

**2SC5506**

Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

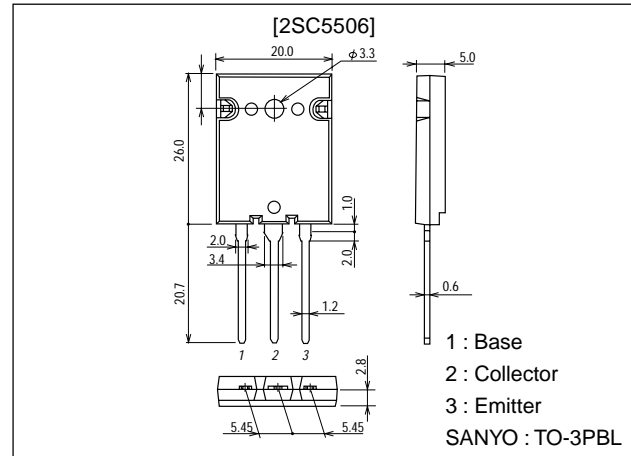
Features

- High speed.
- High breakdown voltage ($V_{CBO}=1600V$).
- High reliability (Adoption of HVP process).
- Adoption of MBIT process.

Package Dimensions

unit:mm

2048B



Specifications

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

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|-----------|------------------|-------------|------------|
| Collector-to-Base Voltage | V_{CBO} | | 1600 | V |
| Collector-to-Emitter Voltage | V_{CEO} | | 800 | V |
| Emitter-to-Base Voltage | V_{EBO} | | 6 | V |
| Collector Current | I_C | | 20 | A |
| Collector Current (Pulse) | I_{CP} | | 40 | A |
| Collector Dissipation | P_C | | 3.5 | W |
| | | $T_c=25^\circ C$ | 180 | W |
| Junction Temperature | T_J | | 150 | $^\circ C$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ C$ |

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

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--------------------------------------|----------------|--------------------------|---------|-----|-----|---------|
| | | | min | typ | max | |
| Collector Cutoff Current | I_{CES} | $V_{CE}=1600V, R_{BE}=0$ | | | 1.0 | mA |
| Collector-to-Emitter Sustain Voltage | $V_{CEO(sus)}$ | $I_C=100mA, I_B=0$ | 800 | | | V |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=4V, I_C=0$ | | | 1.0 | mA |
| Collector Cutoff Current | I_{CBO} | $V_{CB}=800V, I_E=0$ | | | 10 | μA |
| DC Current Gain | h_{FE1} | $V_{CE}=5V, I_C=1A$ | 15 | | 30 | |
| | h_{FE2} | $V_{CE}=5V, I_C=14A$ | 4 | | 7 | |

