



## 2SC4450

### 1500V/5mA High-Voltage Amplifier, High-Voltage Switching Applications

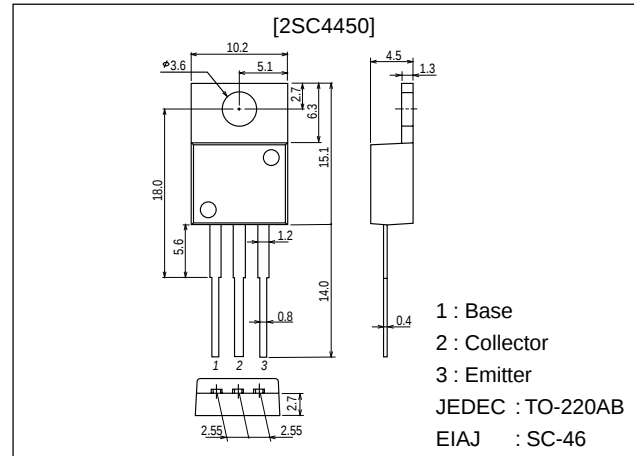
#### Features

- High breakdown voltage.
- Small  $C_{ob}$ .
- Wide ASO.
- High reliability (Adoption of HVP process).

#### Package Dimensions

unit:mm

2010C



#### Specifications

##### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

| Parameter                    | Symbol    | Conditions | Ratings     | Unit             |
|------------------------------|-----------|------------|-------------|------------------|
| Collector-to-Base Voltage    | $V_{CBO}$ |            | 1500        | V                |
| Collector-to-Emitter Voltage | $V_{CEO}$ |            | 1500        | V                |
| Emitter-to-Base Voltage      | $V_{EBO}$ |            | 5           | V                |
| Collector Current            | $I_C$     |            | 5           | mA               |
| Collector Current (Pulse)    | $I_{CP}$  |            | 15          | mA               |
| Collector Dissipation        | $P_C$     |            | 1.75        | W                |
| Junction Temperature         | $T_J$     |            | 150         | $^\circ\text{C}$ |
| Storage Temperature          | $T_{stg}$ |            | -55 to +150 | $^\circ\text{C}$ |

##### Electrical Characteristics at $T_a = 25^\circ\text{C}$

| Parameter                               | Symbol        | Conditions                               | Ratings |     |     | Unit          |
|-----------------------------------------|---------------|------------------------------------------|---------|-----|-----|---------------|
|                                         |               |                                          | min     | typ | max |               |
| Collector Cutoff Current                | $I_{CBO}$     | $V_{CB}=1500\text{V}, I_E=0$             |         |     | 1   | $\mu\text{A}$ |
| Emitter Cutoff Current                  | $I_{EBO}$     | $V_{EB}=4\text{V}, I_C=0$                |         |     | 1   | $\mu\text{A}$ |
| DC Current Gain                         | $h_{FE}$      | $V_{CE}=5\text{V}, I_C=200\mu\text{A}$   | 10      |     | 60  |               |
| Gain-Bandwidth Product                  | $f_T$         | $V_{CE}=10\text{V}, I_C=200\mu\text{A}$  |         | 6   |     | MHz           |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=500\mu\text{A}, I_B=100\mu\text{A}$ |         |     | 5   | V             |
| Base-to-Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C=500\mu\text{A}, I_B=100\mu\text{A}$ |         |     | 2   | V             |
| Collector-to-Base Breakdown Voltage     | $V_{(BR)CBO}$ | $I_C=10\mu\text{A}, I_E=0$               | 1500    |     |     | V             |
| Collector-to-Emitter Breakdown Voltage  | $V_{(BR)CEO}$ | $I_C=100\mu\text{A}, R_{BE}=\infty$      | 1500    |     |     | V             |
| Emitter-to-Base Breakdown Voltage       | $V_{(BR)EBO}$ | $I_E=10\mu\text{A}, I_C=0$               | 5       |     |     | V             |
| Output Capacitance                      | $C_{ob}$      | $V_{CB}=100\text{V}, f=1\text{MHz}$      |         | 1.5 |     | pF            |

