



# 2SB885/2SD1195

## Driver Applications

## Applications

- Motor drivers, printer hammer drivers, relay drivers, voltage regulator control.

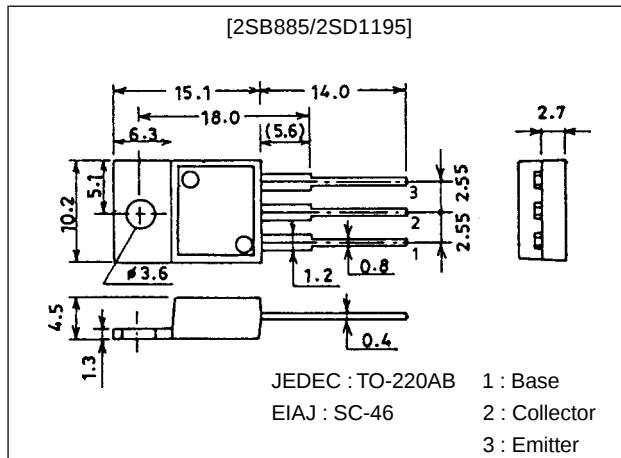
## Features

- High DC current gain.
- High current capacity and wide ASO.
- Low saturation voltage.

## Package Dimensions

unit:mm

2010C



( ) : 2SB885

## Specifications

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

| Parameter                    | Symbol    | Conditions               | Ratings        | Unit               |
|------------------------------|-----------|--------------------------|----------------|--------------------|
| Collector-to-Base Voltage    | $V_{CBO}$ |                          | (-) $\geq 110$ | V                  |
| Collector-to-Emitter Voltage | $V_{CEO}$ |                          | (-) $\geq 100$ | V                  |
| Emitter-to-Base Voltage      | $V_{EBO}$ |                          | (-) $\geq 6$   | V                  |
| Collector Current            | $I_C$     |                          | (-) $\geq 5$   | A                  |
| Collector Current (Pulse)    | $I_{CP}$  |                          | (-) $\geq 8$   | A                  |
| Collector Dissipation        | $P_C$     |                          | 1.75           | W                  |
|                              |           | $T_c=25^{\circ}\text{C}$ | 35             | W                  |
| Junction Temperature         | $T_J$     |                          | 150            | $^{\circ}\text{C}$ |
| Storage Temperature          | $T_{stg}$ |                          | -55 to +150    | $^{\circ}\text{C}$ |

### Electrical Characteristics at $T_a = 25^\circ\text{C}$

| Parameter                               | Symbol        | Conditions                  | Ratings |          |          | Unit |
|-----------------------------------------|---------------|-----------------------------|---------|----------|----------|------|
|                                         |               |                             | min     | typ      | max      |      |
| Collector Cutoff Current                | $I_{CBO}$     | $V_{CB}=(-)80V, I_E=0$      |         |          | $(-)0.1$ | mA   |
| Emitter Cutoff Current                  | $I_{EBO}$     | $V_{EB}=(-)5V, I_C=0$       |         |          | $(-)3.0$ | mA   |
| DC Current Gain                         | $h_{FE}$      | $V_{CE}=(-)3V, I_C=(-)2.5A$ | 1500    | 4000     |          |      |
| Gain-Bandwidth Product                  | $f_T$         | $V_{CE}=(-)5V, I_C=(-)2.5A$ |         | 20       |          | MHz  |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=(-)2.5A, I_B=(-)5mA$   |         | 0.9      | $(-)1.5$ | V    |
|                                         |               |                             |         | $(-1.0)$ |          | V    |
| Base-to-Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C=(-)2.5A, I_B=(-)5mA$   |         |          | $(-)2.0$ | V    |

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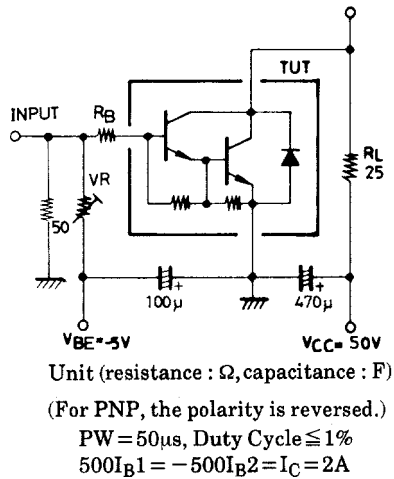
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91098HA (KT)/10996TS (KOTO) 8-4330/D251MH/4027KI/D152KI, TS №.927-1/4

