

| | | |
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| SANYO | No.2214B | 2SB1228/2SD1830 |
| | | PNP/NPN Epitaxial Planar Silicon Darlington Transistor |
| Driver Applications | | |

Applications

- Suitable for use in control of motor drivers, printer hammer drivers, relay drivers, and constant-voltage regulators.

Features

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

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Absolute Maximum Ratings at Ta = 25°C

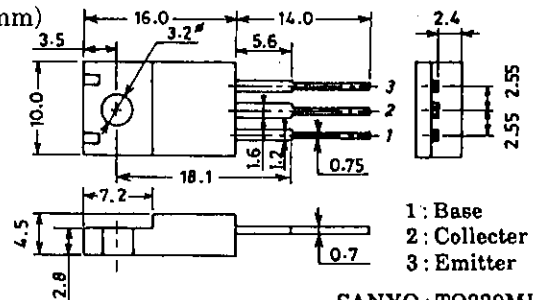
| | | | | |
|------------------------------|------------------|-----|-------------|----|
| Collector-to-Base Voltage | V _{CB0} | (-) | 110 | V |
| Collector-to-Emitter Voltage | V _{CEO} | (-) | 100 | V |
| Emitter-to-Base Voltage | V _{EBO} | (-) | 6 | V |
| Collector Current | I _C | (-) | 8 | A |
| Collector Current (Pulse) | I _{CP} | (-) | 12 | A |
| Collector Dissipation | P _C | | 2.0 | W |
| T _c = 25°C | | | | |
| Junction Temperature | T _j | | 30 | W |
| Storage Temperature | T _{stg} | | 150 | °C |
| | | | -55 to +150 | °C |

Electrical Characteristics at Ta = 25°C

| | | | min | typ | max | unit |
|--------------------------|----------------------|---|------|-------|-----|--------|
| 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 = (-)4A | 1500 | 4000 | | |
| Gain-Bandwidth Product | f _T | V _{CE} = (-)5V, I _C = (-)4A | | 20 | | MHz |
| C-E Saturation Voltage | V _{CE(sat)} | I _C = (-)4A, I _B = (-)8mA | | 0.9 | (-) | 1.5 V |
| | | | | (-) | 1.0 | V |
| B-E Saturation Voltage | V _{BE(sat)} | I _C = (-)4A, I _B = (-)8mA | | | (-) | 2.0 V |
| C-B Breakdown Voltage | V _{(BR)CBO} | I _C = (-)5mA, I _E = 0 | (-) | 110 | | V |
| C-E Breakdown Voltage | V _{(BR)CEO} | I _C = (-)50mA, R _{BE} = ∞ | (-) | 100 | | V |
| Turn-ON Time | t _{on} | See specified Test Circuit. | | 0.6 | | μs |
| | | " | | (0.7) | | μs |
| Storage Time | t _{stg} | " | | 4.8 | | μs |
| | | " | | (1.4) | | μs |
| Fall Time | t _f | " | | 1.6 | | μs |
| | | " | | (1.5) | | μs |

Package Dimensions 2041A

(unit: mm)



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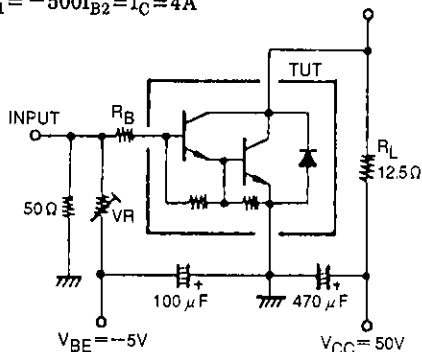
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TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

