



2SC5681

Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

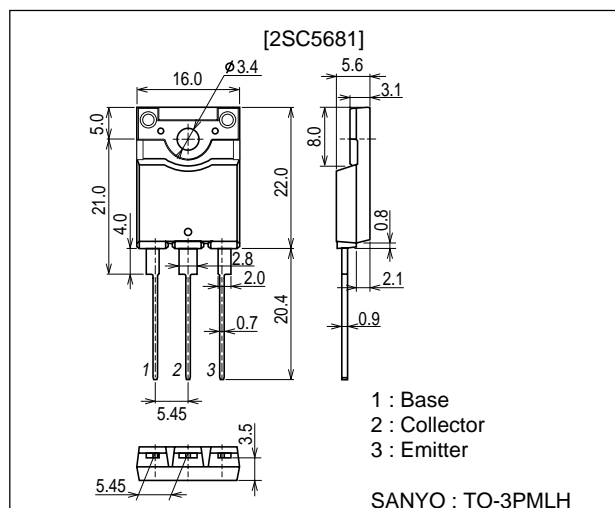
Features

- High speed.
- High breakdown voltage($V_{CB0}=1500V$).
- High reliability(Adoption of HVP process).
- Adoption of MBIT process.

Package Dimensions

unit : mm

2174A



Specifications

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

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|-----------|-------------------|-------------|-------------|
| Collector-to-Base Voltage | V_{CB0} | | 1500 | V |
| Collector-to-Emitter Voltage | V_{CEO} | | 800 | V |
| Emitter-to-Base Voltage | V_{EBO} | | 5 | V |
| Collector Current | I_C | | 15 | A |
| Collector Current (Pulse) | I_{CP} | | 35 | A |
| Collector Dissipation | P_C | | 3.0 | W |
| | | $T_c=25^{\circ}C$ | 85 | 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_{CBO} | $V_{CB}=800V, I_E=0$ | | | 10 | μA |
| Collector Cutoff Current | I_{CES} | $V_{CE}=1500V, R_{BE}=0$ | | | 1.0 | mA |
| Collector 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 |