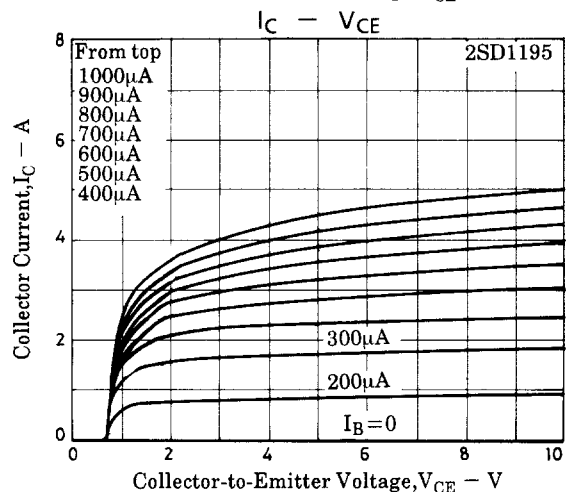
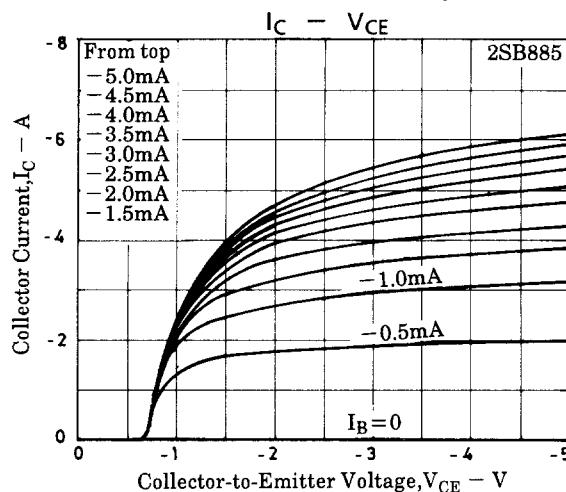
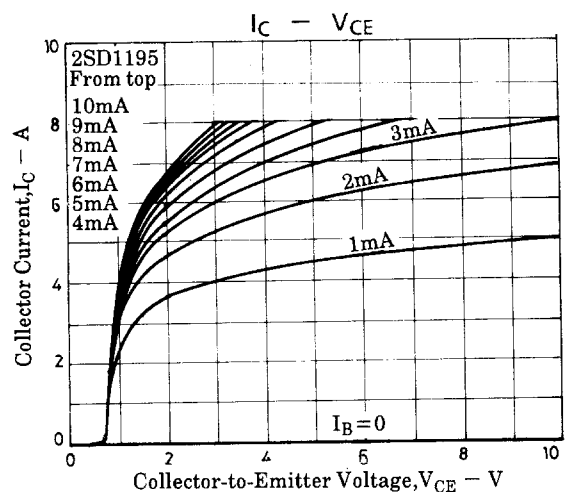
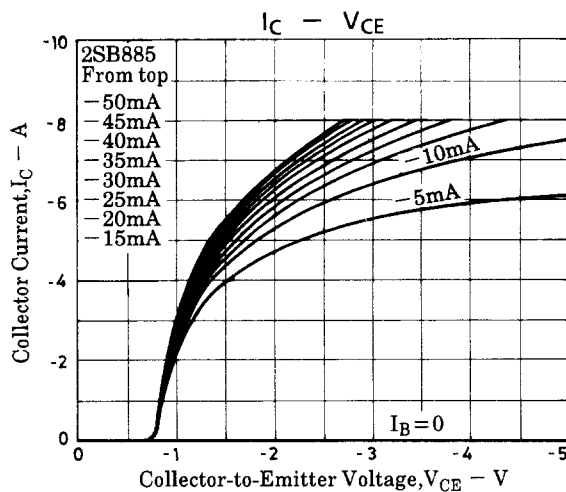
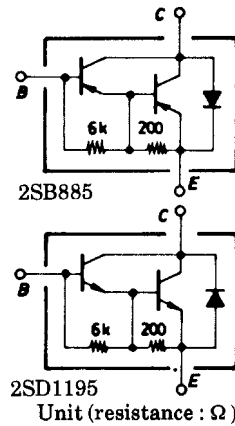
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| Parameter                              | Symbol        | Conditions                   | Ratings |       |     | Unit    |
|----------------------------------------|---------------|------------------------------|---------|-------|-----|---------|
|                                        |               |                              | min     | typ   | max |         |
| Collector-to-Base Breakdown Voltage    | $V_{(BR)CBO}$ | $I_C=(-)5mA, I_E=0$          | (-)110  |       |     | V       |
| Collector-to-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=(-)50mA, R_{BE}=\infty$ | (-)100  |       |     | V       |
| Turn-ON Time                           | $t_{on}$      | See specified Test Circuit   |         | (0.7) |     | $\mu s$ |
| Storage Time                           | $t_{stg}$     | See specified Test Circuit   |         | 0.6   |     | $\mu s$ |
|                                        |               |                              |         | (1.3) |     | $\mu s$ |
|                                        |               |                              |         | 4.8   |     | $\mu s$ |
| Fall Time                              | $t_f$         | See specified Test Circuit   |         | (1.5) |     | $\mu s$ |
|                                        |               |                              |         | 1.6   |     | $\mu s$ |

