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| SANYO | No.2506 | 2SD1853 |
| | NPN Epitaxial Planar Silicon Darlington Transistor | |
| Driver Applications | | |

Applications

Motor drivers, hammer drivers, relay drivers

Features

- . High DC current gain
- . Low saturation voltage

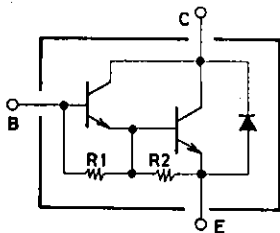
Absolute Maximum Ratings at Ta=25°C

| | | | |
|------------------------------|-----------|-------------|----|
| Collector to Base Voltage | V_{CB0} | 80 | V |
| Collector to Emitter Voltage | V_{CE0} | 60 | V |
| Emitter to Base Voltage | V_{EB0} | 6 | V |
| Collector Current | I_C | 1.5 | A |
| Collector Current(Pulse) | I_{CP} | 3 | A |
| Collector Dissipation | P_C | 0.7 | W |
| Junction Temperature | T_J | 150 | °C |
| Storage Temperature | T_{stg} | -55 to +150 | °C |

Electrical Characteristics at Ta=25°C

| | | | min | typ | max | unit |
|--------------------------|---------------|---------------------------|------|-----|-----|---------|
| Collector Cutoff Current | I_{CBO} | $V_{CB}=60V, I_E=0$ | | | 10 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=5V, I_C=0$ | | | 2.5 | mA |
| DC Current Gain | $h_{FE}(1)$ | $V_{CE}=2V, I_C=0.5A$ | 1000 | | | |
| | $h_{FE}(2)$ | $V_{CE}=2V, I_C=1A$ | 2000 | | | |
| C-E Saturation Voltage | $V_{CE(sat)}$ | $I_C=1A, I_B=2mA$ | | | 1.5 | V |
| B-E Saturation Voltage | $V_{BE(sat)}$ | $I_C=1A, I_B=2mA$ | | | 2.0 | V |
| C-B Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=1mA, I_E=0$ | 80 | | | V |
| C-E Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=25mA, R_{BE}=\infty$ | 60 | | | V |

