



2SB1226/2SD1828

Driver Applications

Applications

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

Features

- High DC current gain.
- Large current capacity and wide ASO.
- Micaless package facilitating mounting.

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Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|-----------|------------------------|-------------|------------------|
| Collector-to-Base Voltage | V_{CB0} | | (-)110 | V |
| Collector-to-Emitter Voltage | V_{CEO} | | (-)100 | V |
| Emitter-to-Base Voltage | V_{EBO} | | (-)6 | V |
| Collector Current | I_C | | (-)3 | A |
| Collector Current (Pulse) | I_{CP} | | (-)5 | A |
| Collector Dissipation | P_C | | 2.0 | W |
| | | $T_c=25^\circ\text{C}$ | 20 | 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} | $V_{CB}=(-)80\text{V}, I_E=0$ | | | (-)0.1 | mA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=(-)5\text{V}, I_C=0$ | | | (-)3.0 | mA |
| DC Current Gain | h_{FE} | $V_{CE}=(-)3\text{V}, I_C=(-)1.5\text{A}$ | 1500 | 4000 | | |
| Gain-Bandwidth Product | f_T | $V_{CE}=(-)5\text{V}, I_C=(-)1.5\text{A}$ | | 20 | | MHz |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=(-)1.5\text{A}, I_B=(-)3\text{mA}$ | | 0.9 | (-)1.5 | V |
| | | | | (-1.0) | | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=(-)1.5\text{A}, I_B=(-)3\text{mA}$ | | | (-)2.0 | V |

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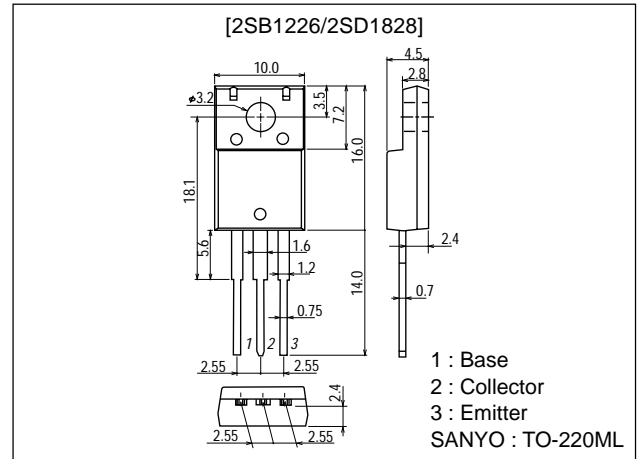
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Package Dimensions

unit:mm

2041A

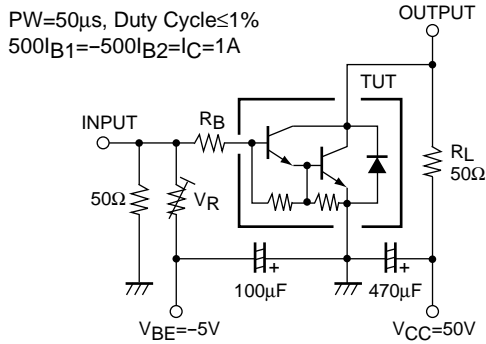


2SB1226/2SD1828

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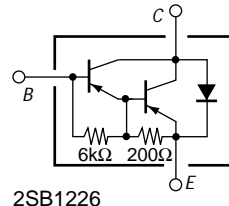
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--|---------------|------------------------------|---------|-------|-----|---------|
| | | | min | typ | max | |
| Collector-to-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=(-)5mA, I_E=0$ | (-)110 | | | V |
| Collector-to-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=(-)50mA, R_{BE}=\infty$ | (-)100 | | | V |
| Turn-ON Time | t_{on} | See specified Test Circuit | | 0.8 | | μs |
| | | | | (0.7) | | μs |
| Storage Time | t_{stg} | See specified Test Circuit | | 5.0 | | μs |
| | | | | (2.4) | | μs |
| Fall Time | t_f | See specified Test Circuit | | 1.2 | | μs |
| | | | | (1.2) | | μs |

Switching Time Test Circuit

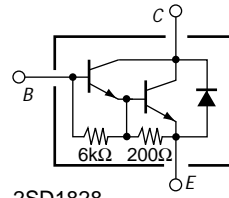


(For PNP, the polarity is reversed.)