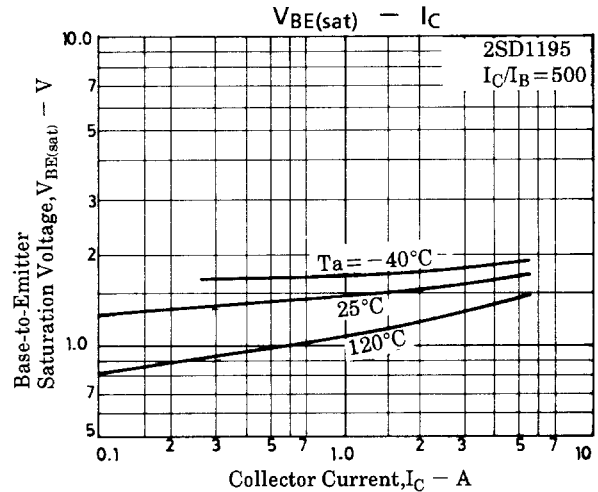
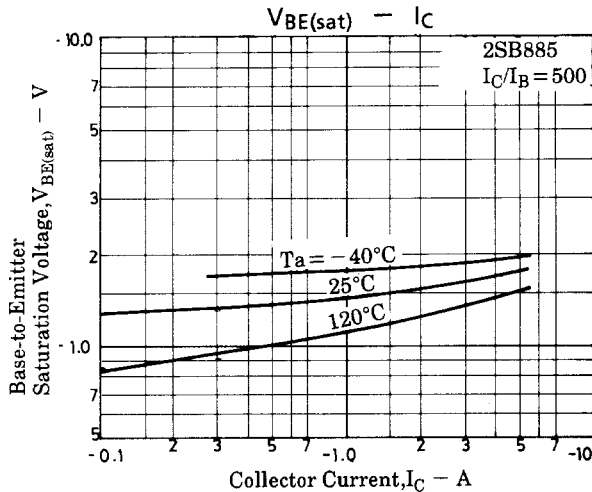
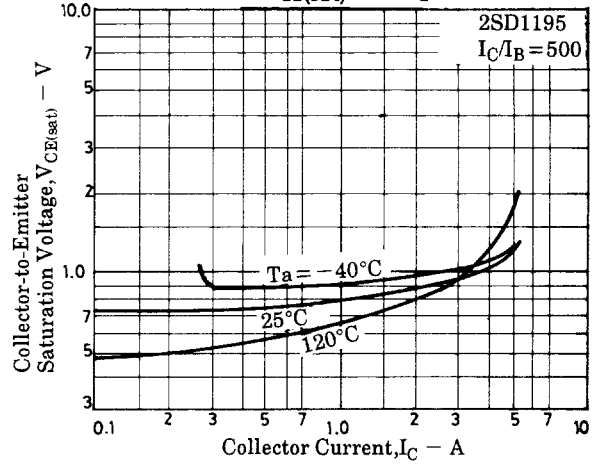
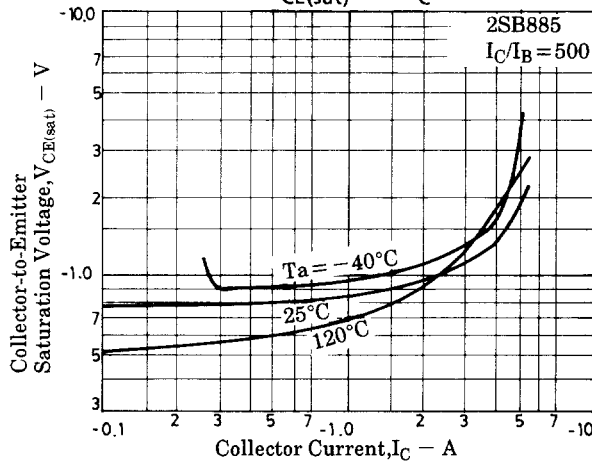
