

|                              |  |                |
|------------------------------|--|----------------|
| <b>SANYO</b>                 | No.3483  | <b>2SC4671</b> |
|                              | NPN Epitaxial Planar Silicon Darlington Transistor |                |
| Various Drivers Applications |  |                |

**Applications**

- Suitable for use in switching of L load (motor drivers, printer hammer drivers, relay drivers).

**Features**

- High DC current gain
- Wide ASO
- On-chip zener diode of  $60 \pm 10V$  between collector and base.
- Uniformity in collector to base voltage.
- Large inductive load handling capability.

**Absolute Maximum Ratings at  $T_a = 25^\circ C$**

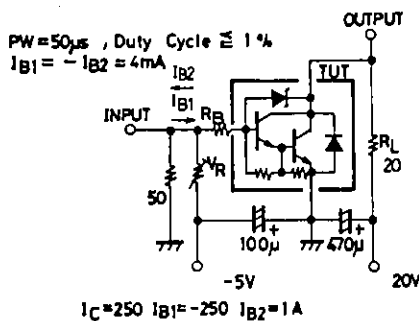
|                              |           |               | unit       |
|------------------------------|-----------|---------------|------------|
| Collector to Base Voltage    | $V_{CBO}$ | *50           | V          |
| Collector to Emitter Voltage | $V_{CEO}$ | *50           | V          |
| Emitter to Base Voltage      | $V_{EBO}$ | 6             | V          |
| Collector Current            | $I_C$     | 2             | A          |
| Collector Current(Pulse)     | $I_{CP}$  | 4             | A          |
| Collector Dissipation        | $P_C$     | 1             | W          |
| Junction Temperature         | $T_j$     | 150           | $^\circ C$ |
| Storage Temperature          | $T_{stg}$ | - 55 to + 150 | $^\circ C$ |

\* : On-chip zener diode ( $60 \pm 10V$ )

**Electrical Characteristics at  $T_a = 25^\circ C$**

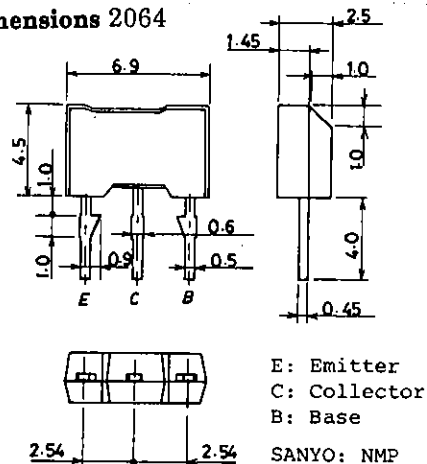
|                                    |               |                                 | min  | typ  | max | unit    |
|------------------------------------|---------------|---------------------------------|------|------|-----|---------|
| Collector Cutoff Current           | $I_{CBO}$     | $V_{CB} = 40V, I_E = 0$         |      |      | 10  | $\mu A$ |
| Emitter Cutoff Current             | $I_{EBO}$     | $V_{EB} = 5V, I_C = 0$          |      |      | 2   | mA      |
| DC Current Gain                    | $h_{FE}$      | $V_{CE} = 5V, I_C = 1A$         | 1000 | 4000 |     |         |
| C-E Saturation Voltage             | $V_{CE(sat)}$ | $I_C = 1A, I_B = 4mA$           |      | 1.0  | 1.5 | V       |
| B-E Saturation Voltage             | $V_{BE(sat)}$ | $I_C = 1A, I_B = 4mA$           |      |      | 2.0 | V       |
| Inductive Load Handling Capability | Es/b          | $L = 100mH, R_{BE} = 100\Omega$ | 25   |      |     | mJ      |
| C-B Breakdown Voltage              | $V_{(BR)CBO}$ | $I_C = 100\mu A, I_E = 0$       | 50   | 60   | 70  | V       |
| C-E Breakdown Voltage              | $V_{(BR)CEO}$ | $I_C = 1mA, R_{BE} = \infty$    | 50   | 60   | 70  | V       |
| Turn-on Time                       | $t_{on}$      | See specified Test Circuit.     |      | 0.2  |     | $\mu s$ |
| Storage Time                       | $t_{stg}$     | "                               |      | 3.5  |     | $\mu s$ |
| Fall Time                          | $t_f$         | "                               |      | 0.5  |     | $\mu s$ |

