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## 2SB892/2SD1207

### Large-Current Switching Applications

#### Features

- Power supplies, relay drivers, lamp drivers, and automotive wiring.

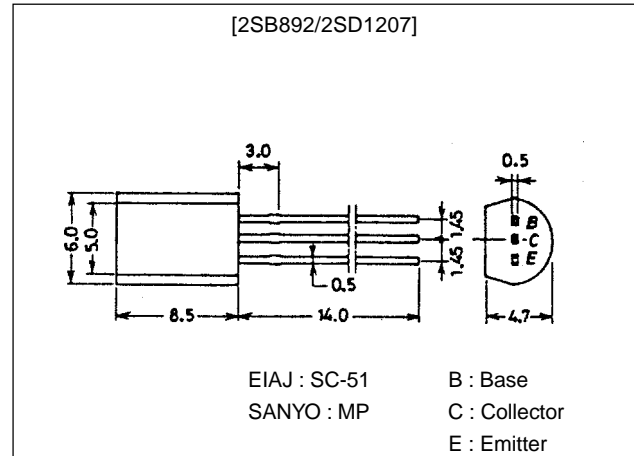
#### Features

- FBET and MBIT processed (Original process of SANYO).
- Low saturation voltage.
- Large current capacity and wide ASO.

#### Package Dimensions

unit:mm

2006A



() : 2SB892

#### Specifications

##### Absolute Maximum Ratings at Ta = 25°C

| Parameter                       | Symbol    | Conditions | Ratings     | Unit |
|---------------------------------|-----------|------------|-------------|------|
| Collector-to-Base Voltage       | $V_{CB0}$ |            | (-)60       | V    |
| Collector-to-Emitter Voltage    | $V_{CE0}$ |            | (-)50       | V    |
| Emitter-to-Base Voltage         | $V_{EB0}$ |            | (-)6        | V    |
| Collector Current               | $I_C$     |            | (-)2        | A    |
| Collector Current (Pulse)       | $I_{CP}$  |            | (-)4        | A    |
| Allowable Collector Dissipation | $P_C$     |            | 1           | W    |
| Junction Temperature            | $T_J$     |            | 150         | °C   |
| Storage Temperature             | $T_{stg}$ |            | -55 to +150 | °C   |

##### Electrical Characteristics at Ta = 25°C

| Parameter                | Symbol    | Conditions                       | Ratings |      |        | Unit    |
|--------------------------|-----------|----------------------------------|---------|------|--------|---------|
|                          |           |                                  | min     | typ  | max    |         |
| Collector Cutoff Current | $I_{CBO}$ | $V_{CB} = (-)50V, I_E = 0$       |         |      | (-)0.1 | $\mu A$ |
| Emitter Cutoff Current   | $I_{EBO}$ | $V_{EB} = (-)4V, I_C = 0$        |         |      | (-)0.1 | $\mu A$ |
| DC Current Gain          | $h_{FE1}$ | $V_{CE} = (-)2V, I_C = (-)100mA$ | 100     |      | 560    |         |
|                          | $h_{FE2}$ | $V_{CE} = (-)2V, I_C = (-)1.5A$  | 40      |      |        |         |
| Gain-Bandwidth Product   | $f_T$     | $V_{CE} = (-)10V, I_C = (-)50mA$ |         | 150  |        | MHz     |
| Output Capacitance       | $C_{ob}$  | $V_{CB} = (-)10V, f = 1MHz$      |         | 12   |        | pF      |
|                          |           |                                  |         | (22) |        | pF      |

\* : The 2SB892/2SD1207 are graded as follows by  $h_{FE}$  at 100mA :

|     |   |     |     |   |     |     |   |     |     |   |     |
|-----|---|-----|-----|---|-----|-----|---|-----|-----|---|-----|
| 100 | R | 200 | 140 | S | 280 | 200 | T | 400 | 280 | U | 560 |
|-----|---|-----|-----|---|-----|-----|---|-----|-----|---|-----|