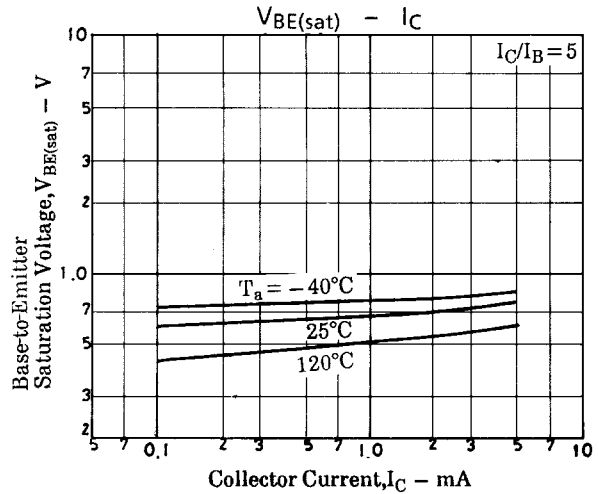
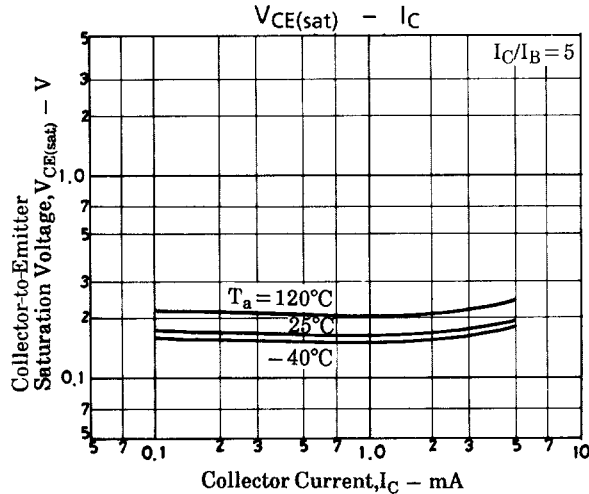
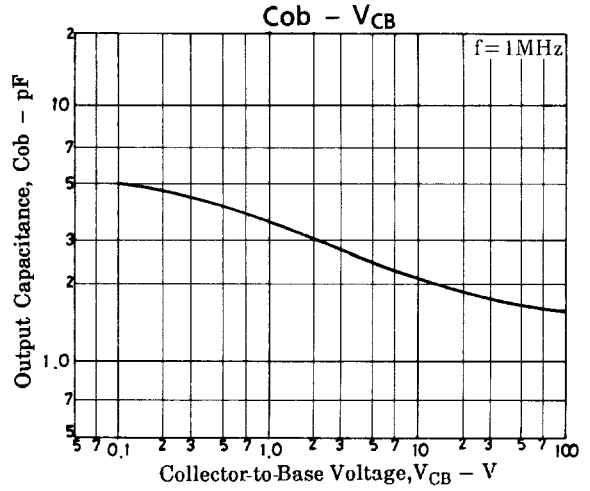
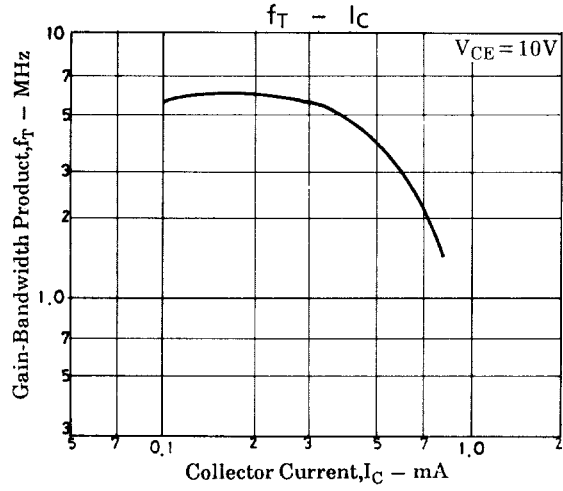
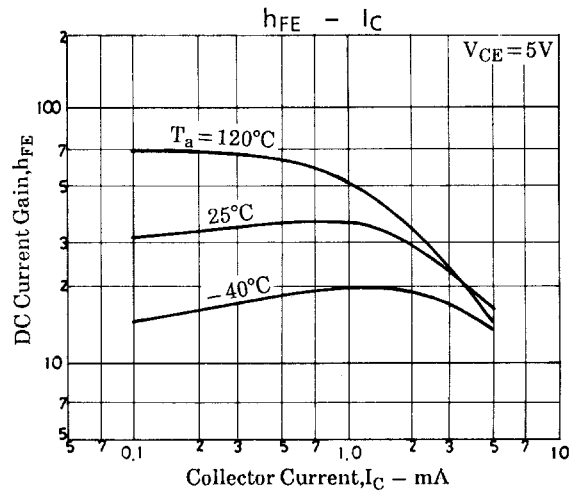
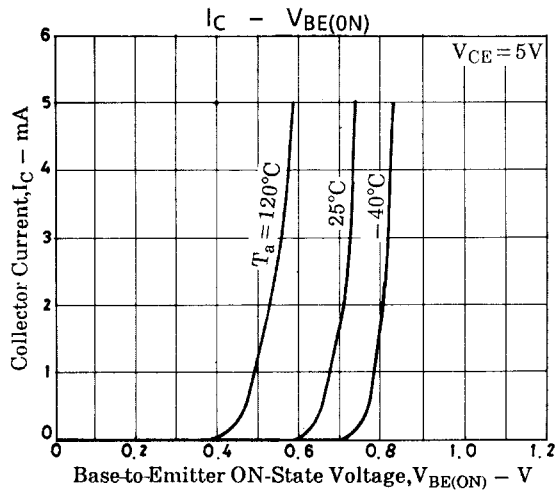
