

**SANYO**

No.1422C

**2SC3294**

NPN Planar Silicon Transistor

Driver Applications

**Applications**

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

**Features**

- High DC current gain.
- Large current capacity and wide ASO.
- On-chip Zener diode of  $60 \pm 10V$  between collector and base.
- Uniformity in collector-to-base breakdown voltage due to adoption of accurate impurity diffusion process.
- High 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            | $I_C$     | 3           | A          |
| Collector Current (Pulse)    | $I_{CP}$  | 6           | A          |
| Base Current                 | $I_B$     | 0.6         | A          |
| Collector Dissipation        | $P_C$     | 25          | W          |
| Junction Temperature         | $T_j$     | 150         | $^\circ C$ |
| Storage Temperature          | $T_{stg}$ | -55 to +150 | $^\circ C$ |

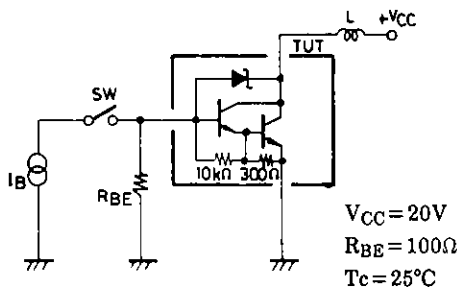
$T_c = 25^\circ C$

\* : With Zener diode ( $60 \pm 10V$ )

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

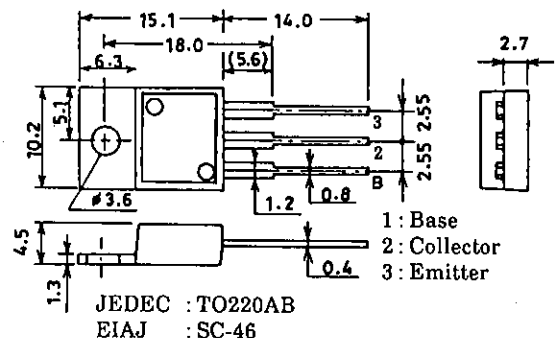
|                                    |               |                                 | min  | typ  | max | unit    |
|------------------------------------|---------------|---------------------------------|------|------|-----|---------|
| Collector Cutoff Current           | $I_{CBO}$     | $V_{CB} = 40V, I_E = 0$         |      |      | 10  | $\mu A$ |
| Emitter Cutoff Current             | $I_{EBO}$     | $V_{EB} = 5V, I_C = 0$          |      |      | 2   | mA      |
| DC Current Gain                    | $h_{FE}$      | $V_{CE} = 5V, I_C = 1.5A$       | 1000 | 4000 |     |         |
| Gain-Bandwidth Product             | $f_T$         | $V_{CE} = 5V, I_C = 1.5A$       |      | 180  |     | MHz     |
| C-E Saturation Voltage             | $V_{CE(sat)}$ | $I_C = 1.5A, I_B = 6mA$         |      | 1.0  | 1.5 | V       |
| B-E Saturation Voltage             | $V_{BE(sat)}$ | $I_C = 1.5A, I_B = 6mA$         |      |      | 2.0 | V       |
| C-B Breakdown Voltage              | $V_{(BR)CBO}$ | $I_C = 0.1mA, I_E = 0$          | 50   | 60   | 70  | V       |
| C-E Breakdown Voltage              | $V_{(BR)CEO}$ | $I_C = 1mA, R_{BE} = \infty$    | 50   | 60   | 70  | V       |
| Inductive Load Handling Capability | Es/b          | $L = 100mH, R_{BE} = 100\Omega$ | 30   |      |     | mJ      |