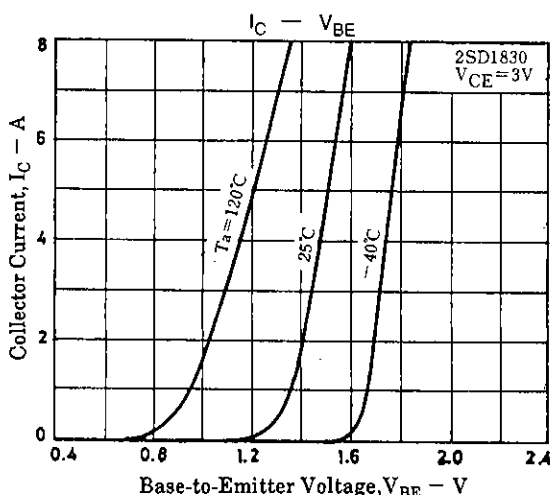
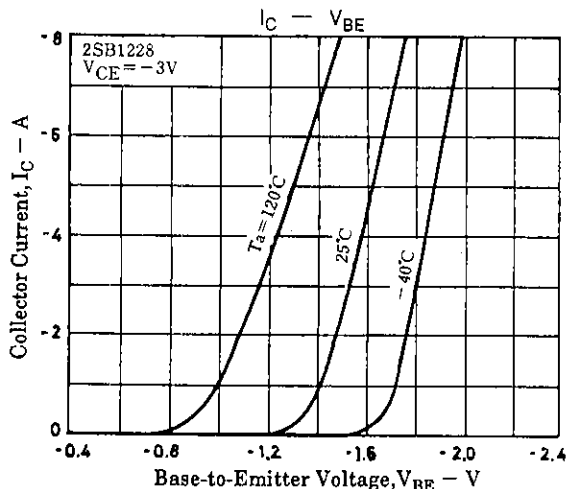
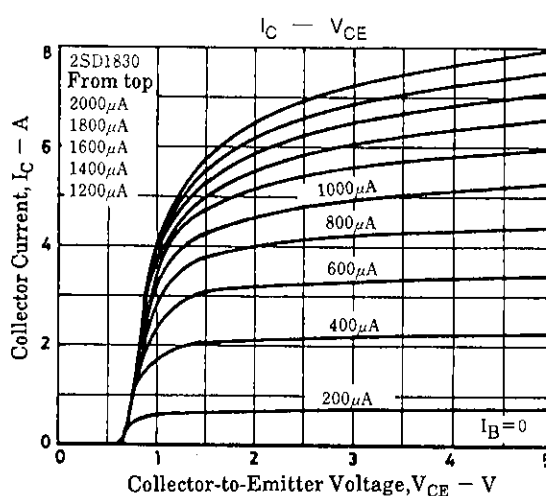
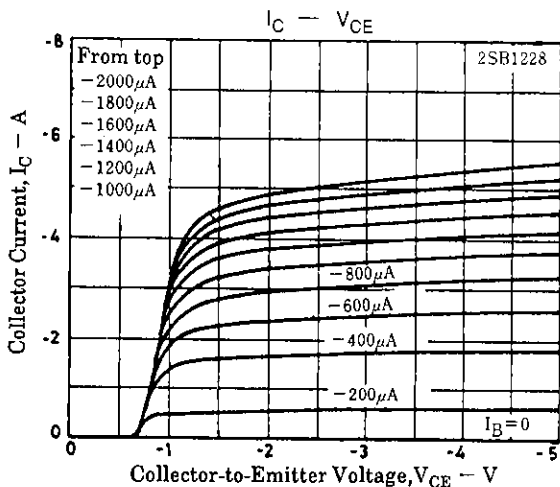
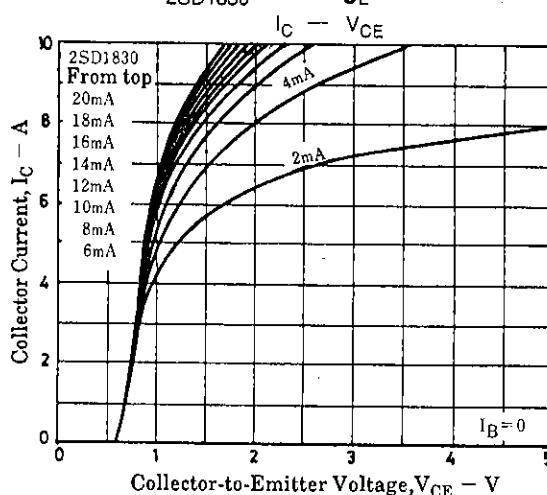
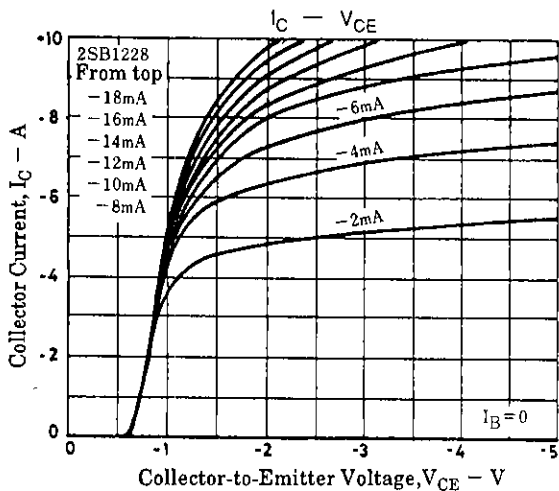
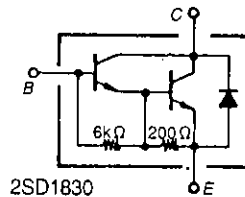
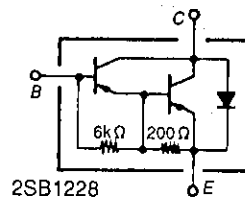
Specified Test Circuit (For PNP, the polarity is reversed.)