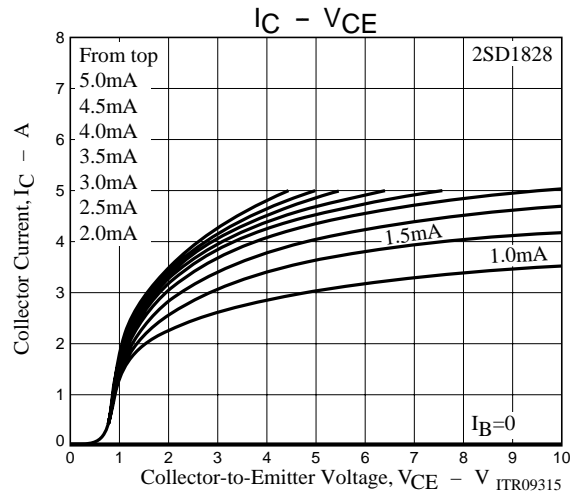
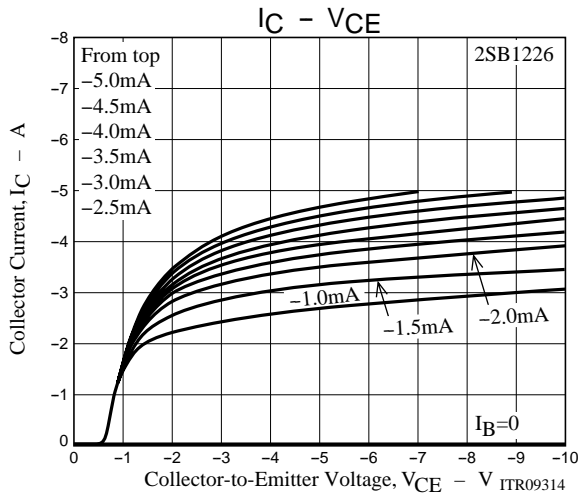
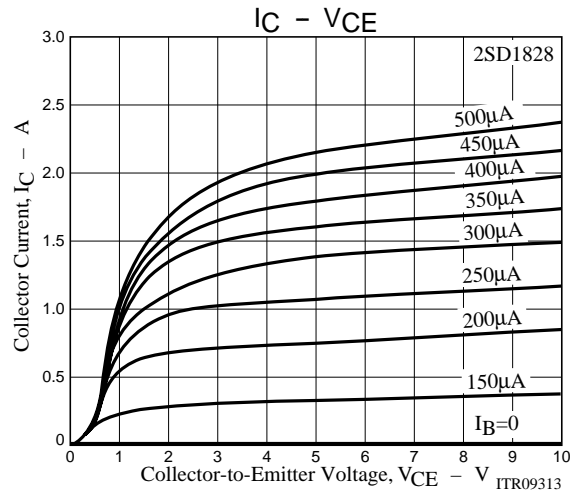
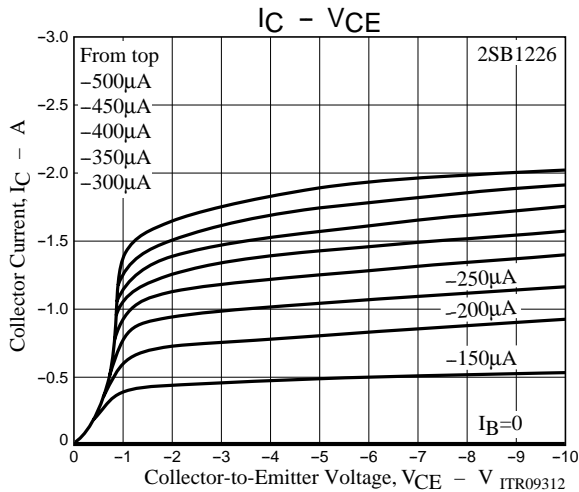
Electrical Connection