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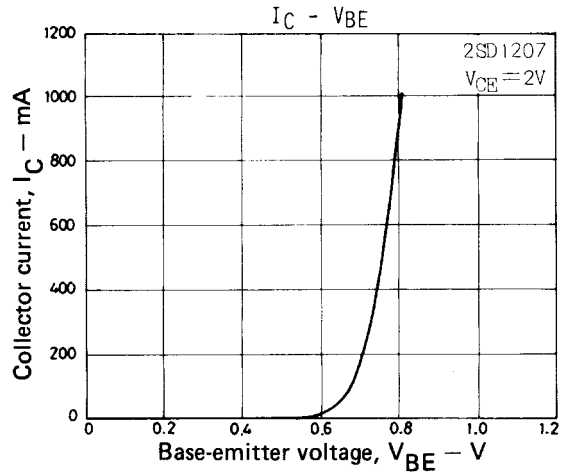
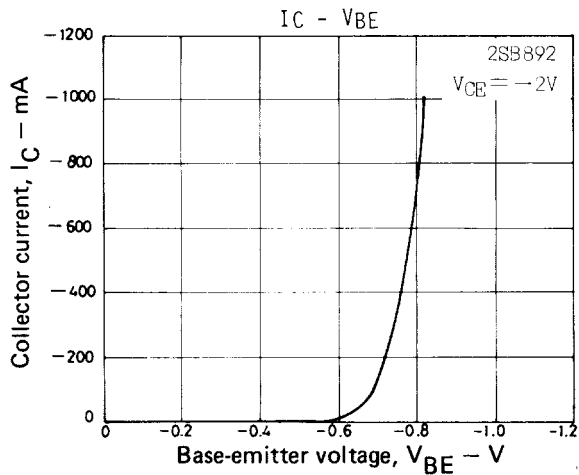
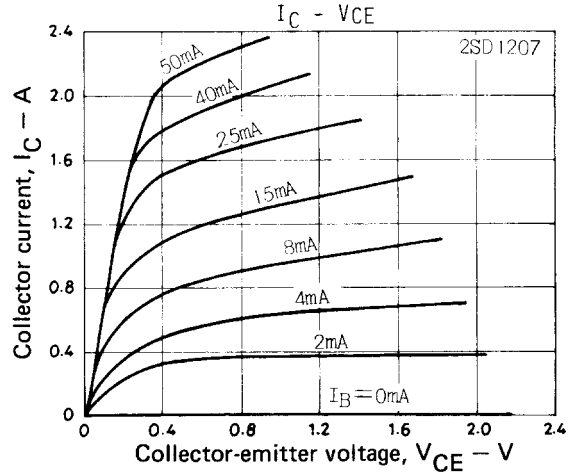
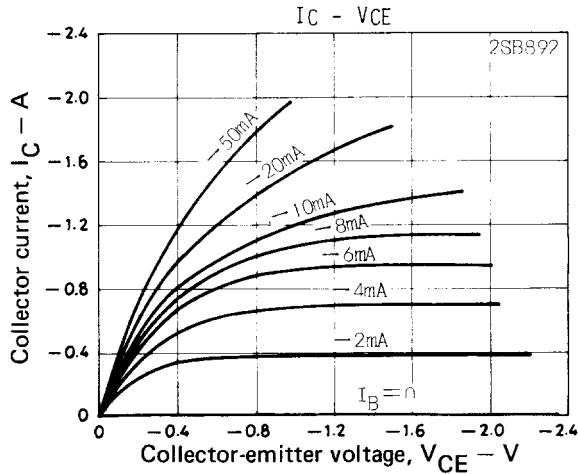
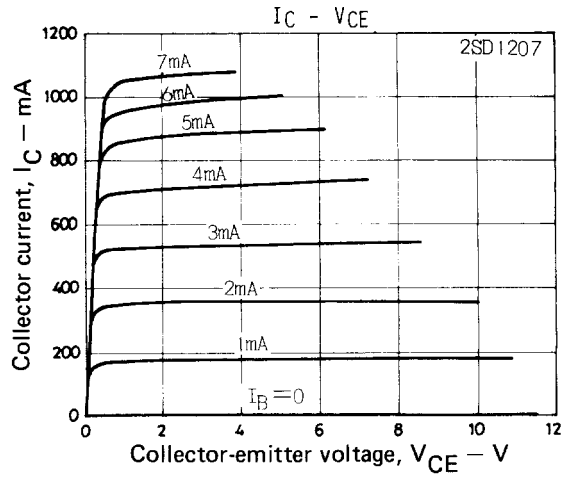
