

| | | |
|----------------------------|--|------------------------|
| SANYO | No.2209C | 2SB1223/2SD1825 |
| | 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.
- Micaless package facilitating mounting.

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Absolute Maximum Ratings at Ta = 25°C

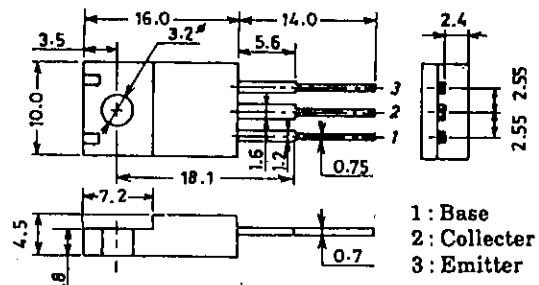
| | | | | unit |
|------------------------------|------------------|-------------|--|------|
| Collector-to-Base Voltage | V _{CB0} | (-)70 | | V |
| Collector-to-Emitter Voltage | V _{CEO} | (-)60 | | V |
| Emitter-to-Base Voltage | V _{EBO} | (-)6 | | V |
| Collector Current | I _C | (-)4 | | A |
| Collector Current (Pulse) | I _{CP} | (-)6 | | A |
| Collector Dissipation | P _C | 2.0 | | W |
| | | 20 | | W |
| Junction Temperature | T _j | 150 | | °C |
| Storage Temperature | T _{stg} | -55 to +150 | | °C |

T_c = 25°C

Electrical Characteristics at Ta = 25°C

| | | | | | unit |
|--------------------------|----------------------|---|-------|--------|--------|
| Collector Cutoff Current | I _{CBO} | V _{CB} = (-)40V, I _E = 0 | min | typ | max |
| Emitter Cutoff Current | I _{EBO} | V _{EB} = (-)5V, I _C = 0 | | | (-)0.1 |
| DC Current Gain | h _{FE} | V _{CE} = (-)2V, I _C = (-)2A | 2000 | 5000 | (-)3.0 |
| Gain-Bandwidth Product | f _T | V _{CE} = (-)5V, I _C = (-)2A | | 20 | MHz |
| C-E Saturation Voltage | V _{CE(sat)} | I _C = (-)2A, I _B = (-)4mA | | 0.9 | (-)1.5 |
| | | | | (-1.0) | V |
| B-E Saturation Voltage | V _{BE(sat)} | I _C = (-)2A, I _B = (-)4mA | | | (-)2.0 |
| C-B Breakdown Voltage | V _{(BR)CBO} | I _C = (-)5mA, I _E = 0 | (-)70 | | V |
| C-E Breakdown Voltage | V _{(BR)CEO} | I _C = (-)50mA, R _{BE} = ∞ | (-)60 | | V |
| Turn-ON Time | t _{on} | See specified Test Circuit. | | 0.6 | μs |
| | | " | | (0.5) | μs |
| Storage Time | t _{stg} | " | | 2.7 | μs |
| | | " | | (1.4) | μs |
| Fall Time | t _f | " | | 1.6 | μs |
| | | " | | (1.2) | μs |

Package Dimensions 2041A
(unit : mm)