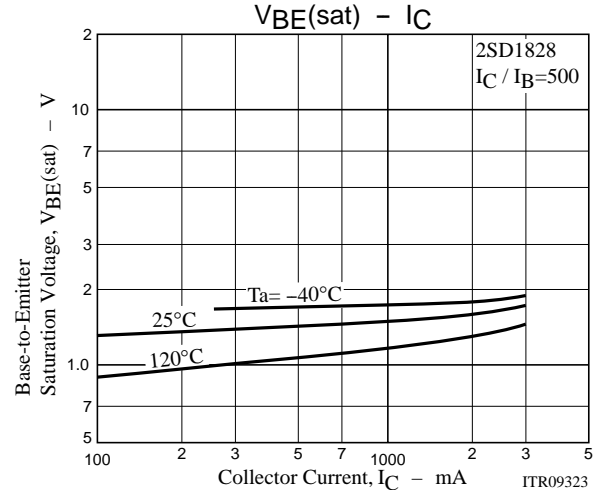
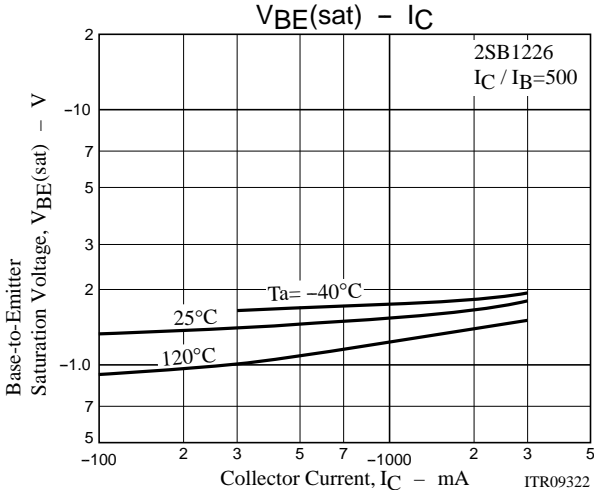
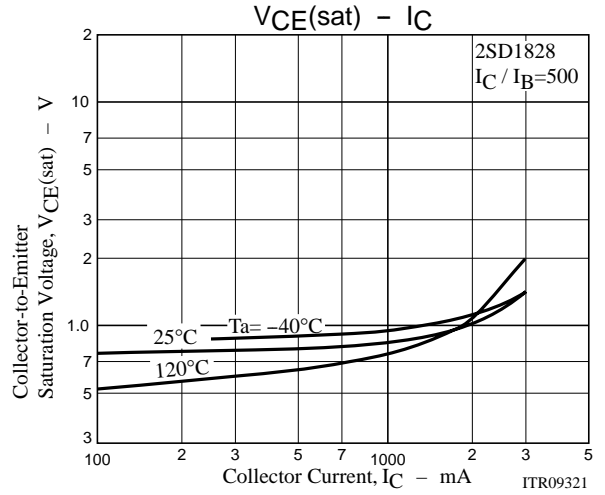
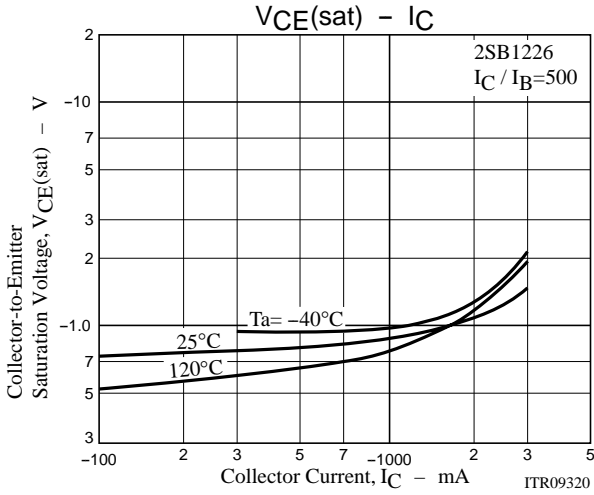
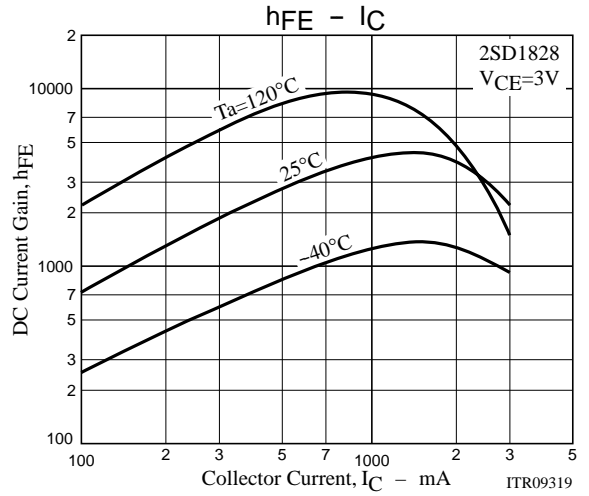