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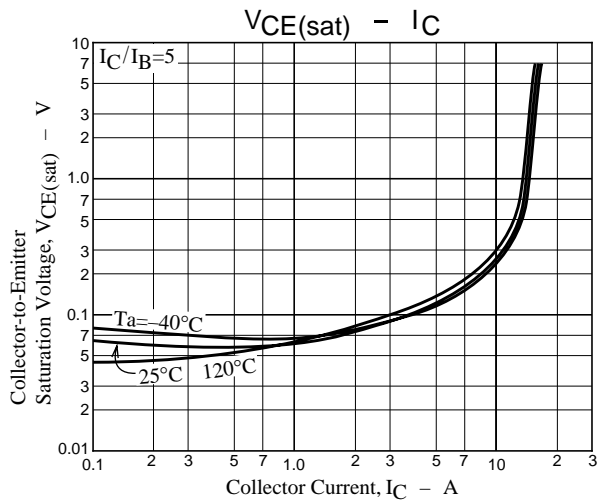
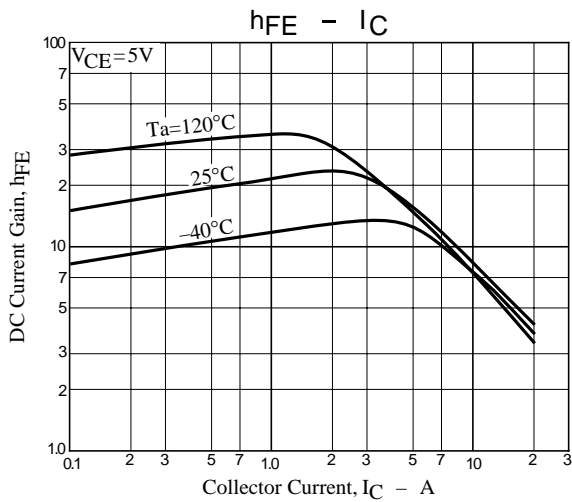
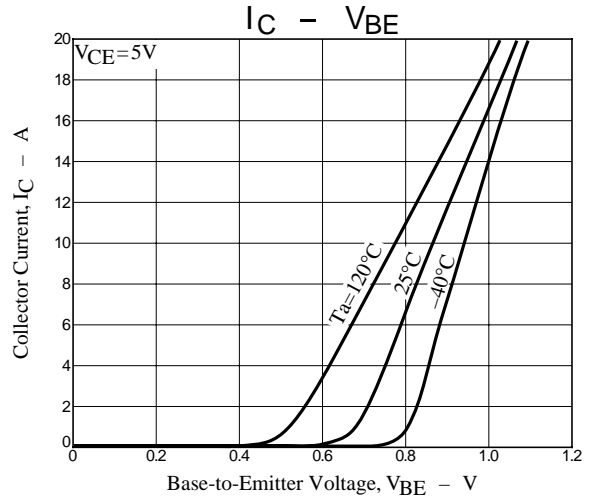
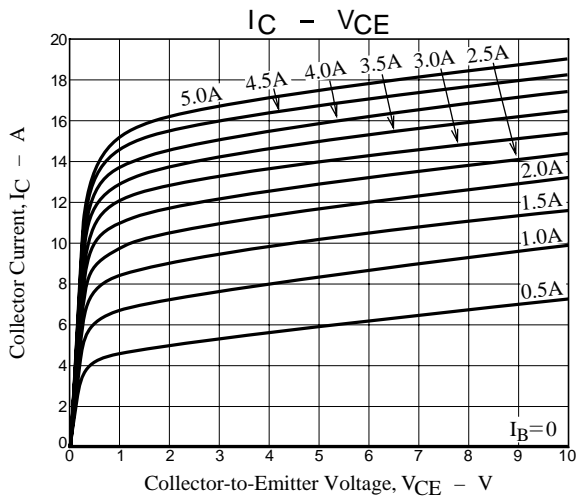
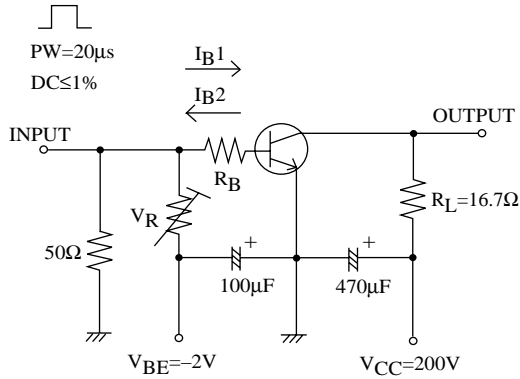
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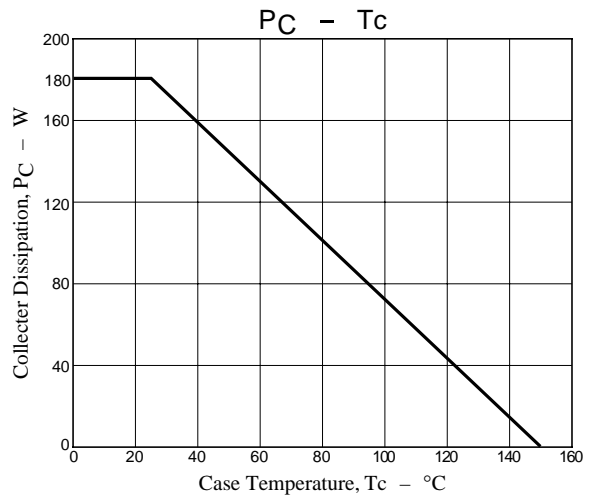
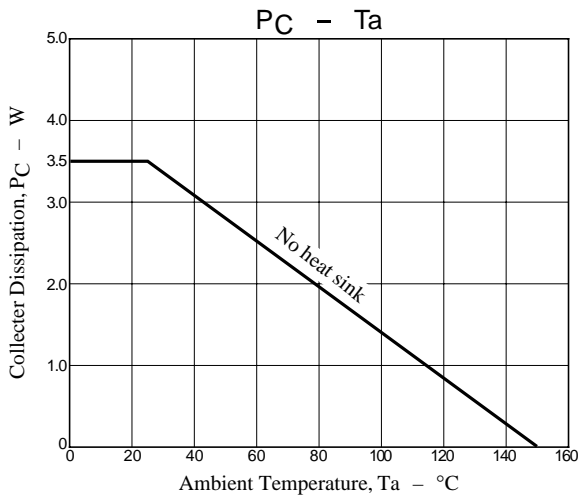
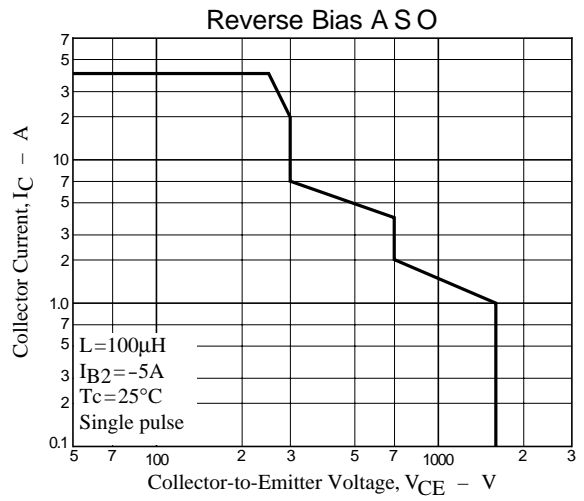
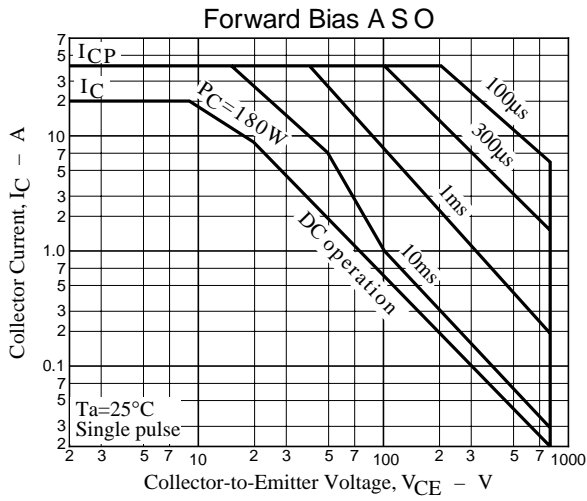
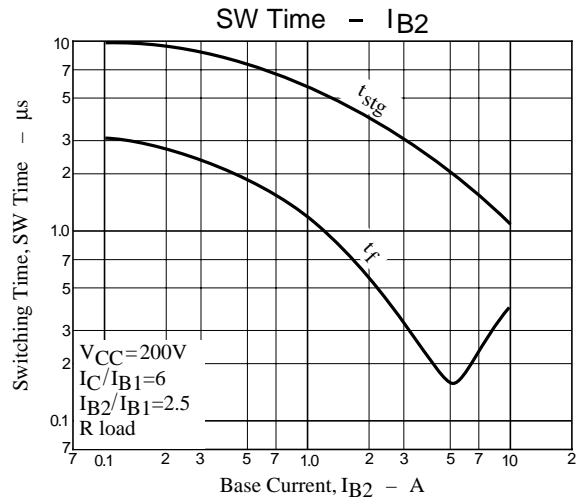
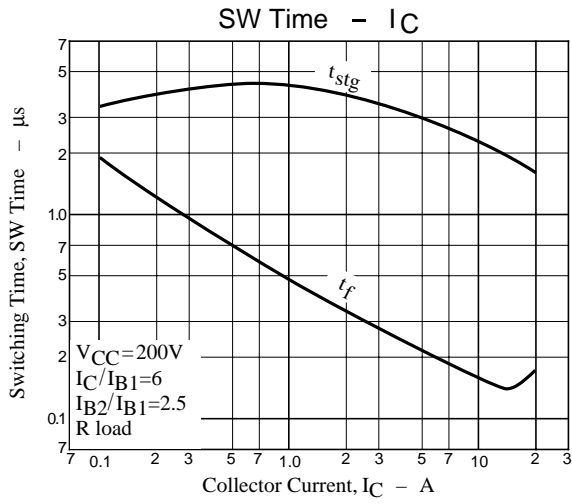
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| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|--------------------------------------|---------|-----|-----|---------|
| | | | min | typ | max | |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=14A, I_B=3.5A$ | | | 5 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=14A, I_B=3.5A$ | | | 1.5 | V |
| Storage Time | t_{stg} | $I_C=12A, I_{B1}=2.0A, I_{B2}=-5.0A$ | | | 3.0 | μs |
| Fall Time | t_f | $I_C=12A, I_{B1}=2.0A, I_{B2}=-5.0A$ | | | 0.2 | μs |

Switching Time Test Circuit



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