**Switching Time Test Circuit**

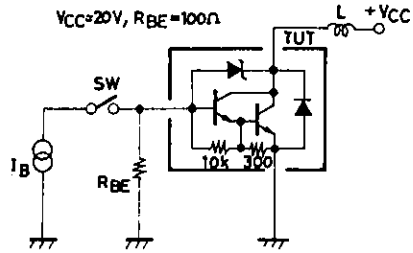


Unit(Resistance :  $\Omega$  , Capacitance : F)

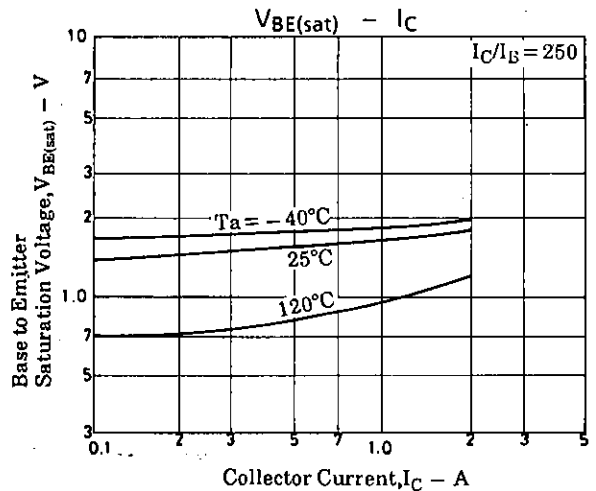
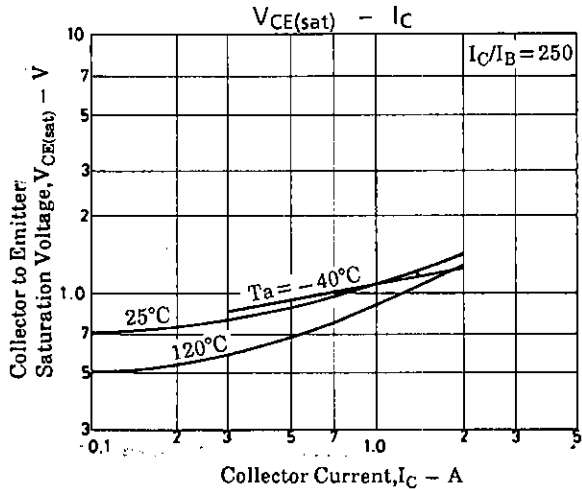
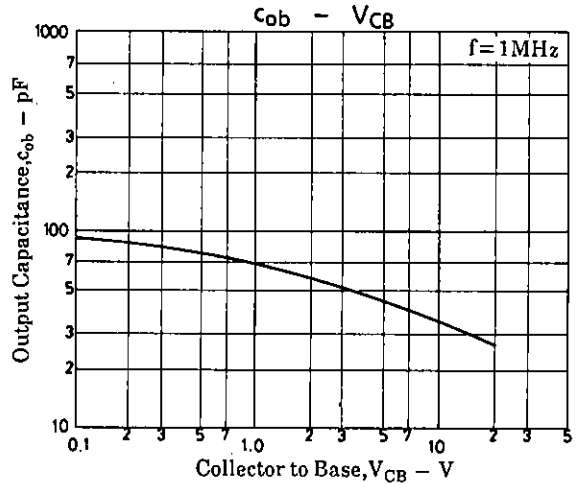
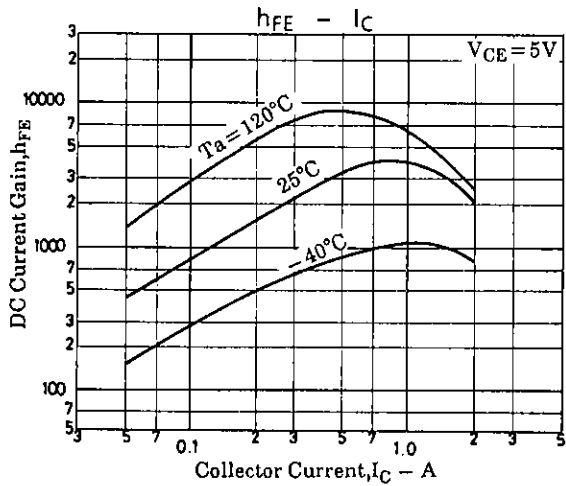
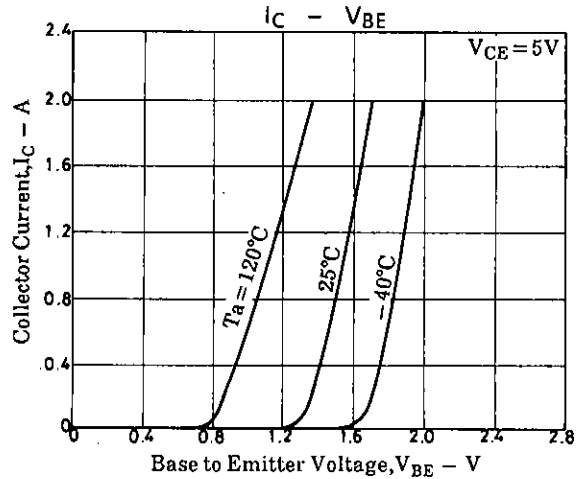
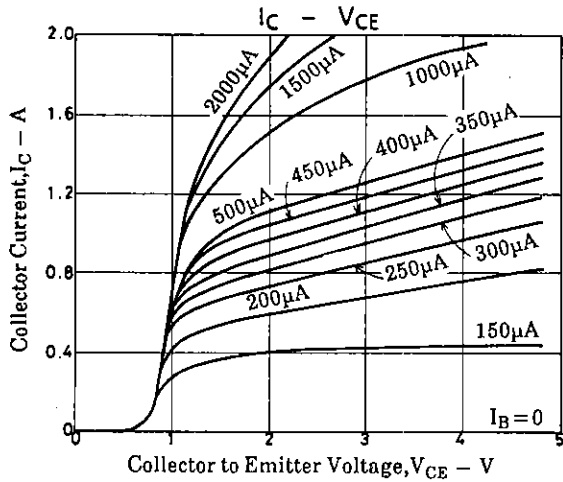
**Package Dimensions 2064**  
(unit: mm)