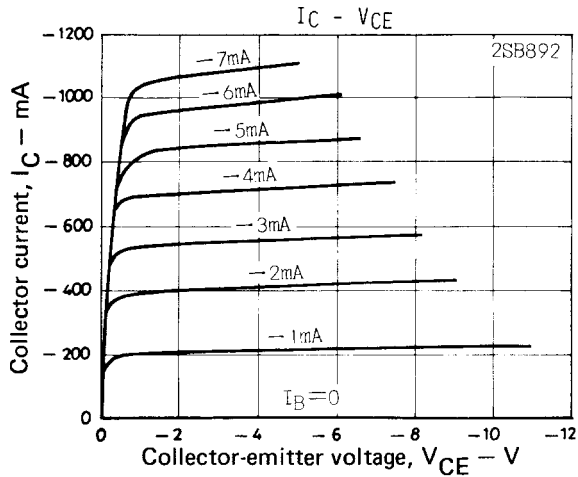
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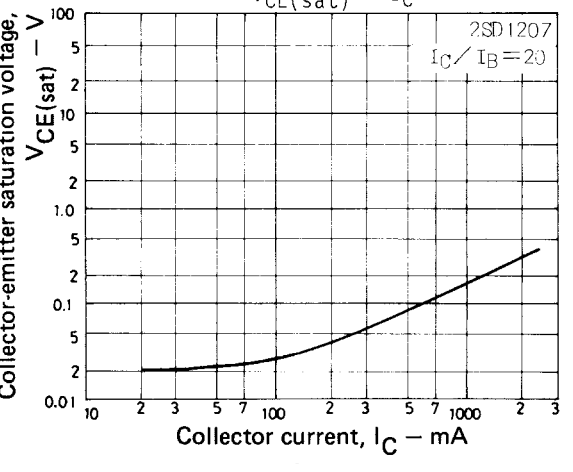
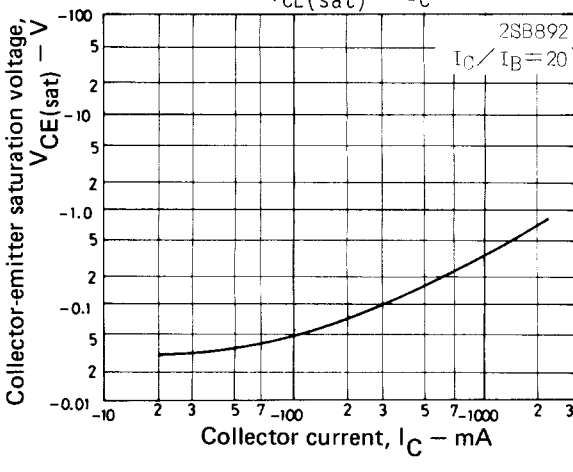
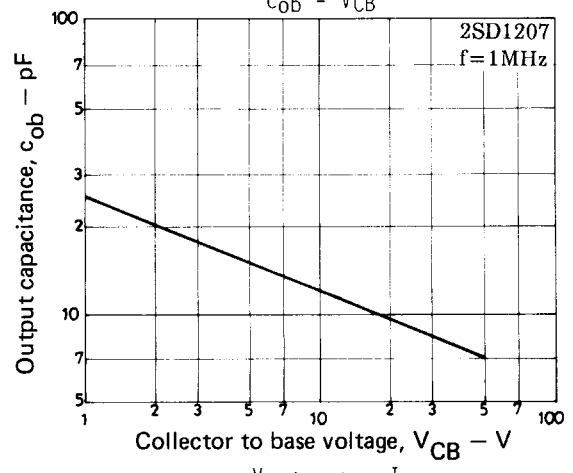
