



SANYO Semiconductors

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 | | \approx 60 | V |
| Collector-to-Emitter Voltage | VCEO | | \approx 50 | V |
| Emitter-to-Base Voltage | VEBO | | \approx 6 | V |
| Collector Current | IC | | \approx 2 | A |
| Collector Current (Pulse) | ICP | | \approx 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} = \approx 50V, I _E =0A | | | \approx 0.1 | μA |
| Emitter Cutoff Current | IEBO | V _{EB} = \approx 4V, I _C =0A | | | \approx 0.1 | μA |

Continued on next page.

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Continued from preceding page.

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|--------------------------------------|-------------------|------------------------|-----------------------|------|
| | | | min | typ | max | |
| DC Current Gain | h_{FE1}^* | $V_{CE} = (\pm)2V, I_C = (\pm)100mA$ | 100 | | 560 | |
| | h_{FE2} | $V_{CE} = (\pm)2V, I_C = (\pm)1.5A$ | 40 | | | |
| Gain-Bandwidth Product | f_T | $V_{CE} = (\pm)10V, I_C = (\pm)50mA$ | | 150 | | MHz |
| Output Capacitance | C_{ob} | $V_{CB} = (\pm)10V, f = 1MHz$ | | (22) 12 | | pF |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = (\pm)1A, I_B = (\pm)50mA$ | | (=0.3) 0.15 | (=0.7) 0.4 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = (\pm)1A, I_B = (\pm)50mA$ | | (=) 0.9 | (=) 1.2 | V |
| Collector-to-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C = (\pm)10\mu A, I_E = 0A$ | (=) 60 | | | V |
| Collector-to-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = (\pm)1mA, R_{BE} = \infty$ | (=) 50 | | | V |
| Emitter-to-Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E = (\pm)10\mu A, I_C = 0A$ | (=) 6 | | | V |

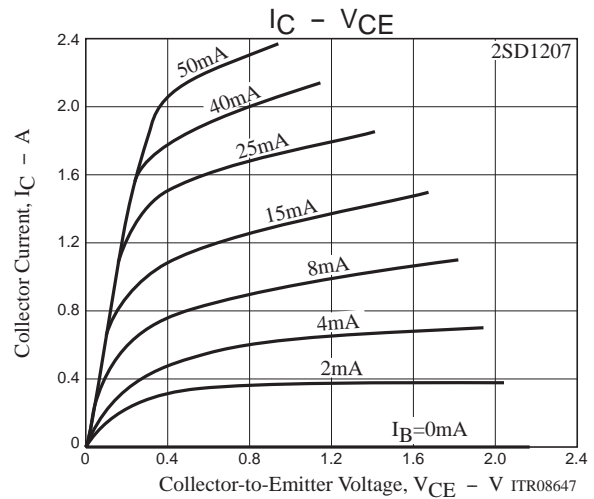
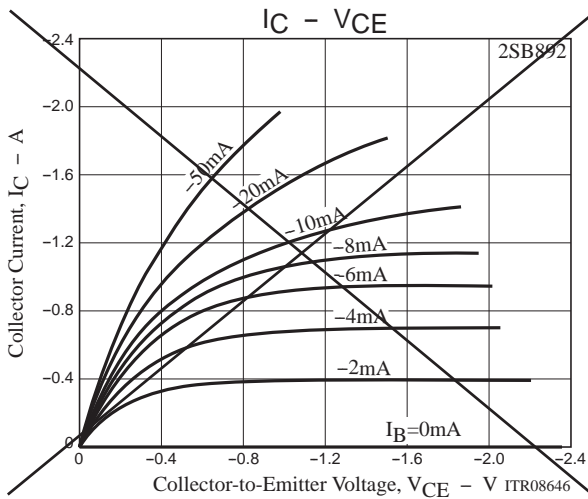
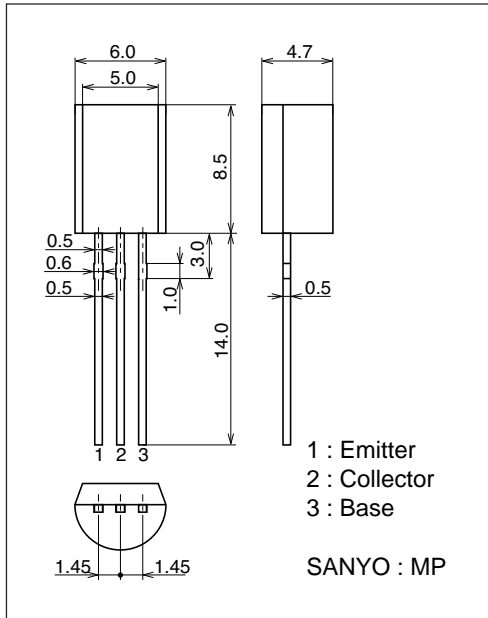
* : The ~~2SB892~~ 2SD1207 are graded as follows by h_{FE} at 100mA :

