

**2SC3676**

## 900V/300mA High-Voltage Amplifier High-Voltage Switching Applications

### Applications

- High voltage amplifiers.
- High-voltage switching applications.
- Dynamic focus applications.

### Features

- High breakdown voltage ( $V_{CEO}$  min=900V).
- Small Cob (Cob typ=5.0pF).
- Wide ASO (Adoption of MBIT process).
- High reliability (Adoption of HVP process).

### 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 | $V_{CEO}$ |                        | 900         | V                |
| Emitter-to-Base Voltage      | $V_{EBO}$ |                        | 5           | V                |
| Collector Current            | $I_C$     |                        | 300         | mA               |
| Collector Current (Pulse)    | $I_{CP}$  |                        | 1           | A                |
| Collector Dissipation        | $P_C$     | $T_c=25^\circ\text{C}$ | 20          | 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                | $I_{CBO}$     | $V_{CB}=900\text{V}, I_E=0$          |         |     | 10  | $\mu\text{A}$ |
| Emitter Cutoff Current                  | $I_{EBO}$     | $V_{EB}=4\text{V}, I_C=0$            |         |     | 10  | $\mu\text{A}$ |
| DC Current Gain                         | $h_{FE}$      | $V_{CE}=5\text{V}, I_C=30\text{mA}$  | 30      |     |     |               |
| Gain-Bandwidth Product                  | $f_T$         | $V_{CE}=10\text{V}, I_C=30\text{mA}$ |         | 6   |     | MHz           |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=60\text{mA}, I_B=12\text{mA}$   |         |     | 5   | V             |
| Base-to-Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C=60\text{mA}, I_B=12\text{mA}$   |         |     | 2   | V             |
| Collector-to-Base Breakdown Voltage     | $V_{(BR)CBO}$ | $I_C=1\text{mA}, I_E=0$              | 1500    |     |     | V             |
| Collector-to-Emitter Breakdown Voltage  | $V_{(BR)CEO}$ | $I_C=1\text{mA}, R_{BE}=\infty$      | 900     |     |     | V             |
| Emitter-to-Base Breakdown Voltage       | $V_{(BR)EBO}$ | $I_E=1\text{mA}, I_C=0$              | 5       |     |     | V             |
| Output Capacitance                      | Cob           | $V_{CB}=100\text{V}, f=1\text{MHz}$  |         | 5.0 |     | pF            |

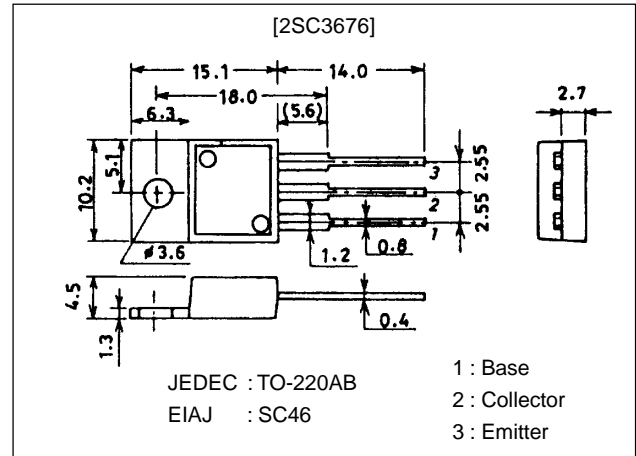
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### Package Dimensions