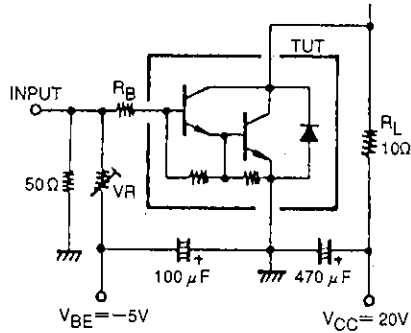


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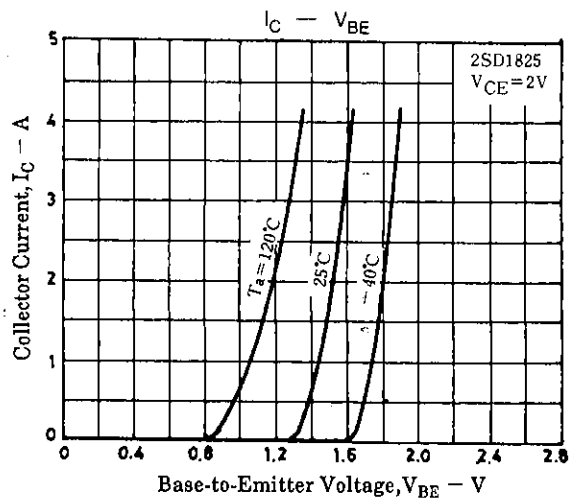
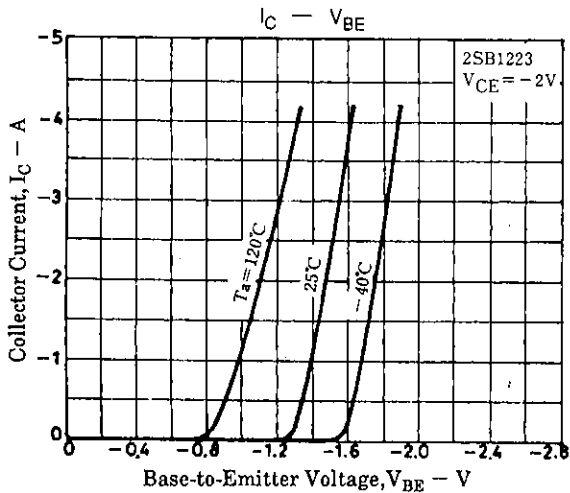
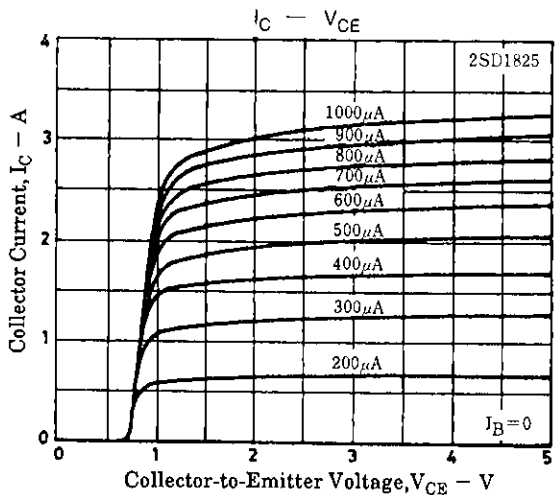
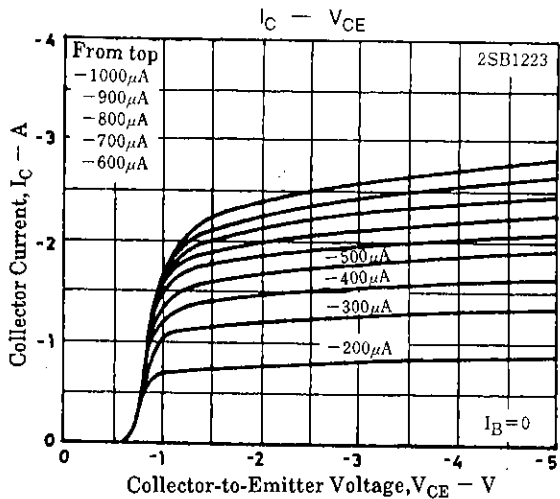
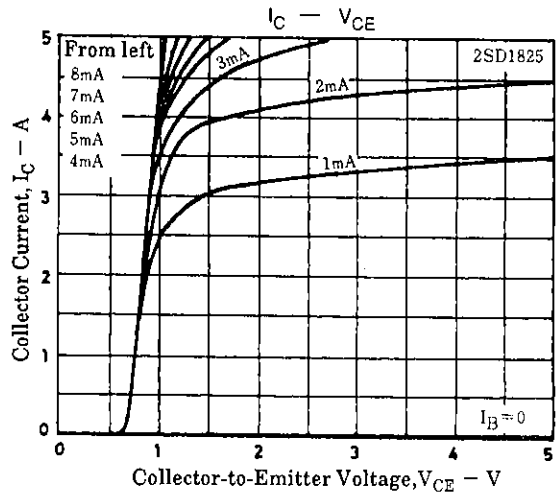
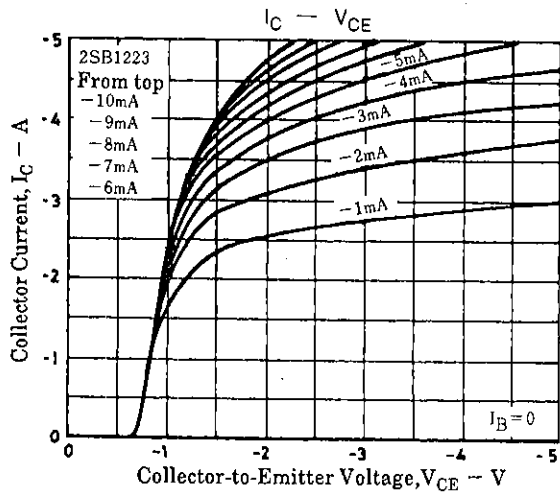
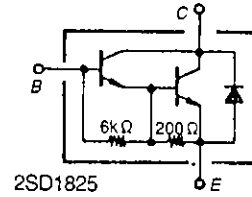
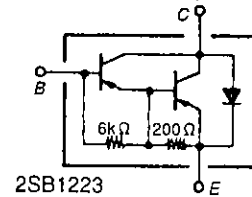
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Specified Test Circuit (For PNP, the polarity is reversed.)

