



ON Semiconductor®

ON Semiconductor DATA SHEET

2SB892 / 2SD1207 — PNP / NPN Epitaxial Planar Silicon Transistors Large-Current Switching Applications

Applications

- 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.

Specifications () : 2SB892

Absolute Maximum Ratings at Ta=25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|--------|------------|-------------|------|
| Collector-to-Base Voltage | VCBO | | (-)60 | V |
| Collector-to-Emitter Voltage | VCEO | | (-)50 | V |
| Emitter-to-Base Voltage | VEBO | | (-)6 | V |
| Collector Current | IC | | (-)2 | A |
| Collector Current (Pulse) | ICP | | (-)4 | A |
| Collector Dissipation | PC | | 1 | W |
| Junction Temperature | Tj | | 150 | °C |
| Storage Temperature | Tstg | | -55 to +150 | °C |

Electrical Characteristics at Ta=25°C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--------------------------|--------|---|---------|-----|--------|------|
| | | | min | typ | max | |
| Collector Cutoff Current | ICBO | V _{CB} =(-)50V, I _E =0A | | | (-)0.1 | μA |
| Emitter Cutoff Current | IEBO | V _{EB} =(-)4V, I _C =0A | | | (-)0.1 | μA |

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| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|------------------------------|---------|------------|-----------|------|
| | | | min | typ | max | |
| 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} | $V_{CB}=(-)10V, f=1MHz$ | | (22)12 | | pF |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=(-)1A, I_B=(-)50mA$ | | (-0.3)0.15 | (-0.7)0.4 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=(-)1A, I_B=(-)50mA$ | | (-)0.9 | (-)1.2 | V |
| Collector-to-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=(-)10\mu A, I_E=0A$ | (-)60 | | | V |
| Collector-to-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=(-)1mA, R_{BE}=\infty$ | (-)50 | | | V |
| Emitter-to-Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E=(-)10\mu A, I_C=0A$ | (-)6 | | | V |

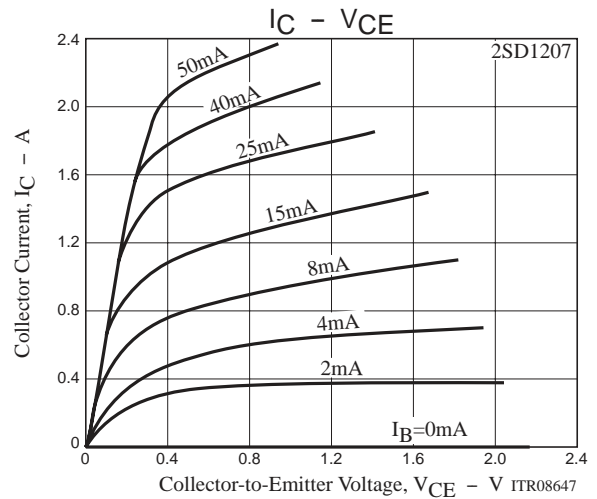
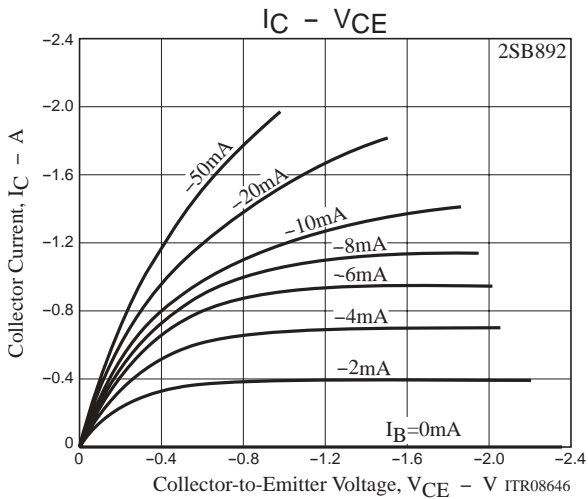
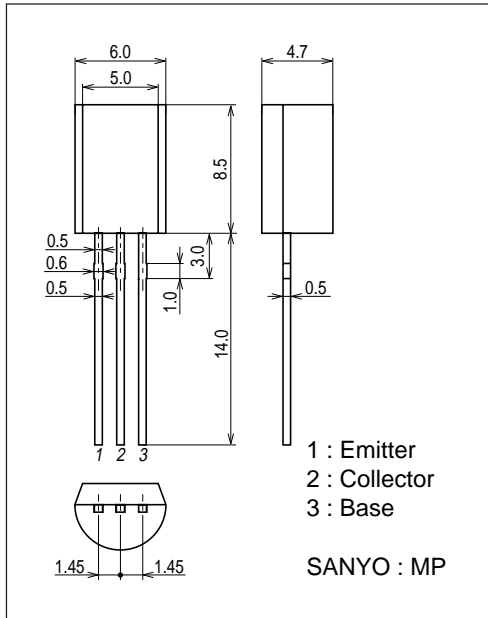
* : The 2SB892 / 2SD1207 are graded as follows by h_{FE} at 100mA :