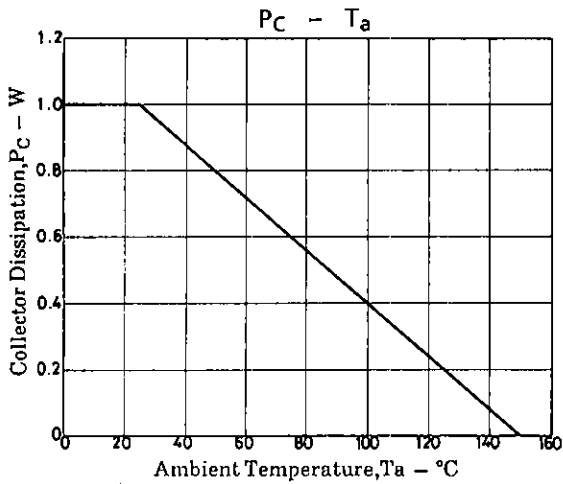
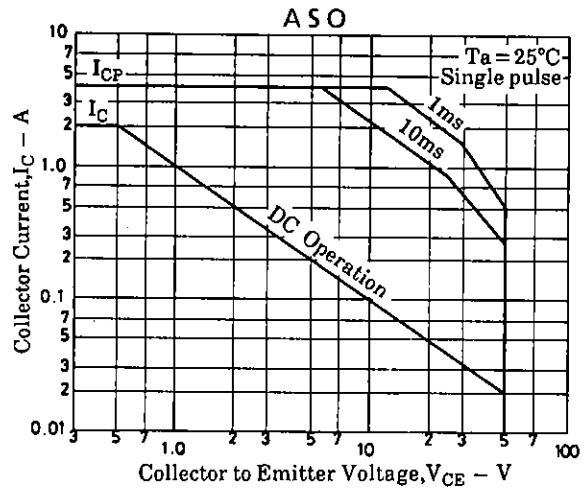
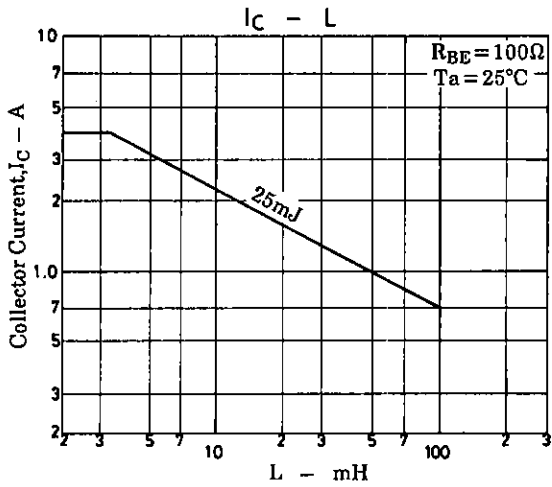


Es/b Test Circuit



Unit(Resistance : Ω)





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