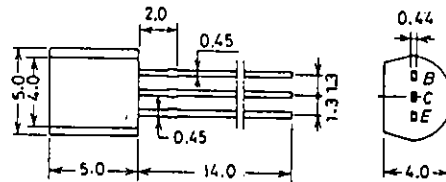
Electrical Connection



$R1 \approx 5k\Omega$
 $R2 \approx 500\Omega$

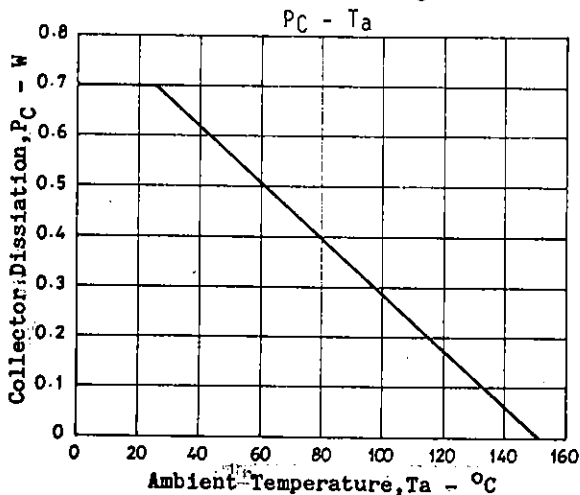
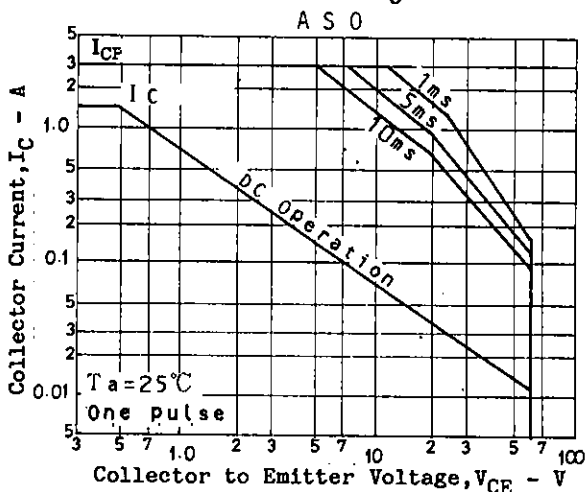
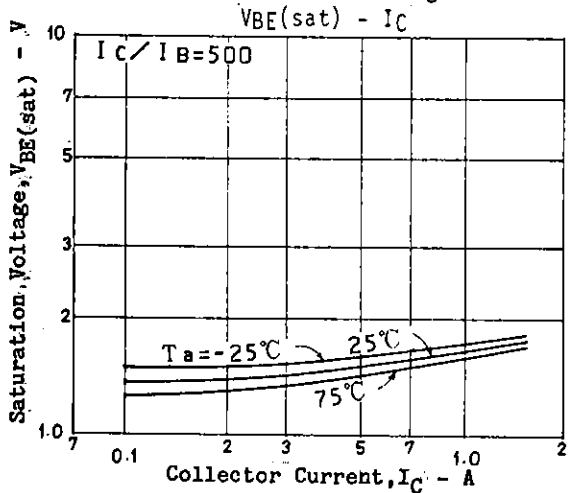
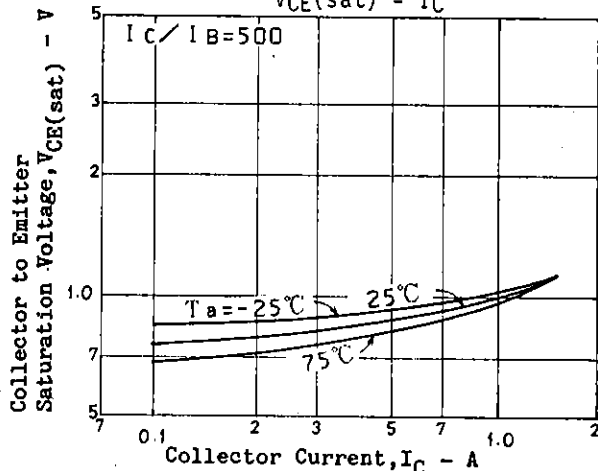
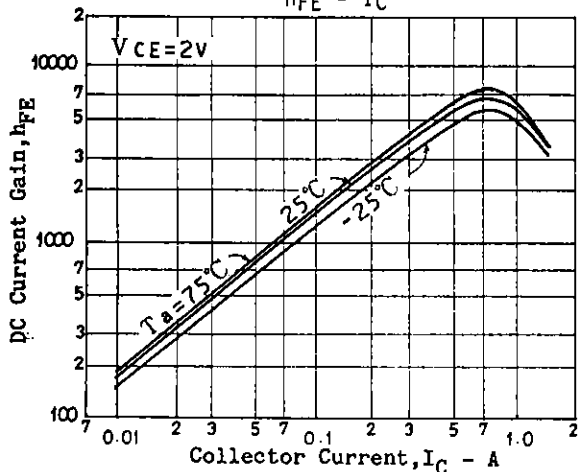
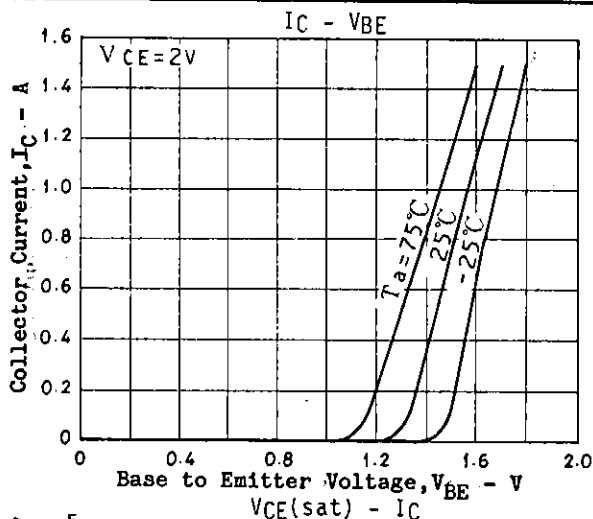
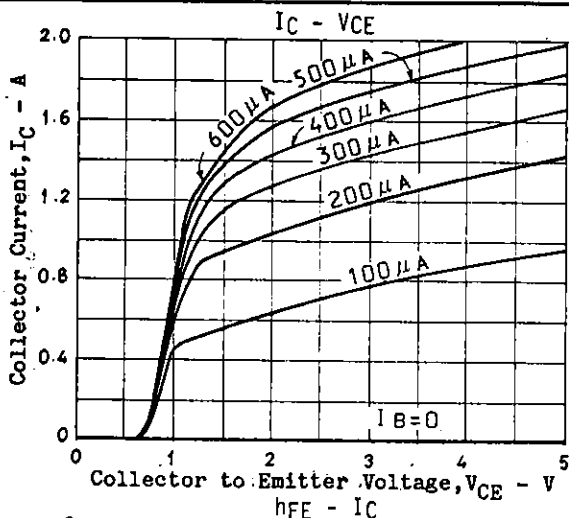
Package Dimensions 2003A

(unit: mm)



JEDEC: TO-92
 EIAJ : SC-43
 SANYO: NP

B. Base
 C. Collector
 E. Emitter



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