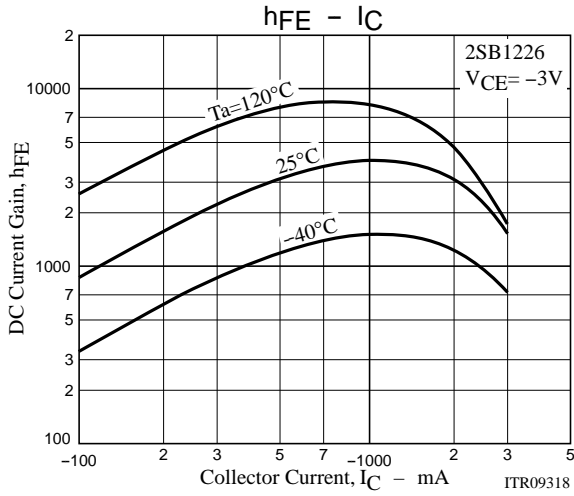
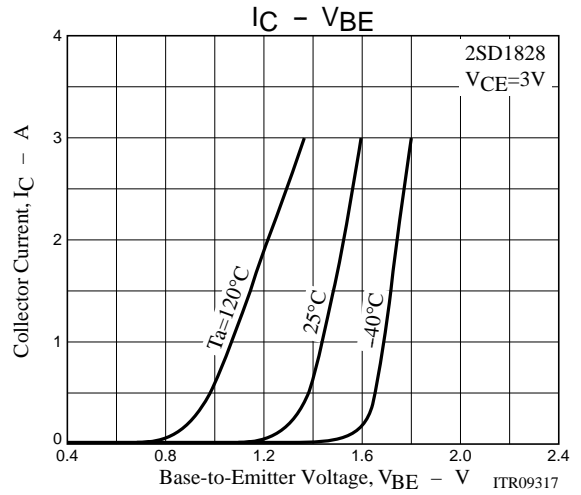
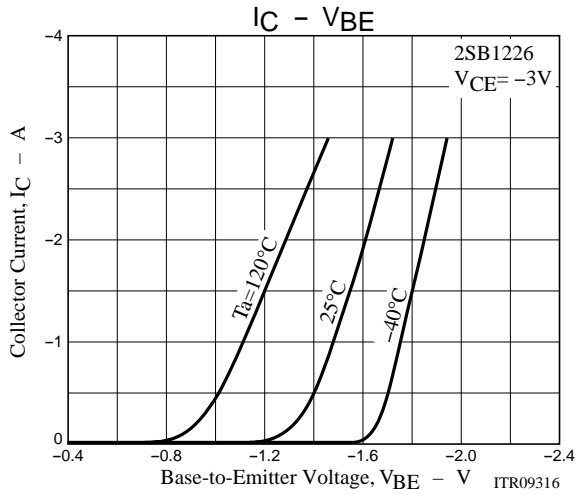
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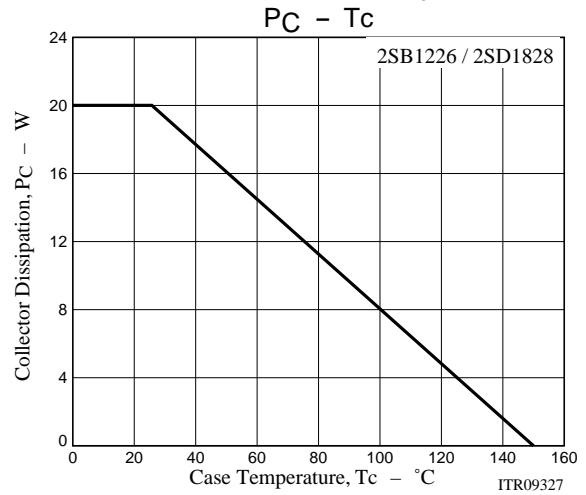