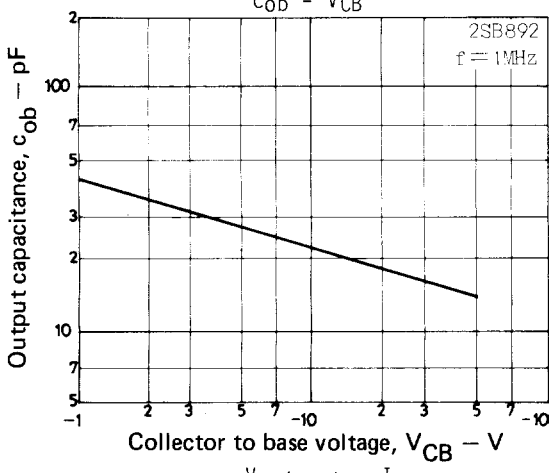
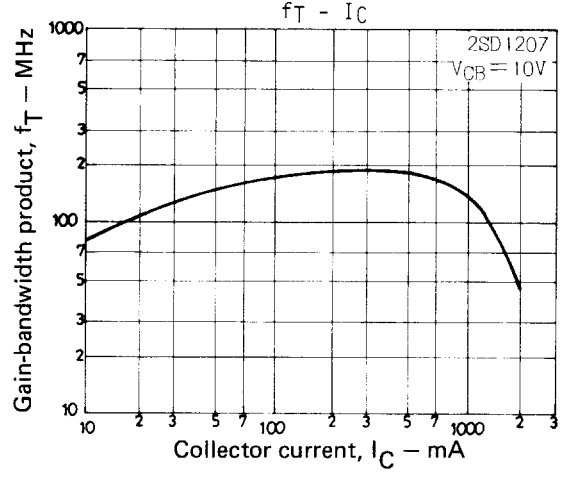
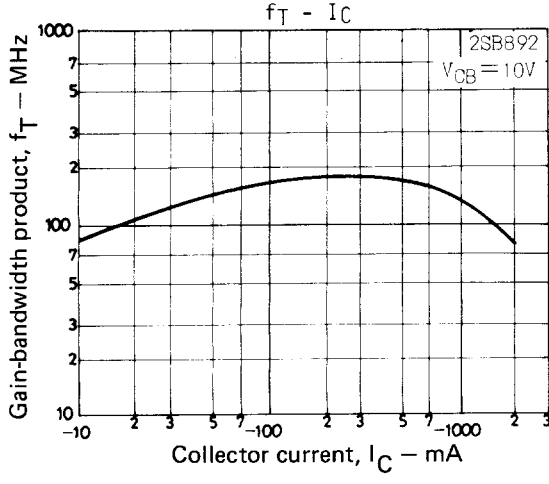
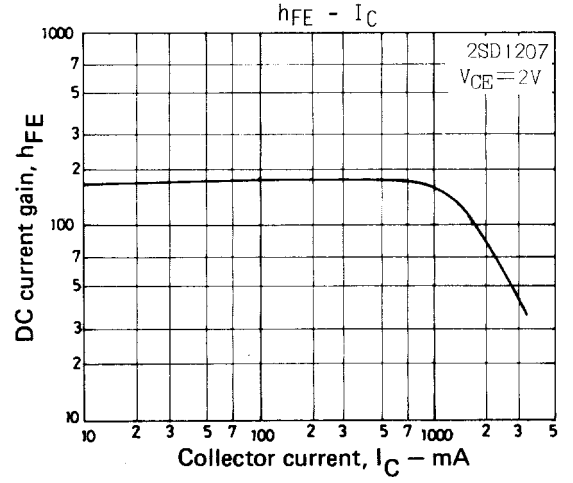
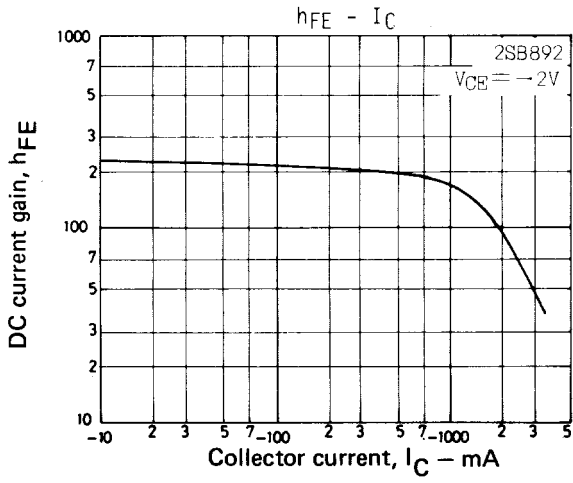
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