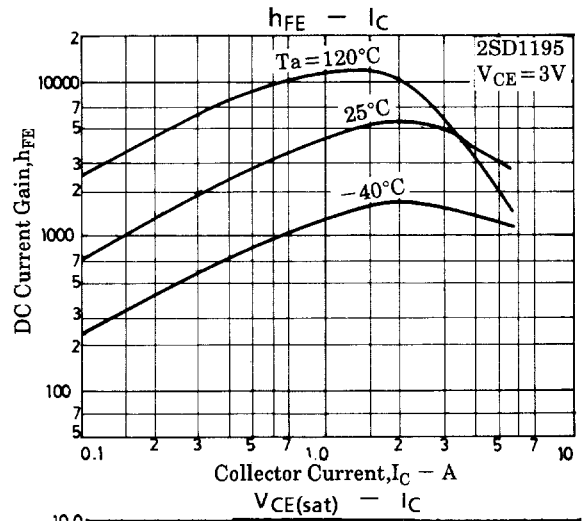
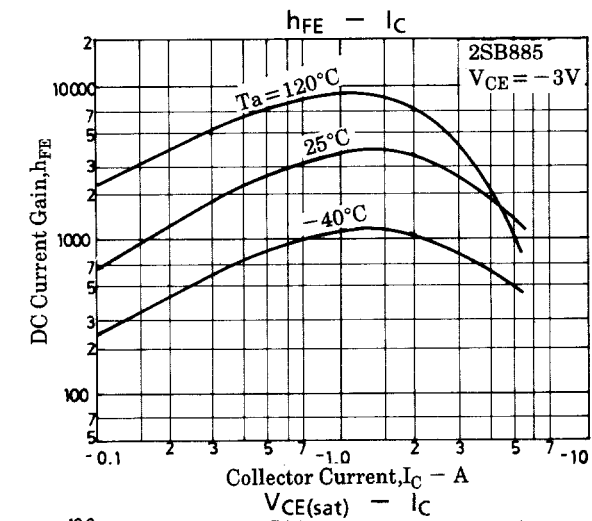
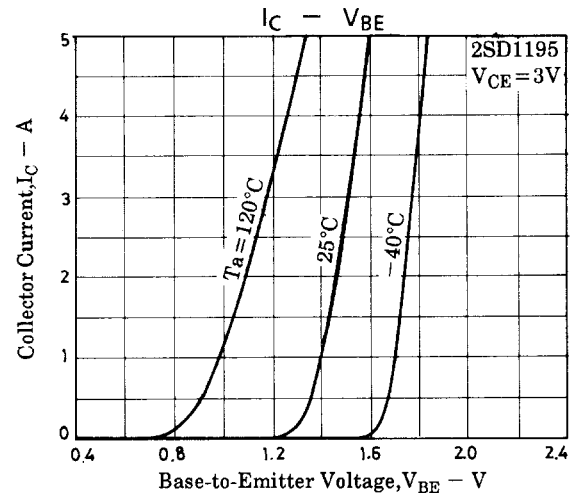
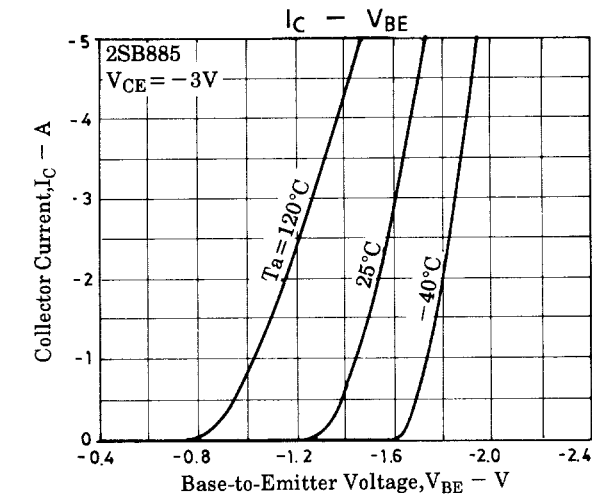
## Switching Time Test Circuit