PW = 50μs, Duty cycle ≤ 1%

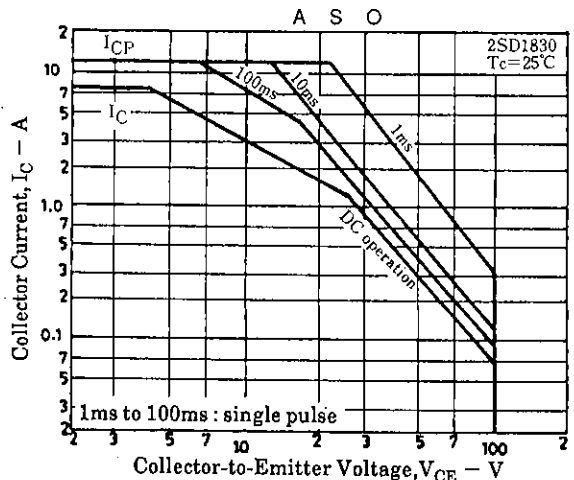
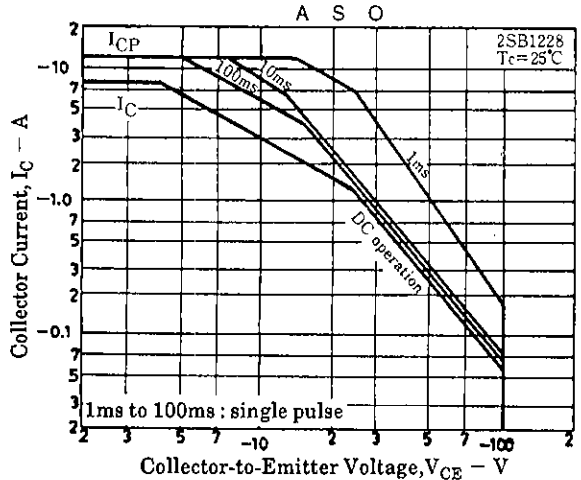
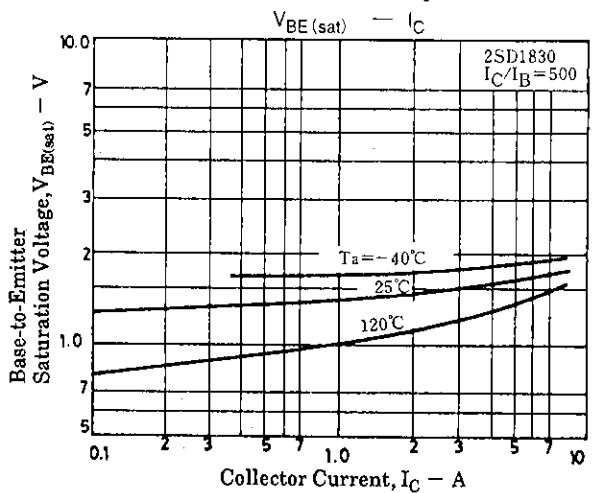
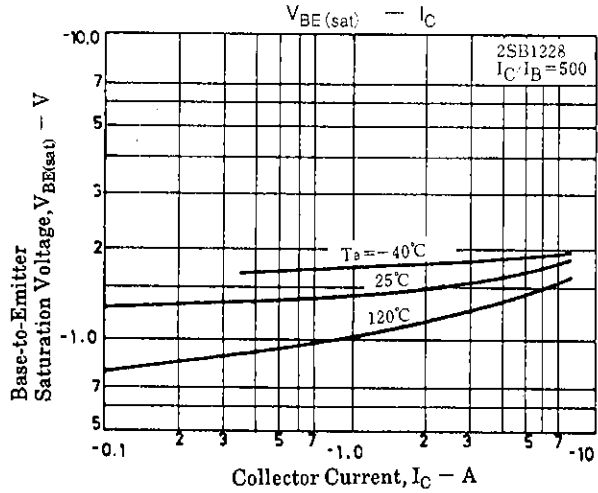