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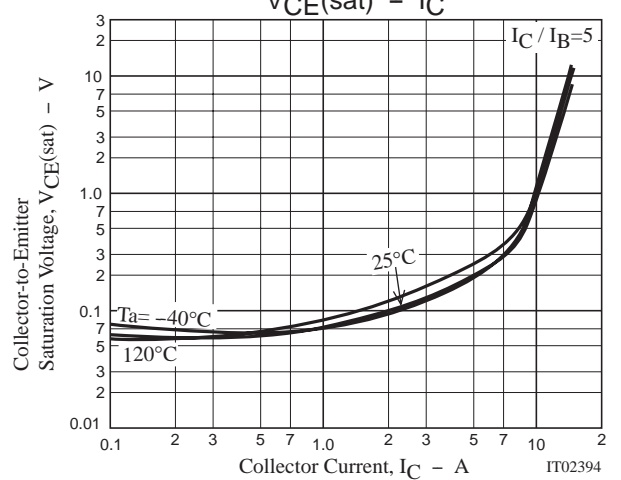
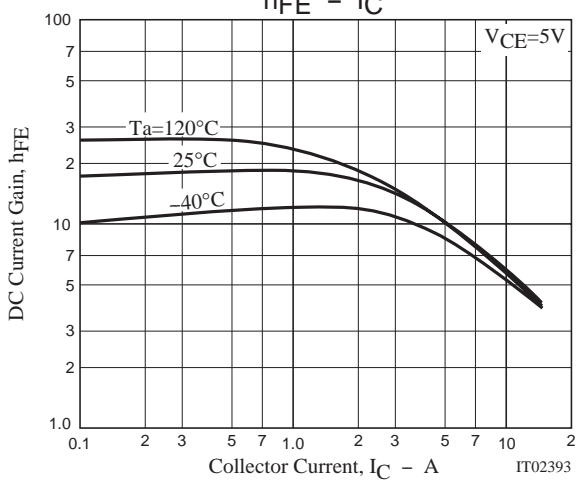
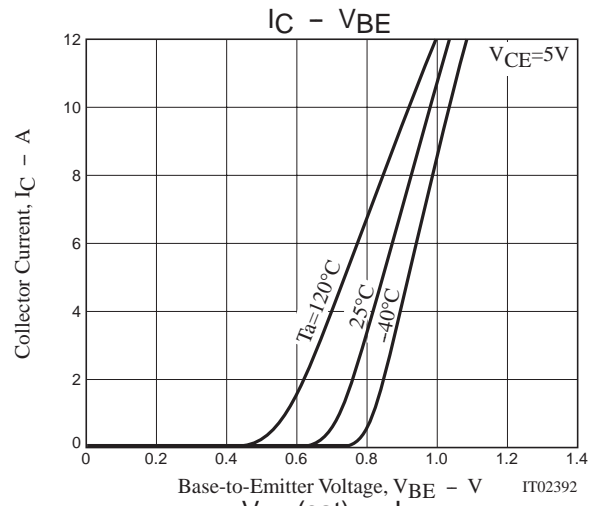
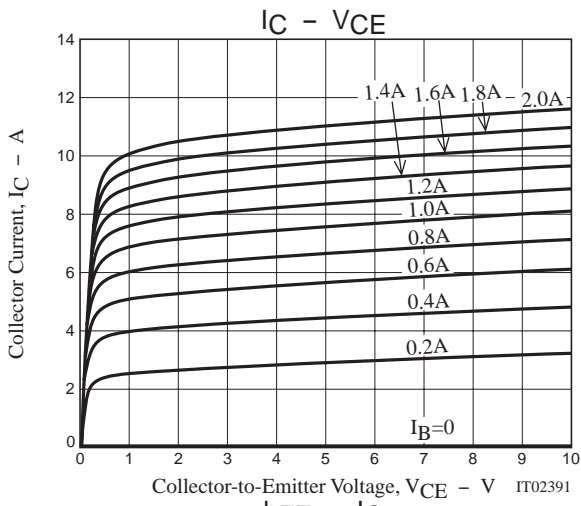
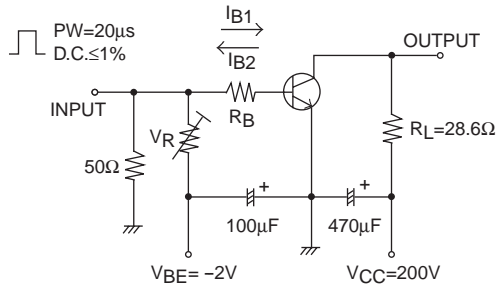
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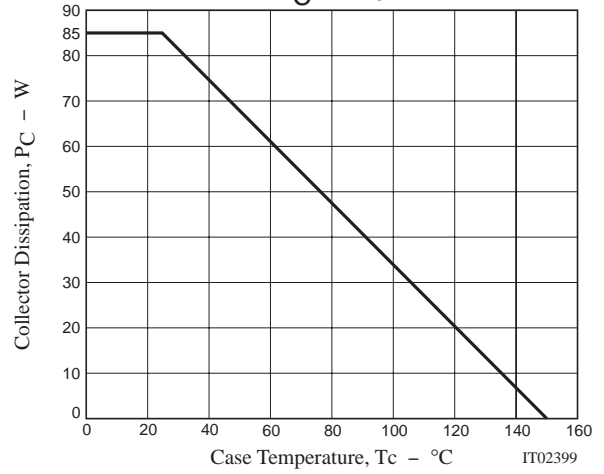
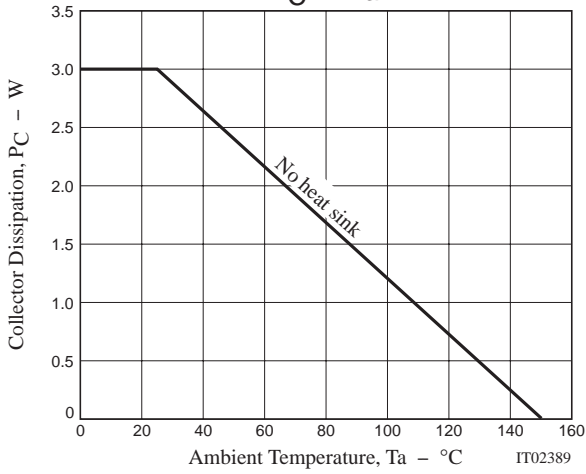
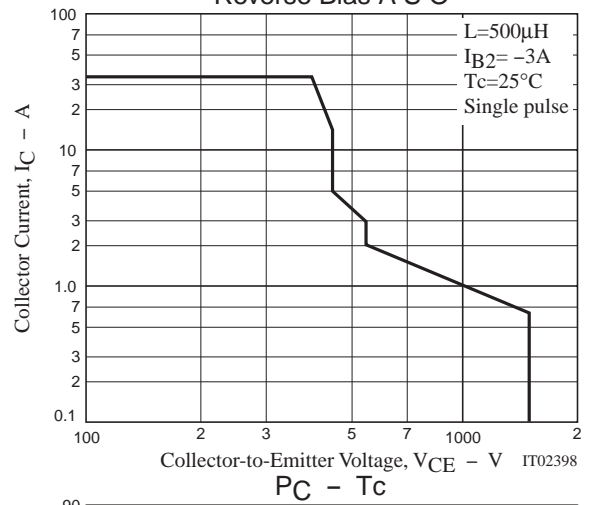
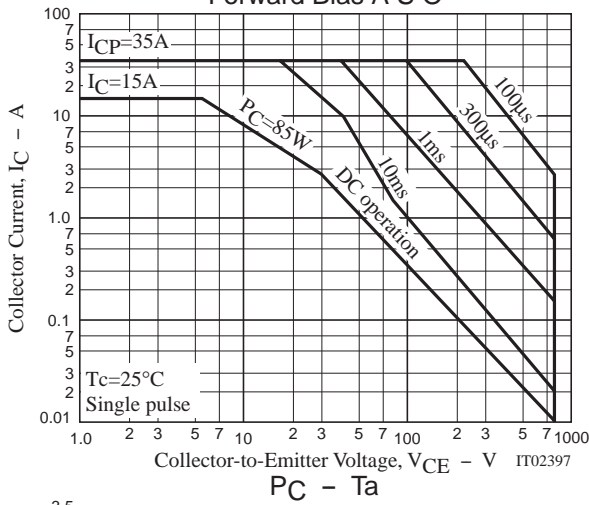
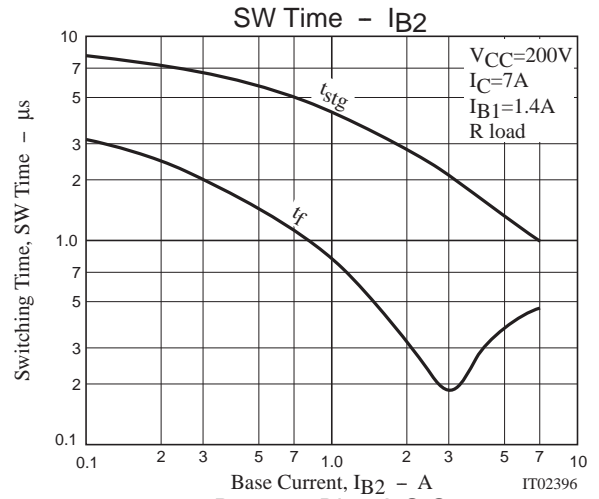
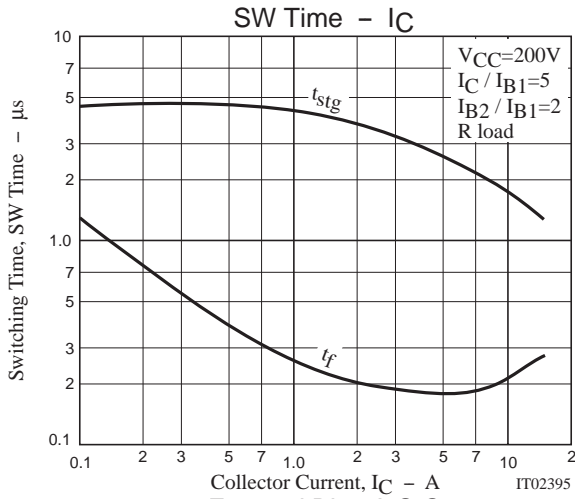
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| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|-------------------------------------|---------|-----|-----|---------|
| | | | min | typ | max | |
| DC Current Gain | h_{FE1} | $V_{CE}=5V, I_C=1A$ | 15 | | | |
| | h_{FE2} | $V_{CE}=5V, I_C=12A$ | 4 | | 7 | |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=10.8A, I_B=2.7A$ | | | 3 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=10.8A, I_B=2.7A$ | | | 1.5 | V |
| Storage Time | t_{stg} | $I_C=7A, I_{B1}=1.4A, I_{B2}=-2.8A$ | | | 3.0 | μs |
| Fall Time | t_f | $I_C=7A, I_{B1}=1.4A, I_{B2}=-2.8A$ | | | 0.2 | μs |

Switching Time Test Circuit



2SC5681



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