

**2SC5302**

Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

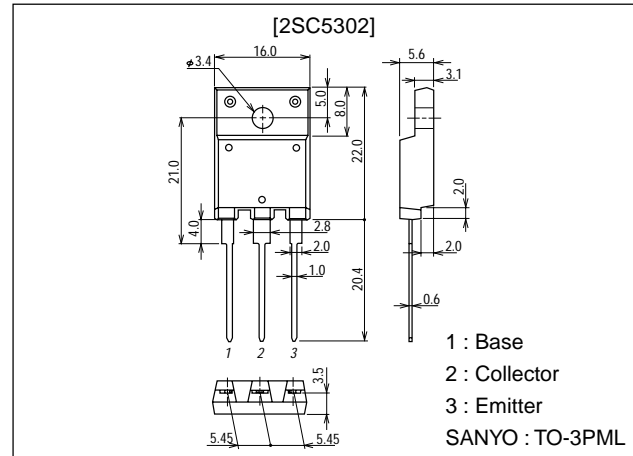
Features

- Fast speed ($t_f=100\text{ns}$ typ).
- High breakdown voltage ($V_{CBO}=1500\text{V}$).
- High reliability (adoption of HVP process).
- Adoption of MBIT process.

Package Dimensions

unit:mm

2039D



Specifications

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

| Parameter | Symbol | Condition | Rating | Unit |
|------------------------------|-----------|------------------------|-------------|------------------|
| Collector-to-Base Voltage | V_{CBO} | | 1500 | |
| Collector-to-Emitter Voltage | V_{CEO} | | 800 | |
| Emitter-to-Base Voltage | V_{EBO} | | 6V | |
| Collector Current | I_C | | 1A | |
| Collector Current (pulse) | I_{CP} | | 3A | |
| Collector Dissipation | P_C | $T_c=25^\circ\text{C}$ | 3W | |
| | | | 7W | |
| Junction Temperature | T | | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{st} | | -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_{CES} | $V_{CE}=1500\text{V}, R_{BE}=0$ | | | 1A | m |
| Collector Sustain Voltage | $V_{CEO(sus)}$ | $I_C=100\text{mA}, I_B=0$ | 80V | | | |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=4\text{V}, I_C=0$ | | | 1A | m |
| Collector Cutoff Current | I_{CBO} | $V_{CB}=800\text{V}, I_E=0$ | | | 1A | μ |
| DC Current Gain | h_{FE1V} | $V_{CE}=5\text{V}, I_C=0.0\text{A}$ | 20 | | 3 | |
| | h_{FE2V} | $V_{CE}=5\text{V}, I_C=42\text{A}$ | | | 7 | |

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SANYO Electric Co., Ltd. Semiconductor Business Headquarters