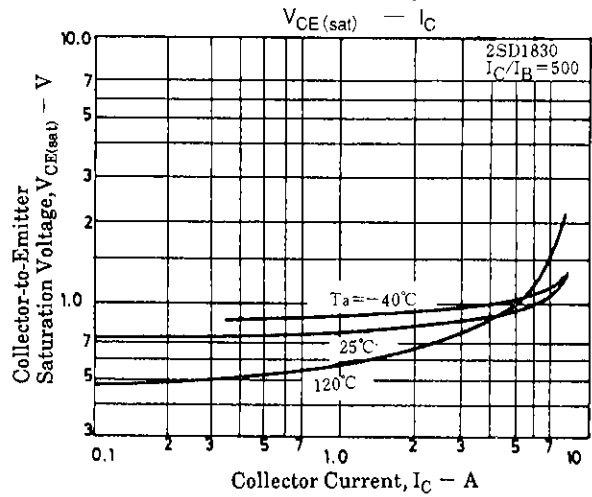
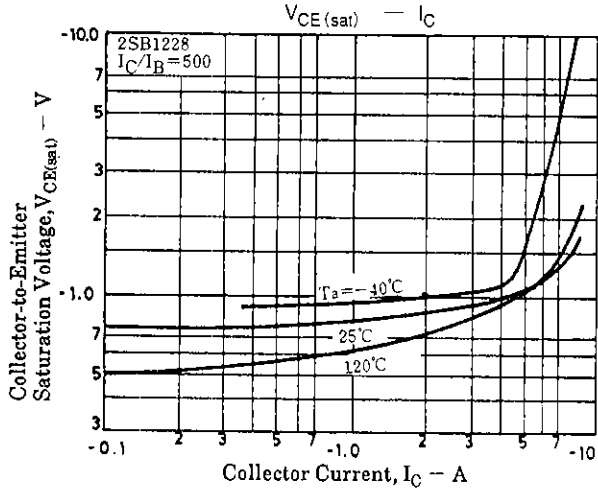
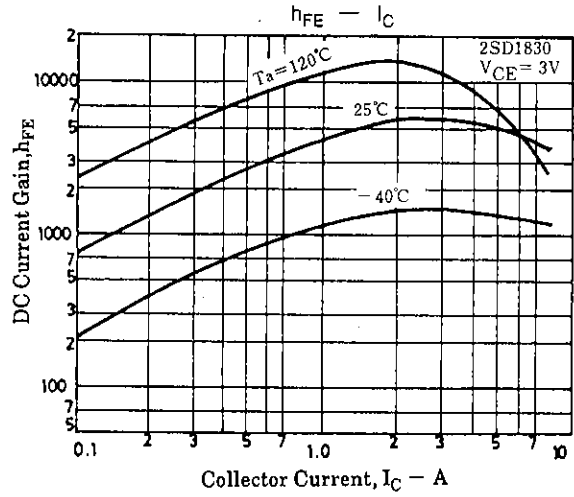
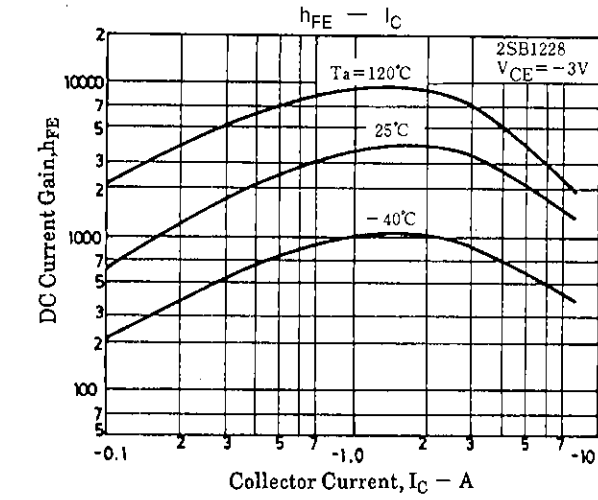
500I_{B1} = -500I_{B2} = I_C = 4A