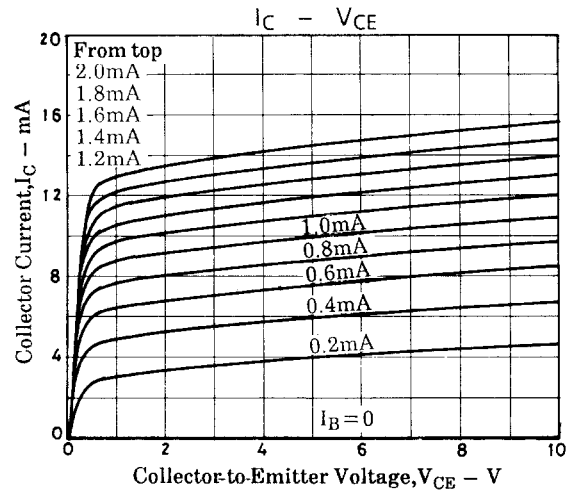
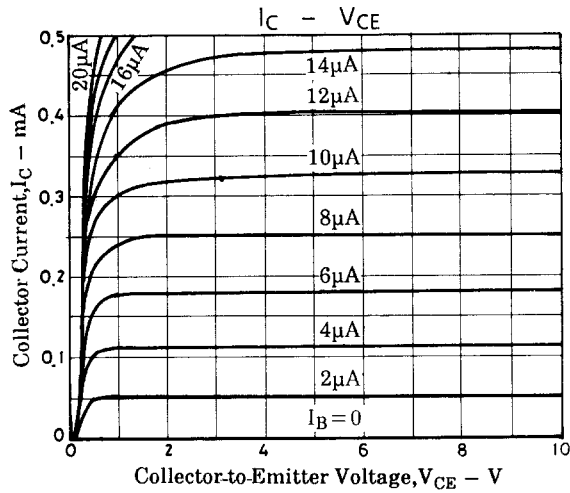
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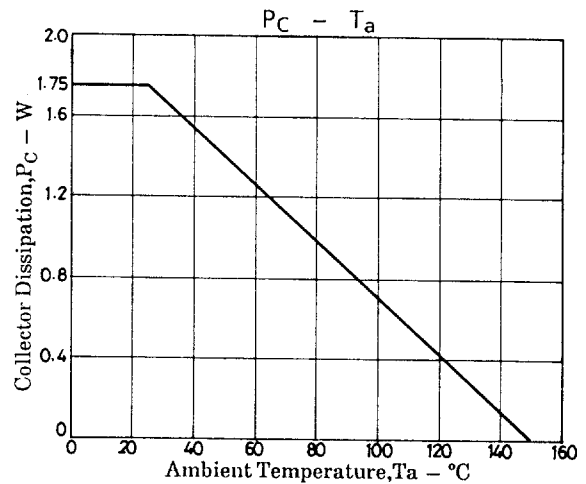
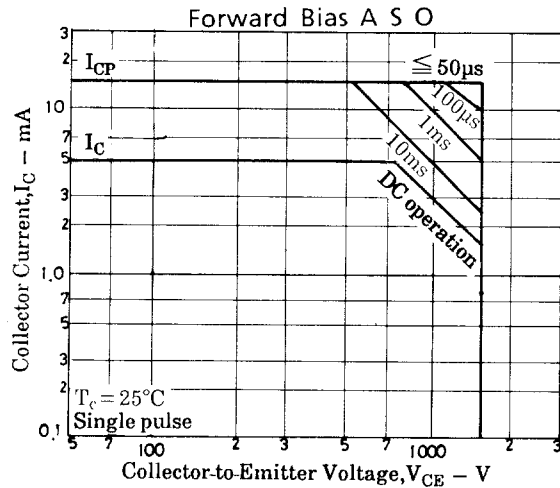
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