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

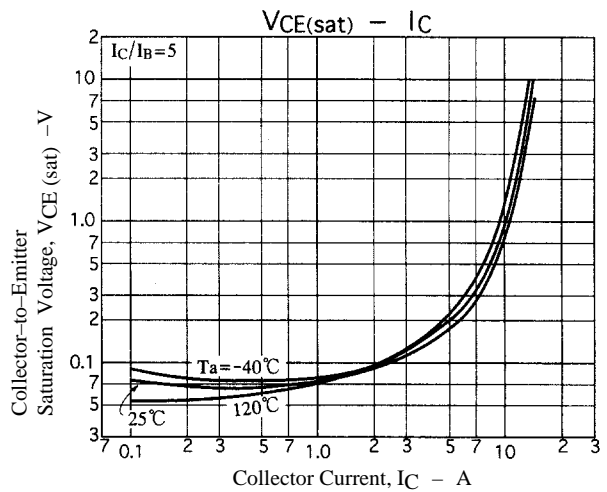
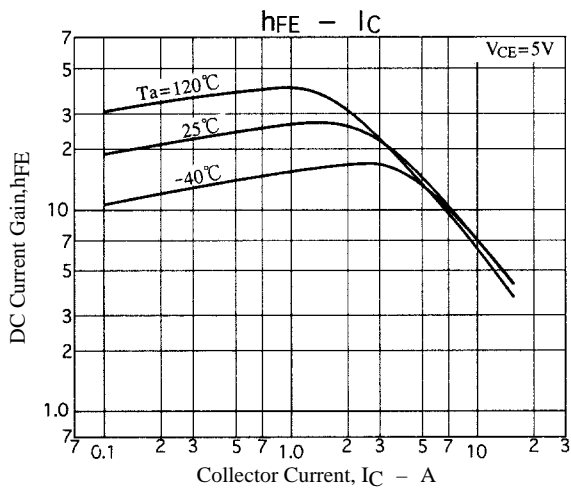
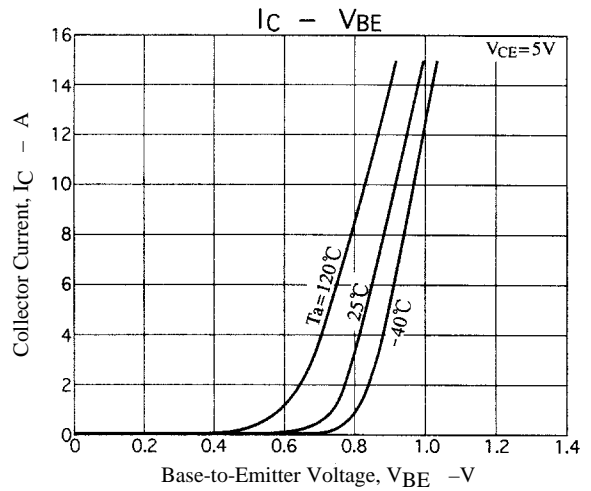
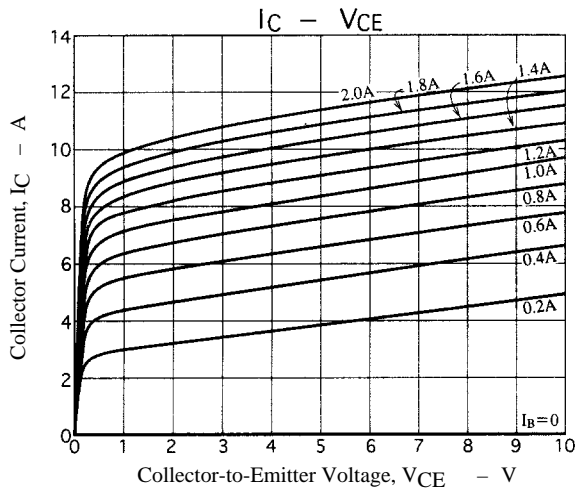
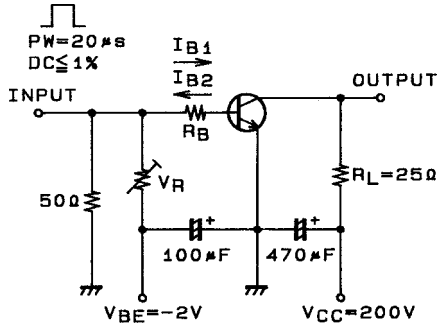
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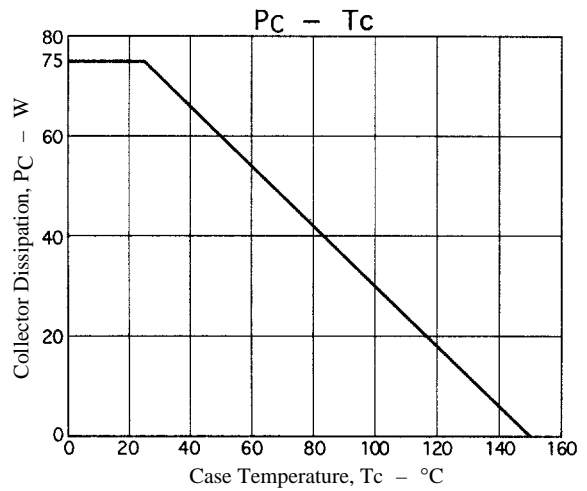
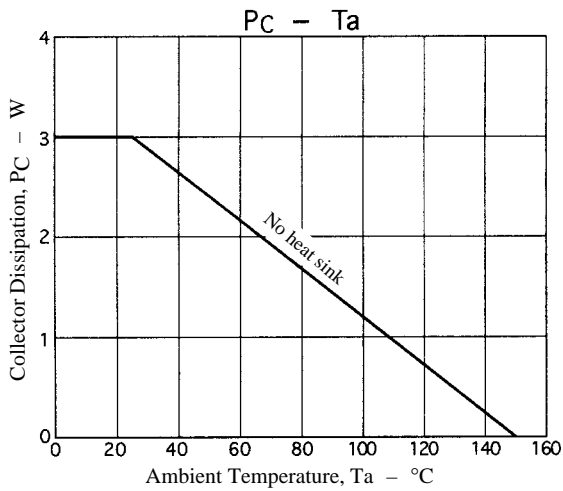
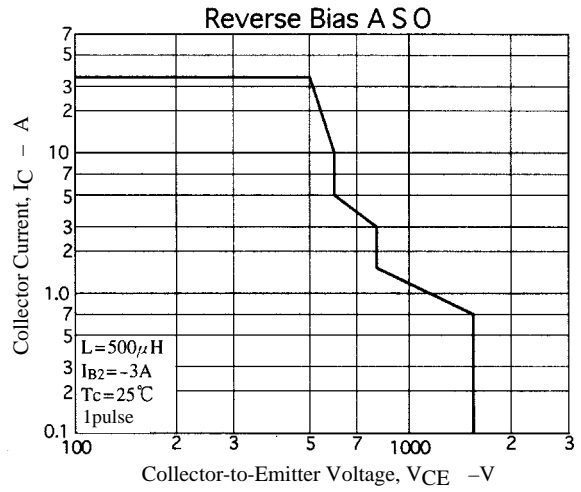
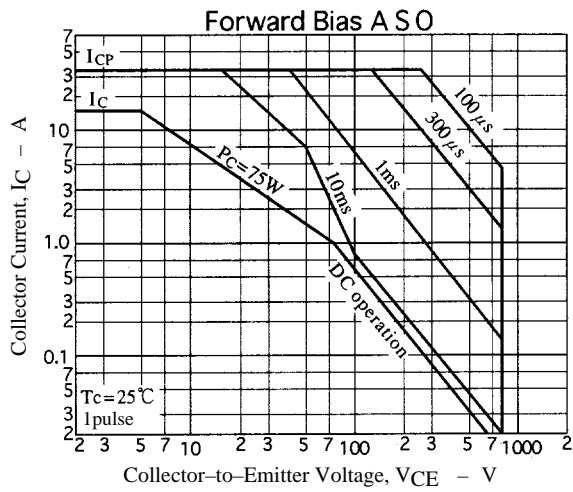
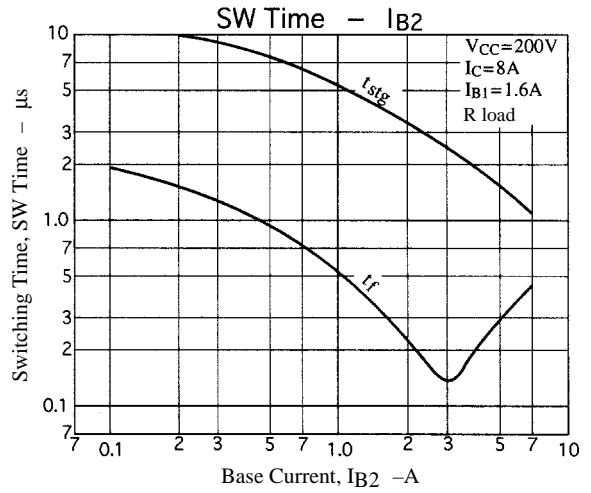
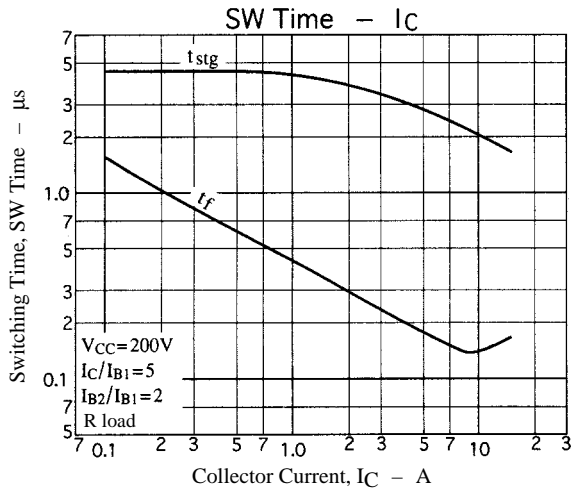
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| Parameter | Symbol | Condition | Ratings | | | Unit |
|---|---------|--------------------------------|---------|-----|-----|-------|
| | | | min | typ | max | |
| Collector-to-Emitter Saturation Voltage | CE(sat) | $I_C=12A, I_B=5A$ | | | | V |
| Base-to-Emitter Saturation Voltage | BE(sat) | $I_C=12A, I_B=5A$ | | | 1V | |
| Storage Time | stg | $I_C=8A, I_B1=1.6A, I_B2=3.2A$ | | | 3s | μ |
| Fall Time | f | $I_C=8A, I_B1=1.6A, I_B2=3.2A$ | | | 0s | μ |

Switching Time Test Circuit



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