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

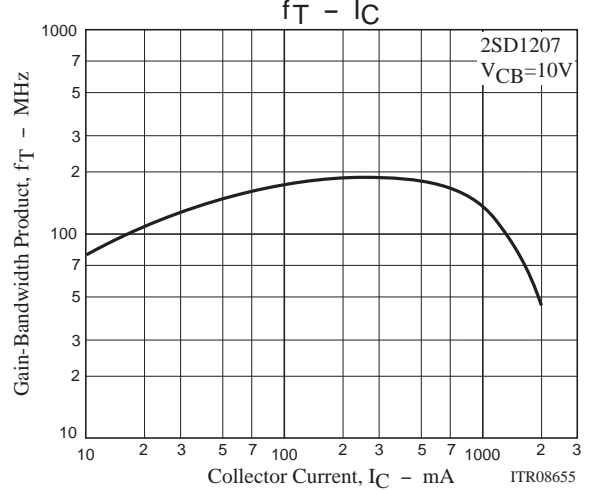
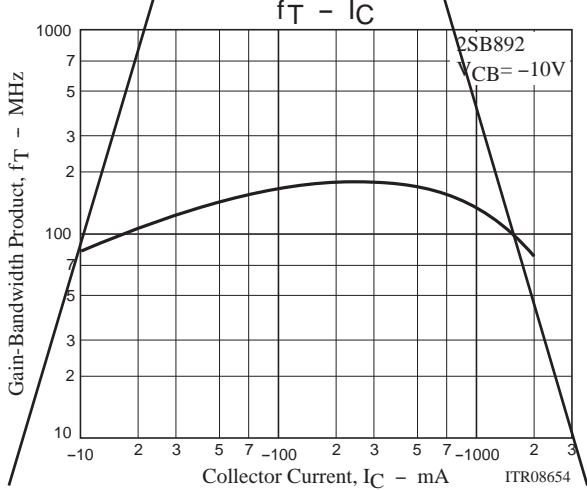
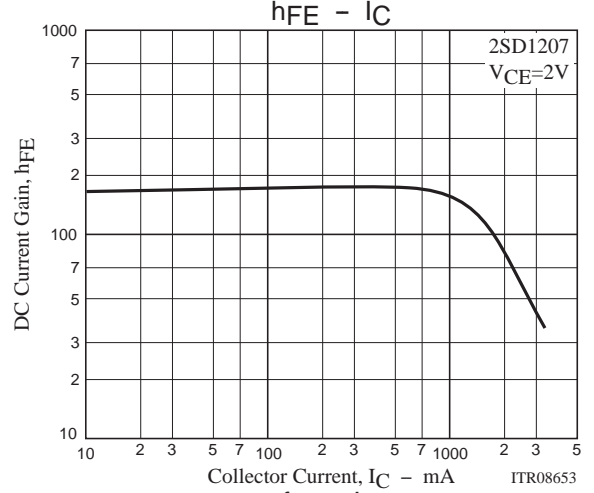
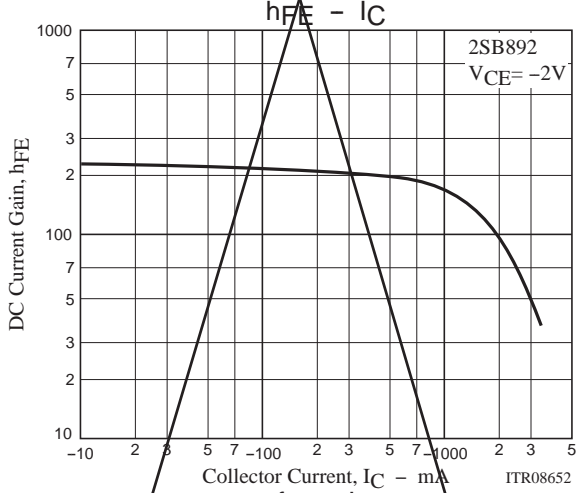