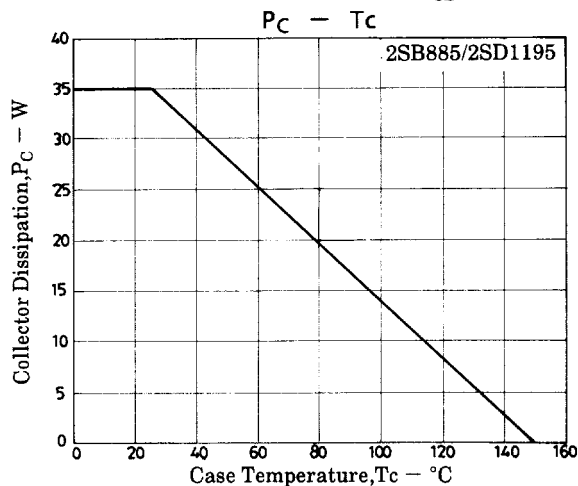
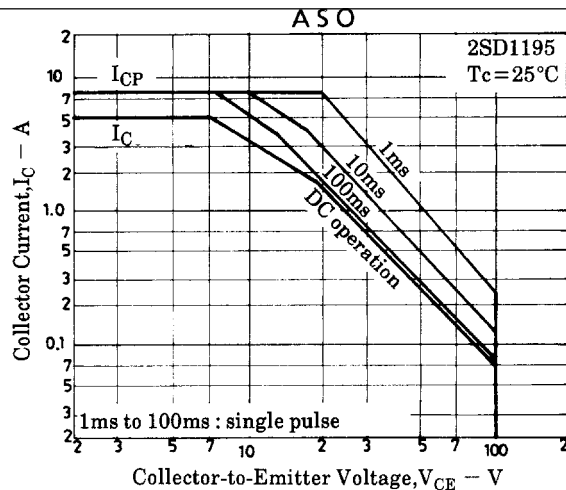
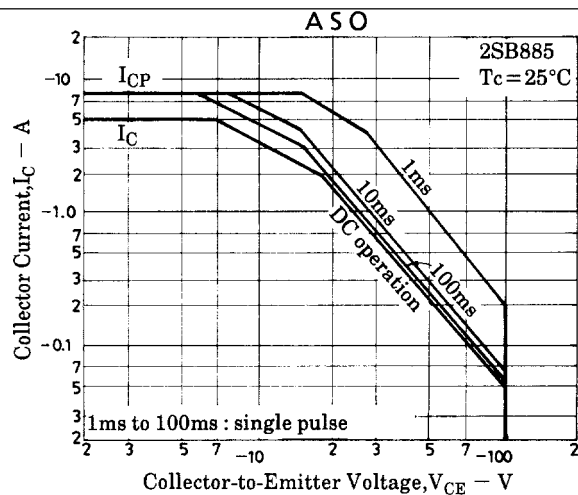
## Electrical Connection



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