unit:mm

2010C

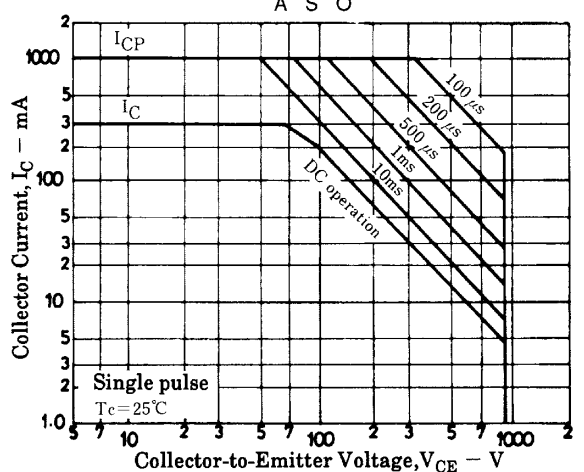
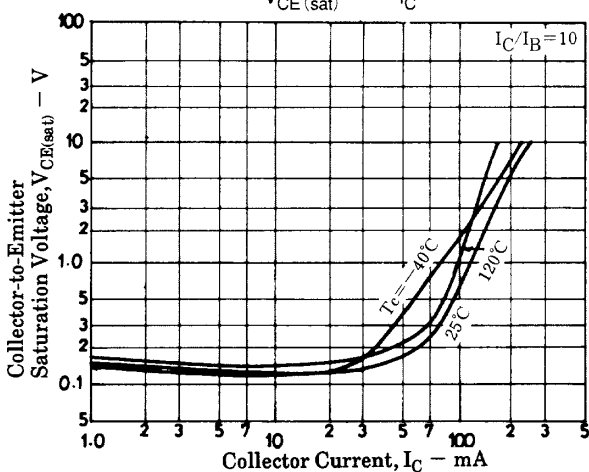
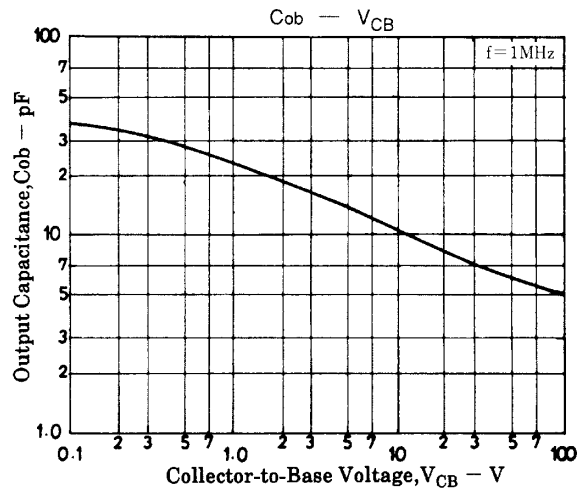
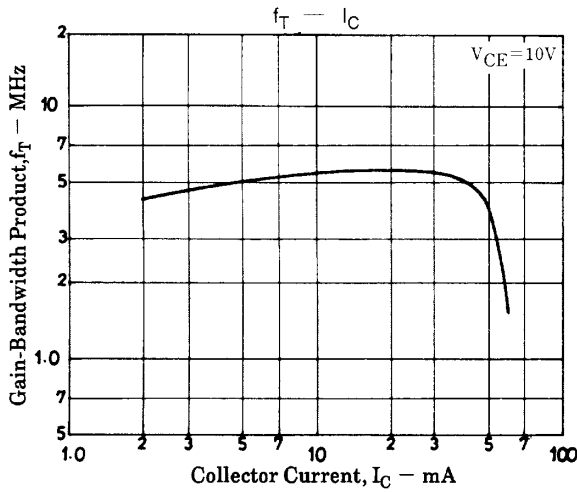
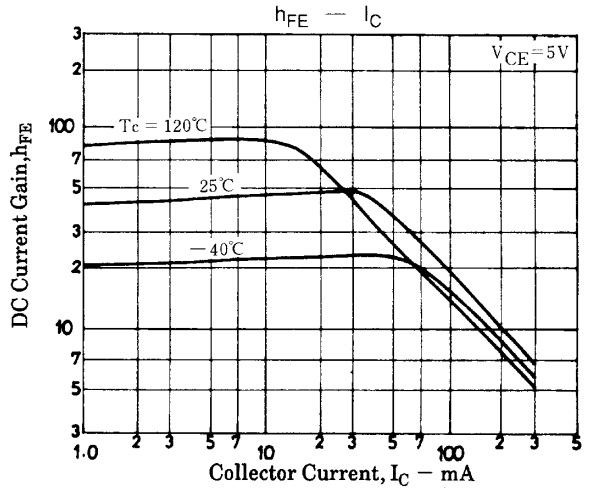
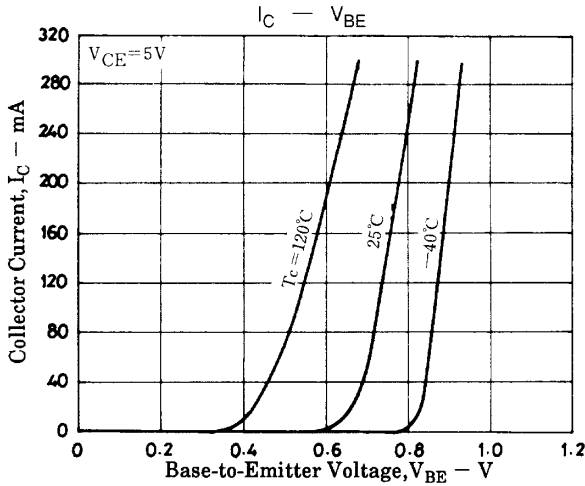