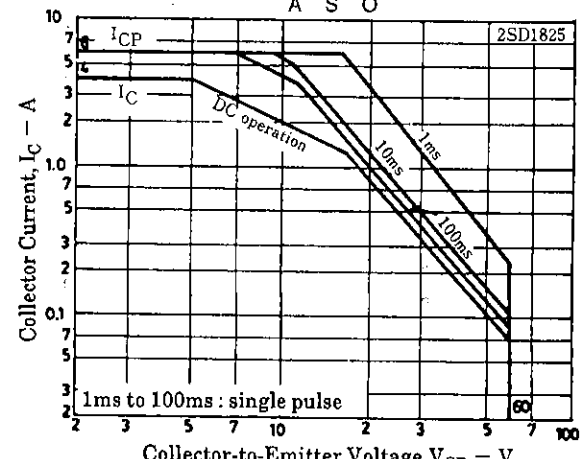
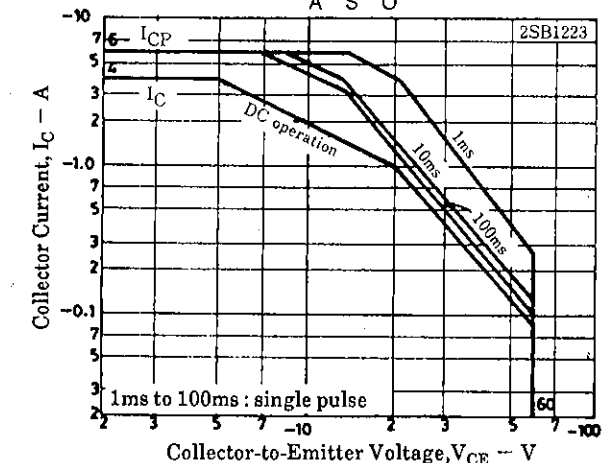
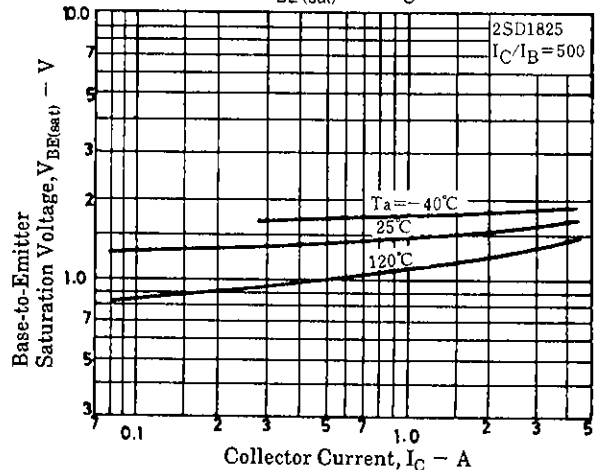
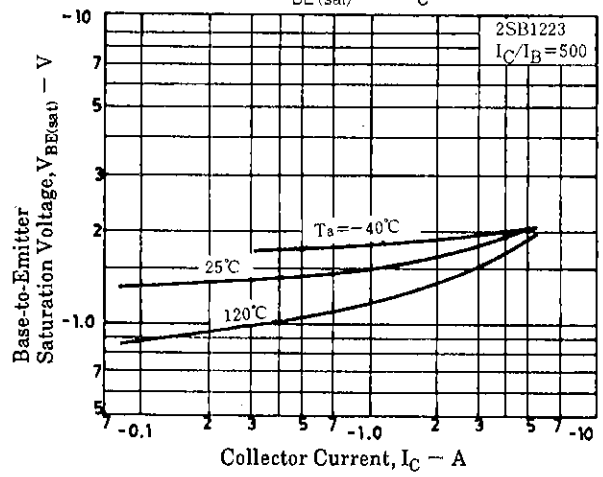
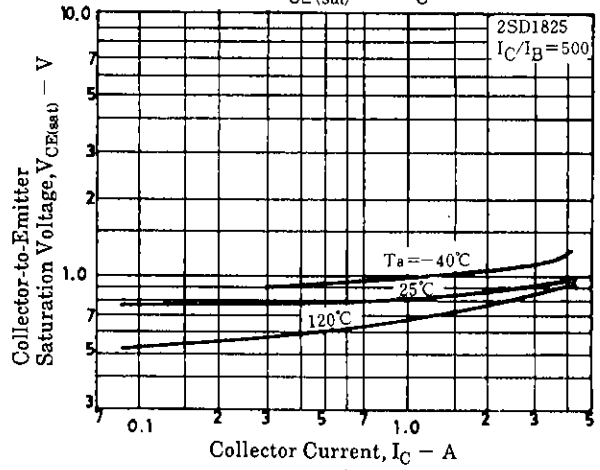