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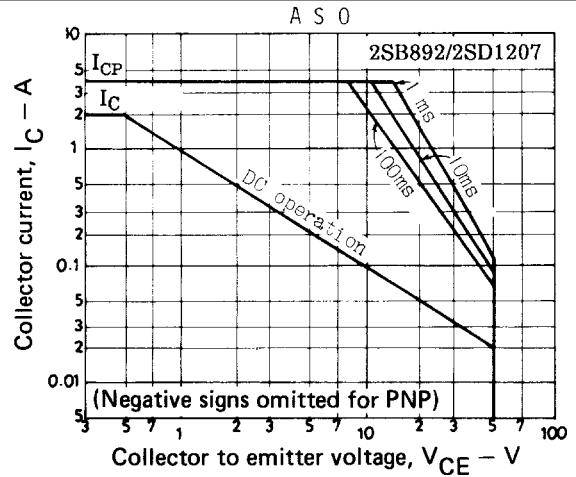
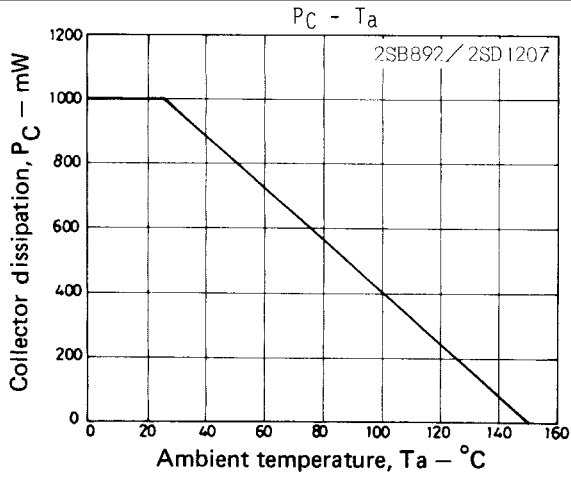
| Parameter                               | Symbol        | Conditions                  | Ratings |        |        | Unit |
|---|---------------|-----------------------------|---------|--------|--------|------|
|   |               |                             | min     | typ    | max    |      |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=(-)1A, I_B=(-)50mA$    |         | 0.15   | 0.4    | V    |
| Base-to-Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C=(-)1A, I_B=(-)50mA$    |         | (-0.3) | (-0.7) | V    |
| Collector-to-Base Breakdown Voltage     | $V_{(BR)CBO}$ | $I_C=(-)10\mu A, I_E=0$     | (-60)   |        |        | V    |
| Collector-to-Emitter Breakdown Voltage  | $V_{(BR)CEO}$ | $I_C=(-)1mA, R_{BE}=\infty$ | (-50)   |        |        | V    |
| Emitter-to-Base Breakdown Voltage       | $V_{(BR)EBO}$ | $I_E=(-)10\mu A, I_C=0$     | (-6)    |        |        | V    |



# 2SB892/2SD1207



## 2SB892/2SD1207



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