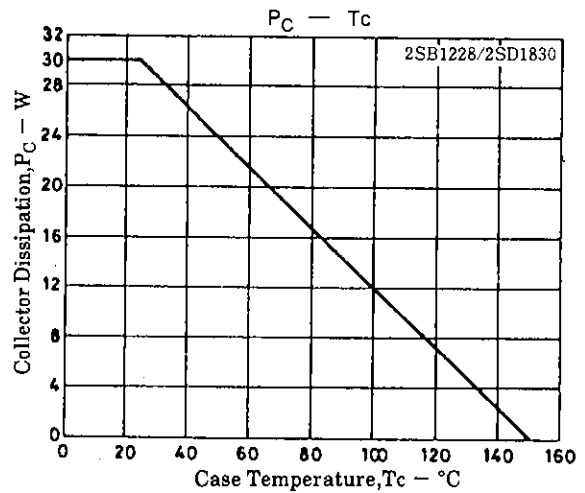
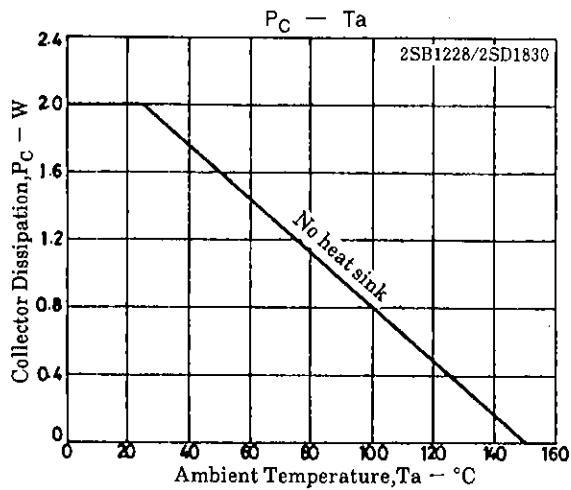


Electrical Connection



2SB1228/2SD1830





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