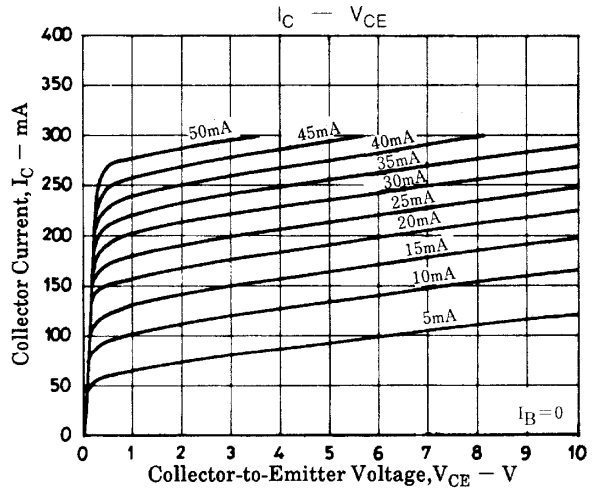
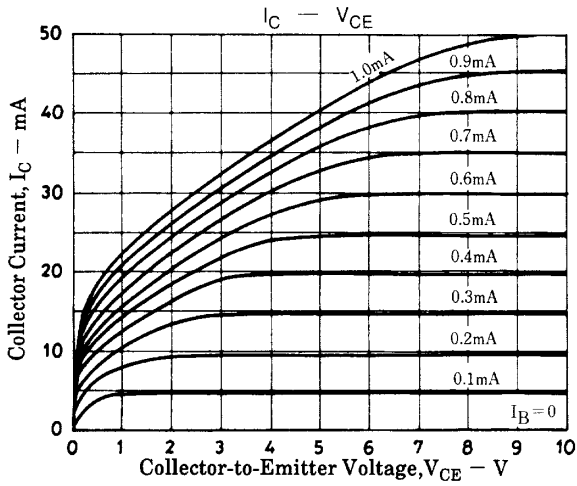


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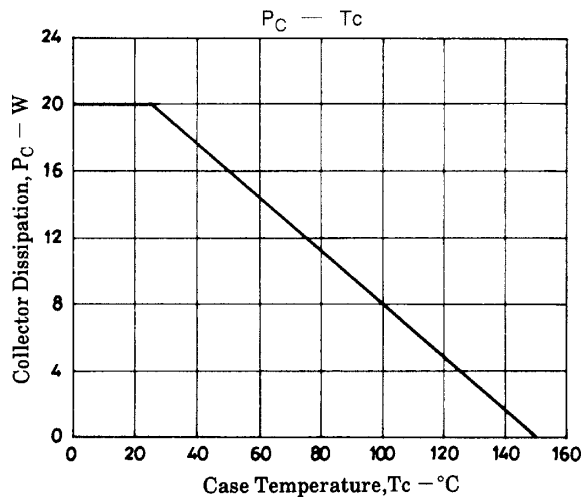
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