -4 \text{ V}, I_C = -3 \text{ A}$ | 40 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -3 \text{ A}, I_B = -375 \text{ mA}$ | | | -0.8 | V |
| Transition frequency | f_T | $V_{CE} = -10 \text{ V}, I_C = -0.1 \text{ A}, f = 10 \text{ MHz}$ | | 90 | | MHz |
| Turn-on time | t_{on} | $I_C = -1 \text{ A}$, Resistance loaded | | | 0.3 | μs |
| Storage time | t_{stg} | $I_{B1} = -0.1 \text{ A}, I_{B2} = 0.1 \text{ A}$ | | | 0.7 | μs |
| Fall time | t_f | $V_{CC} = 50 \text{ V}$ | | | 0.15 | μs |

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

2. *: Rank classification

| Rank | Q | P |
|-----------|------------|------------|
| h_{FE1} | 120 to 250 | 160 to 320 |



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