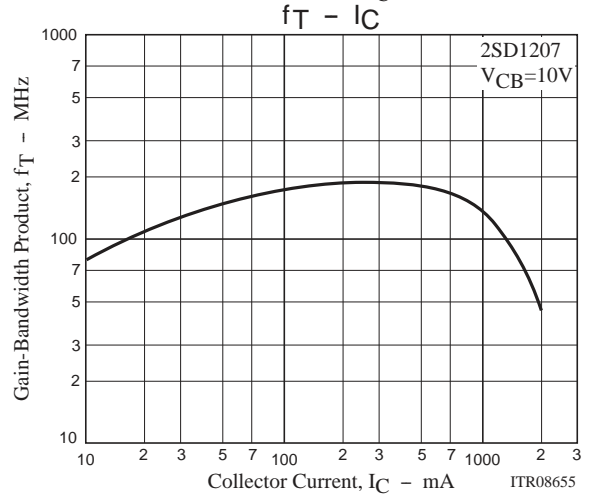
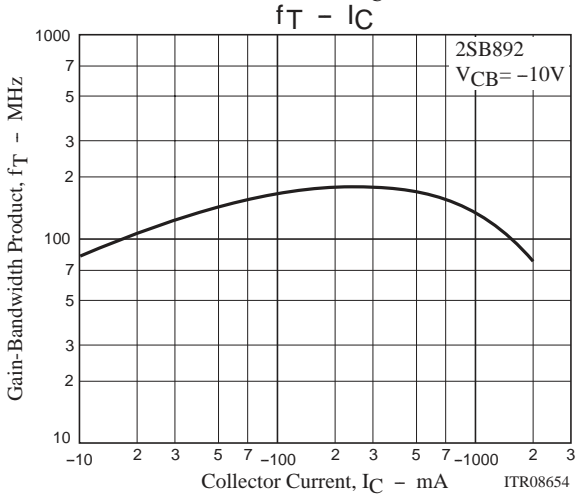
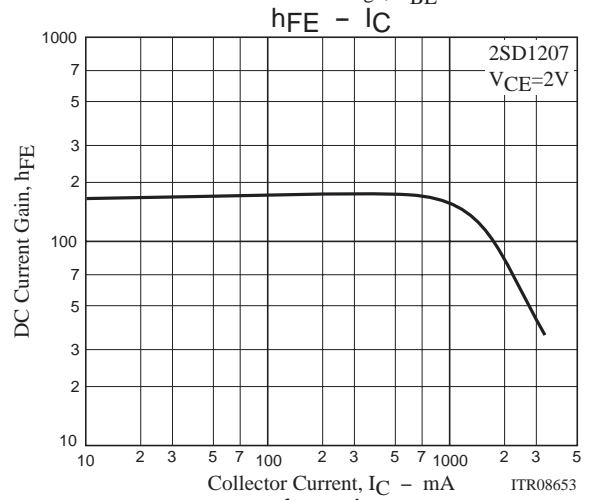
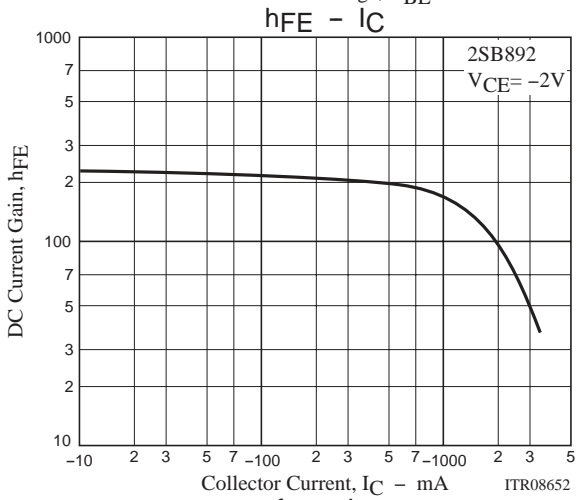
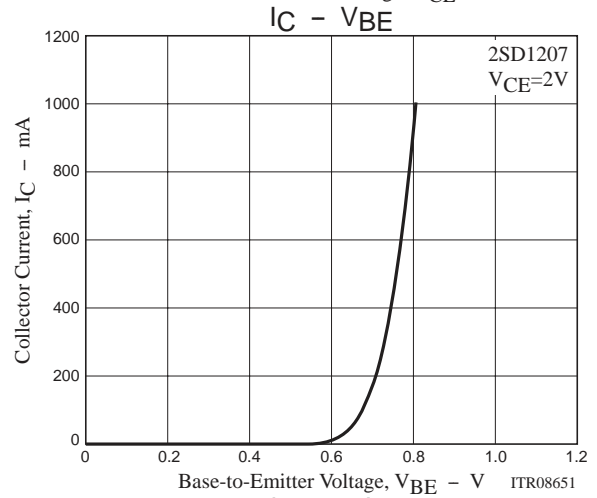
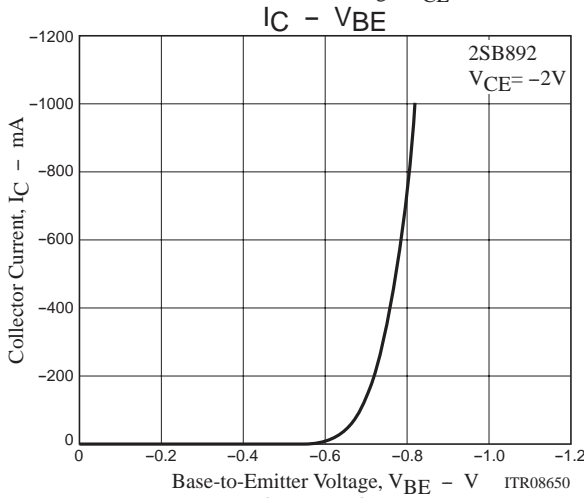