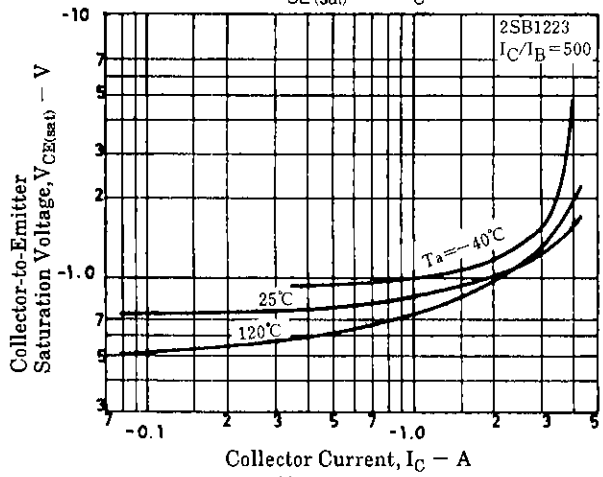
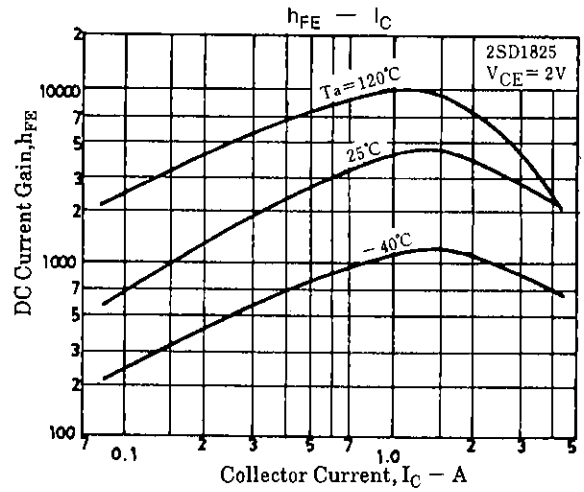
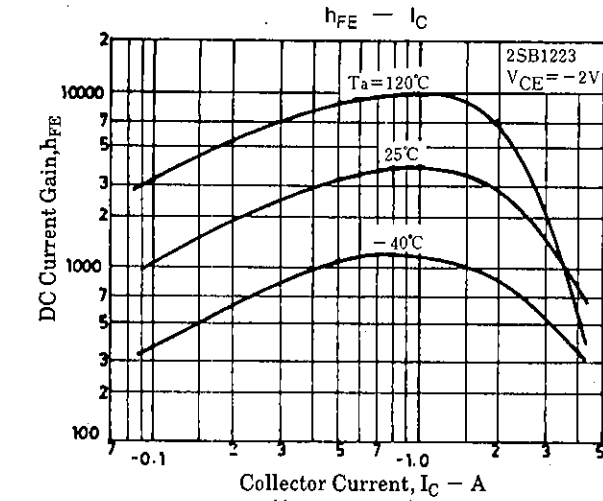
PW = 50μs, Duty cycle ≤ 1%
 500I_{B1} = -500I_{B2} = I_C = 2A