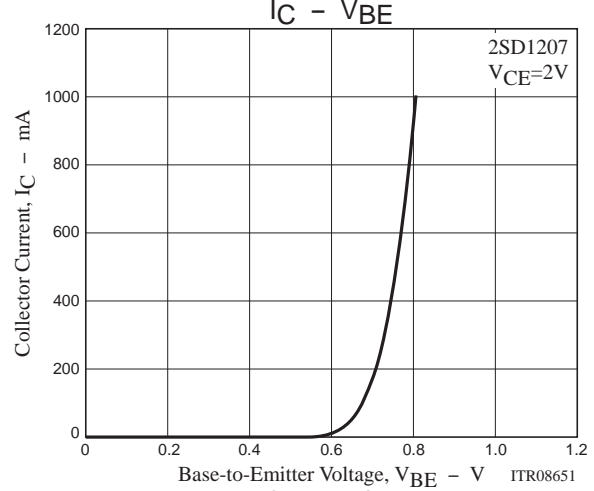
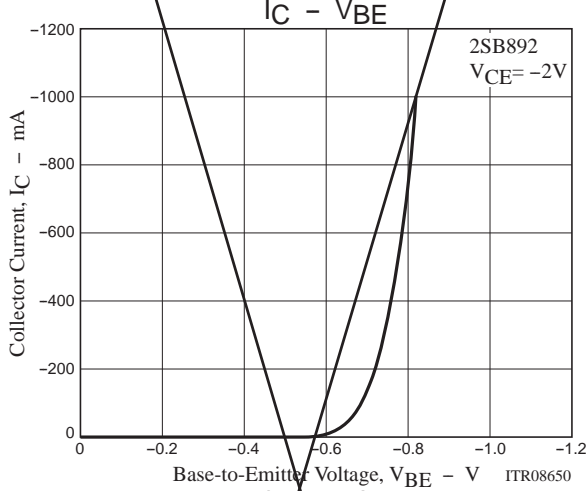
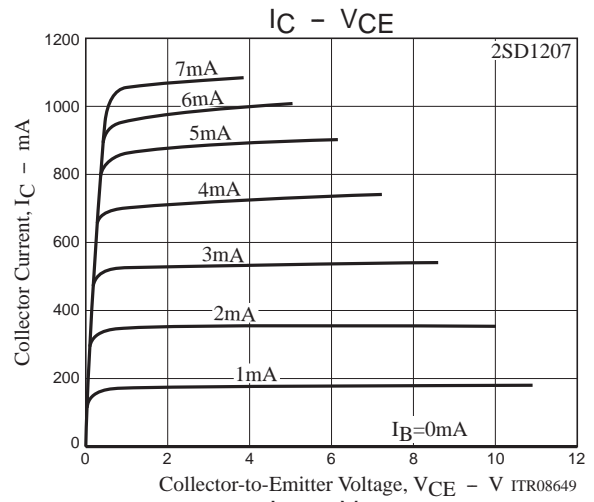
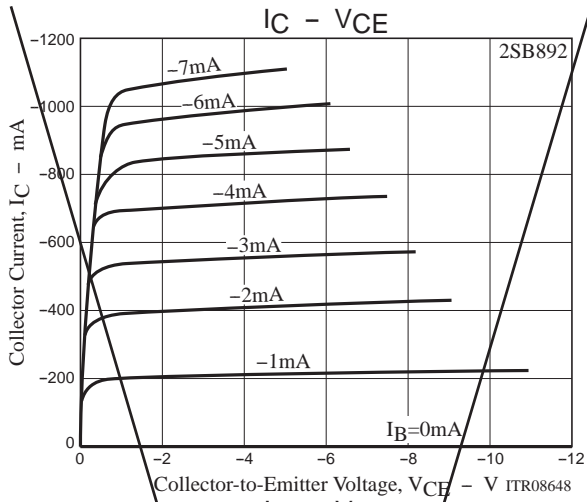
Package Dimensions