**Es/b Test Circuit**

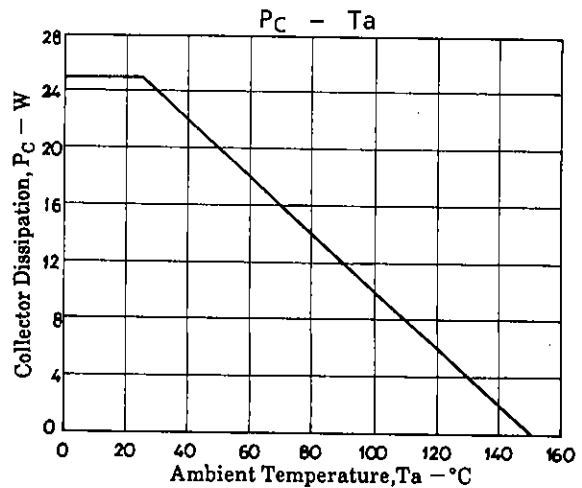
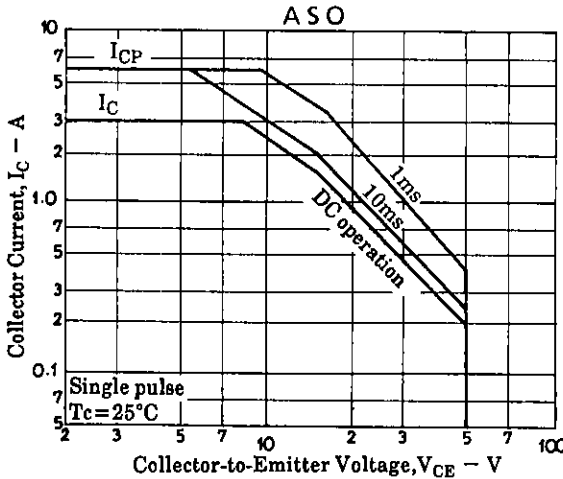
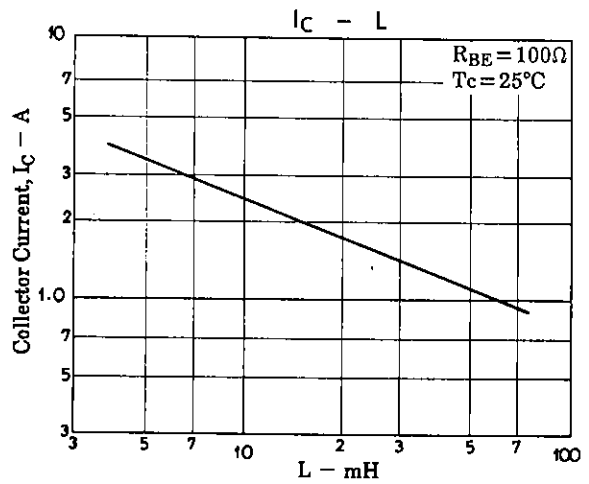
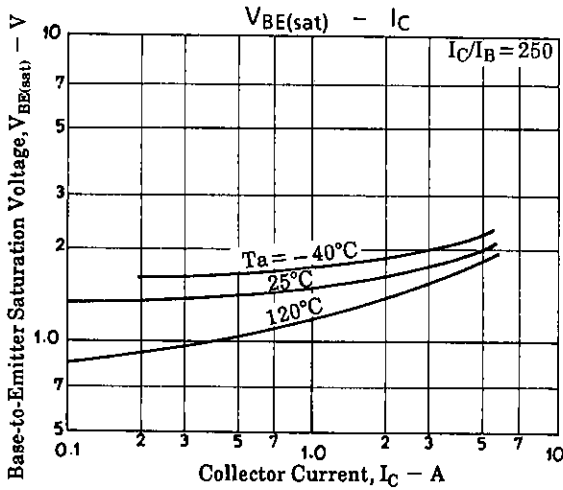
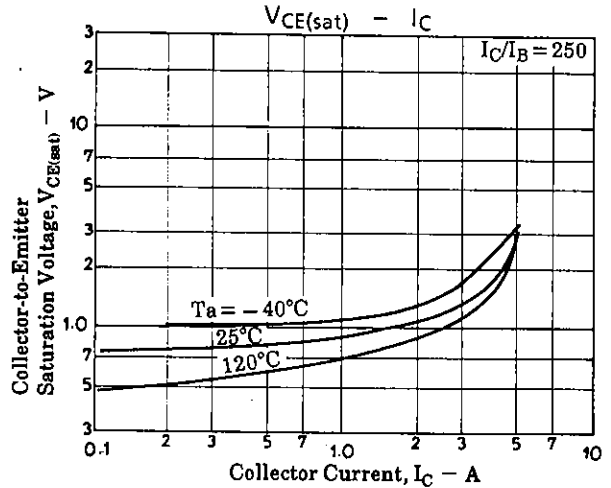
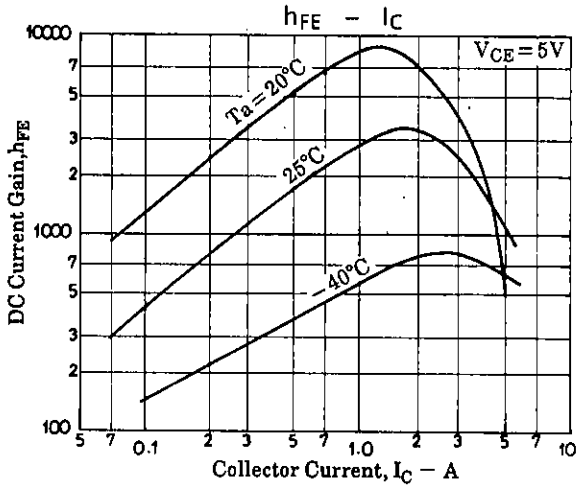
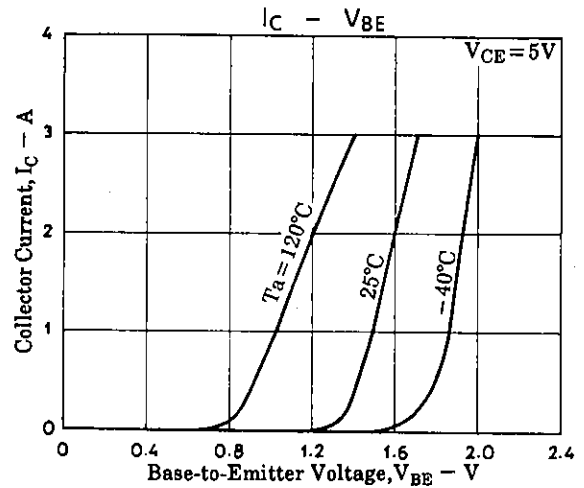
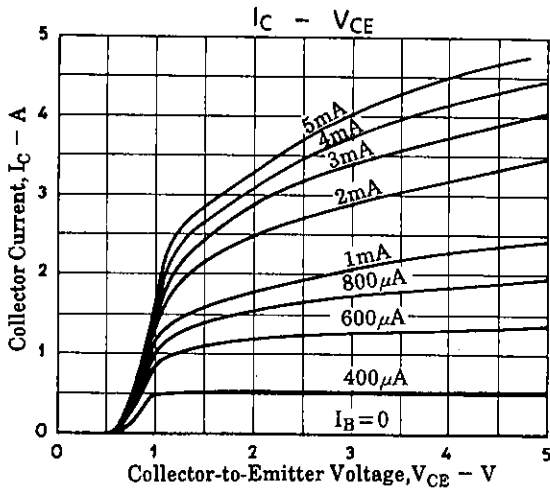


**Package Dimensions 2010C**

(unit : mm)



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