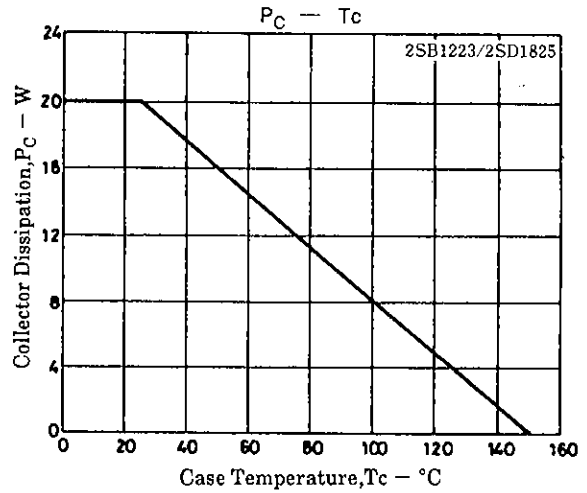
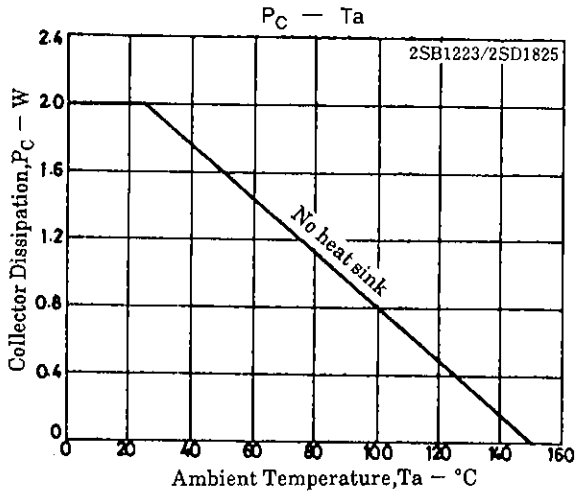
Electrical Connection



2SB1223/2SD1825



2SB1223/2SD1825



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