unit : mm (typ)

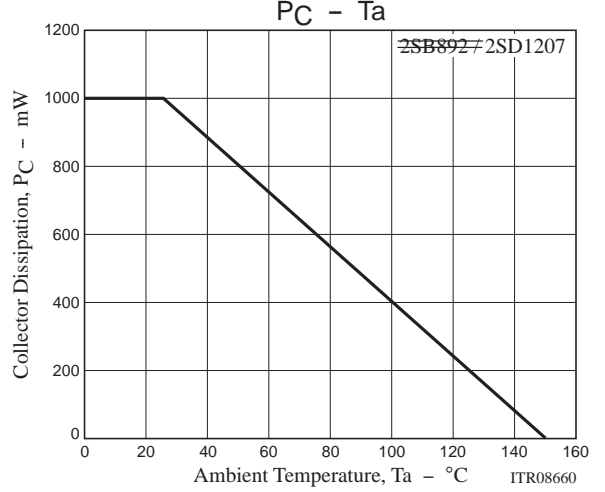
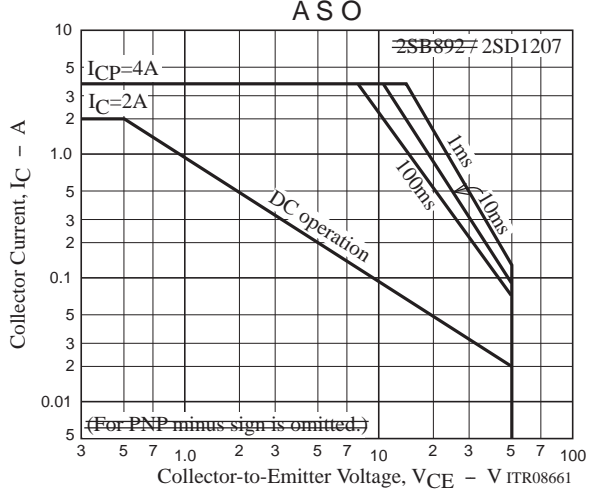
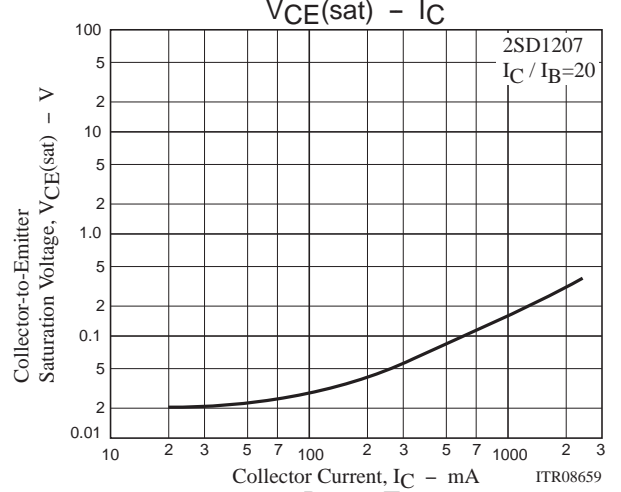
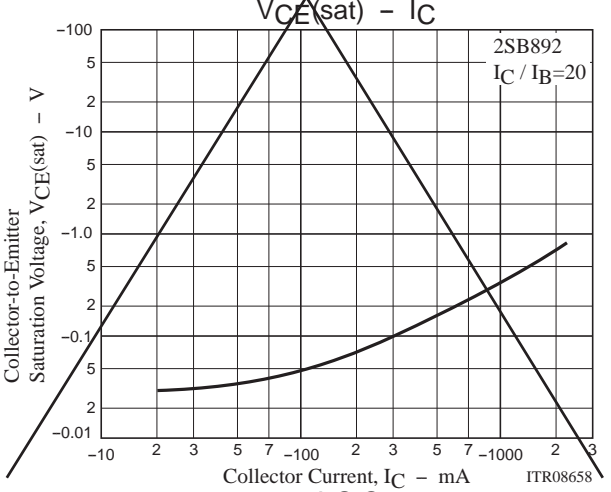
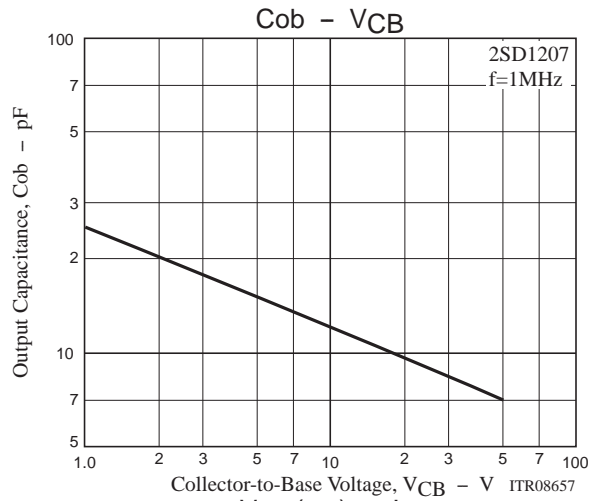
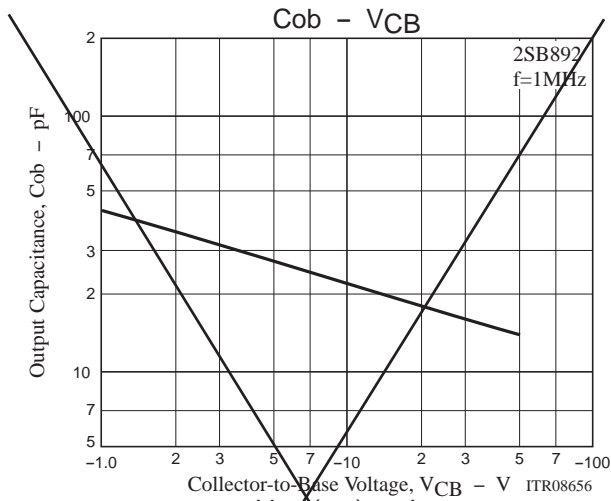
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