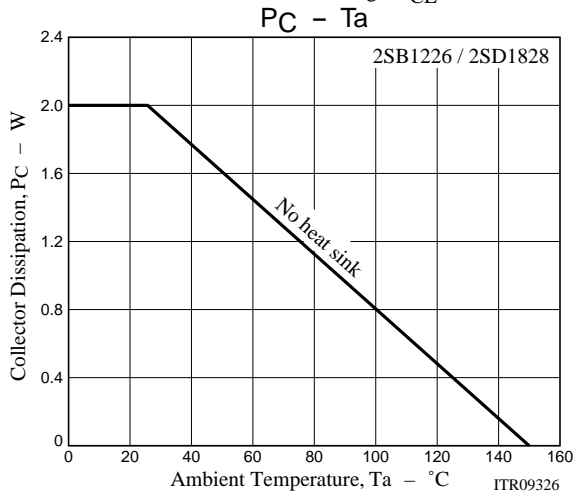
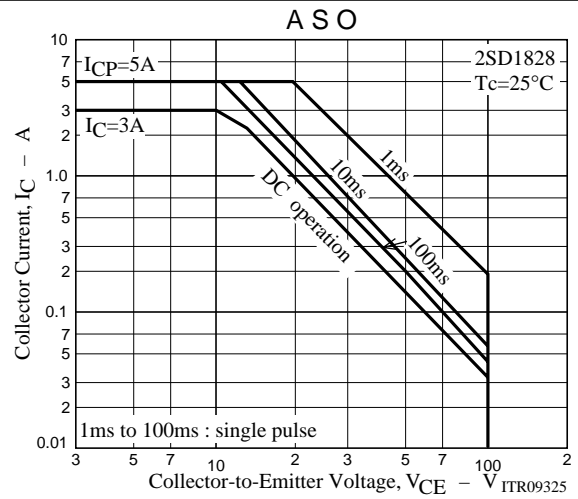
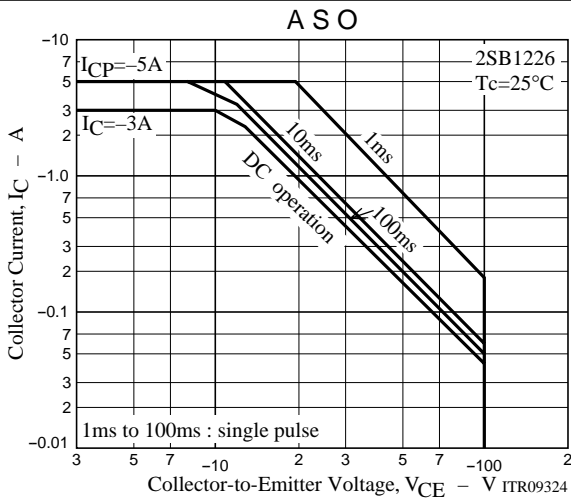
2SD1828



2SB1226/2SD1828



2SB1226/2SD1828



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