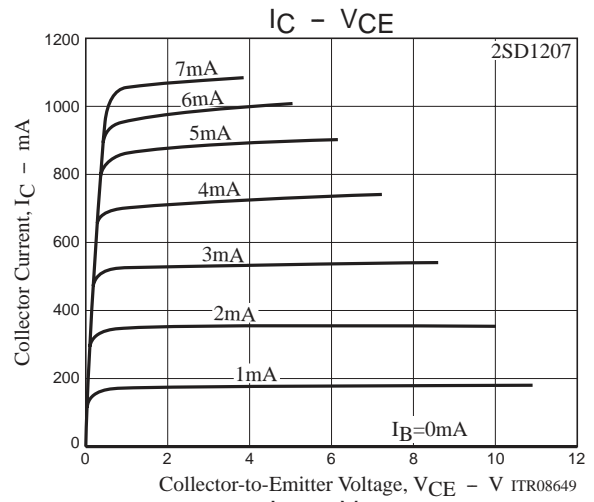
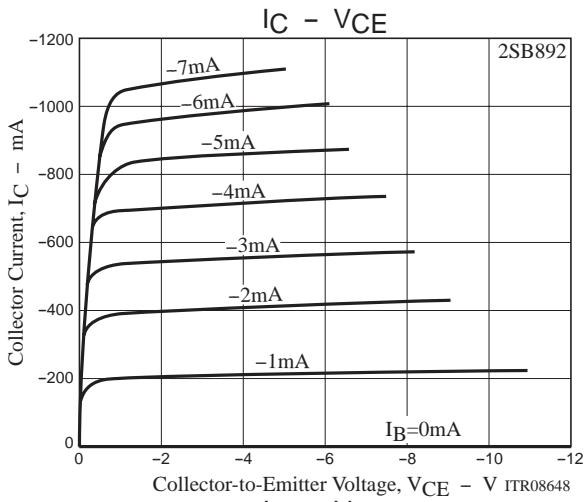
| Rank | R | S | T | U |
|----------|------------|------------|------------|------------|
| h_{FE} | 100 to 200 | 140 to 280 | 200 to 400 | 280 to 560 |

Package Dimensions

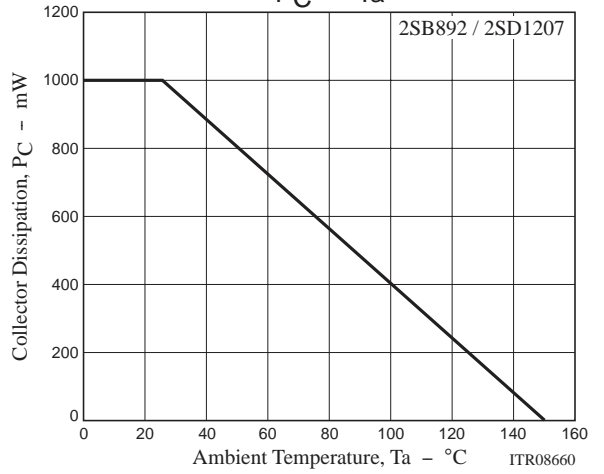
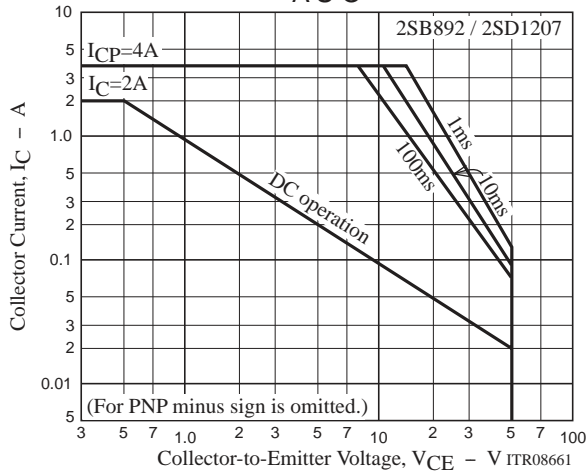
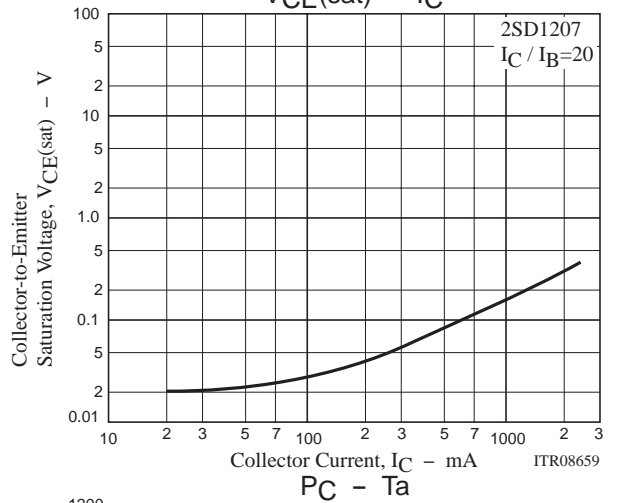
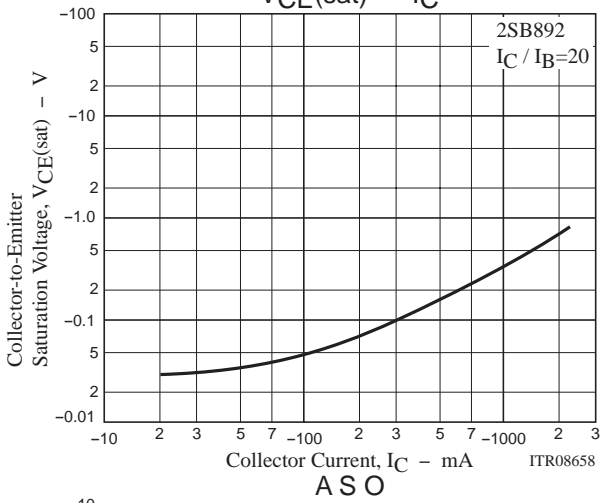
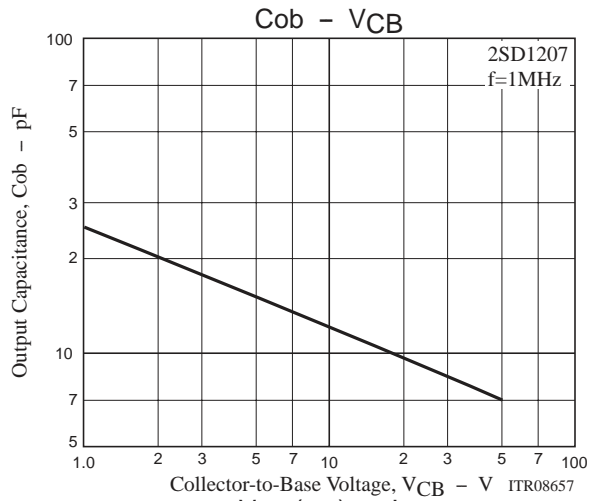
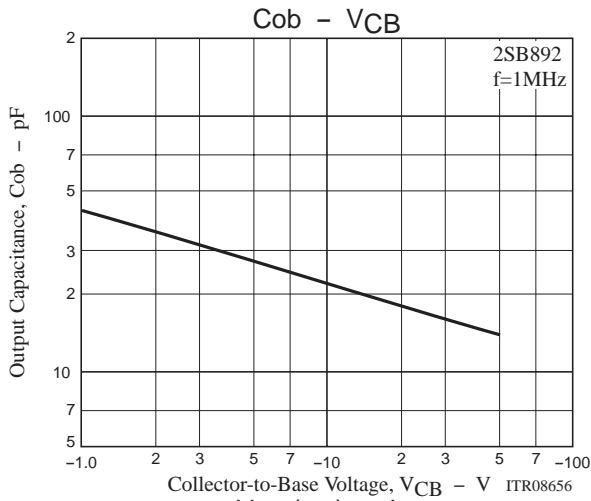
unit : mm (typ)

7520-002





2SB892 / 2SD1207



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