



2SC6091 — NPN Triple Diffused Planar Silicon Transistor

Color TV Horizontal Deflection Output Applications

Features

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

Specifications

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

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|-----------|------------------|-------------|------------|
| Collector-to-Base Voltage | V_{CBO} | | 1500 | V |
| Collector-to-Emitter Voltage | V_{CEO} | | 700 | V |
| Emitter-to-Base Voltage | V_{EBO} | | 5 | V |
| Collector Current | I_C | | 8 | A |
| Collector Current (Pulse) | I_{CP} | | 20 | A |
| Collector Dissipation | P_C | | 3.0 | W |
| | | $T_c=25^\circ C$ | 65 | 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} | $V_{CB}=800V, I_E=0A$ | | | 10 | μA |
| Collector Cutoff Current | I_{CES} | $V_{CE}=1500V, R_{BE}=0\Omega$ | | | 10 | mA |
| Collector Sustain Voltage | $V_{CEO(sus)}$ | $I_C=100mA, I_B=0A$ | 700 | | | V |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=4V, I_C=0A$ | | | 1 | mA |

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D0507KC TI IM TC-00000485 No. A0994-1/4

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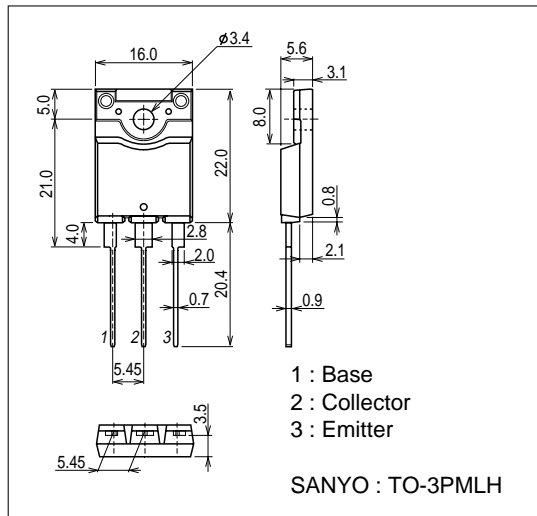
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| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|----------------|-------------------------------------|---------|-----|-----|---------|
| | | | min | typ | max | |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)1}$ | $I_C=2.25A, I_B=0.45A$ | 0.1 | | 0.3 | V |
| | $V_{CE(sat)2}$ | $I_C=4.5A, I_B=0.9A$ | | | 2 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=4.5A, I_B=0.9A$ | | | 1.5 | V |
| DC Current Gain | h_{FE1} | $V_{CE}=5V, I_C=1A$ | 10 | | | |
| | h_{FE2} | $V_{CE}=5V, I_C=5A$ | 5.3 | | 7.5 | |
| Fall Time | t_f | $I_C=3A, I_{B1}=0.6A, I_{B2}=-1.2A$ | | | 0.2 | μs |

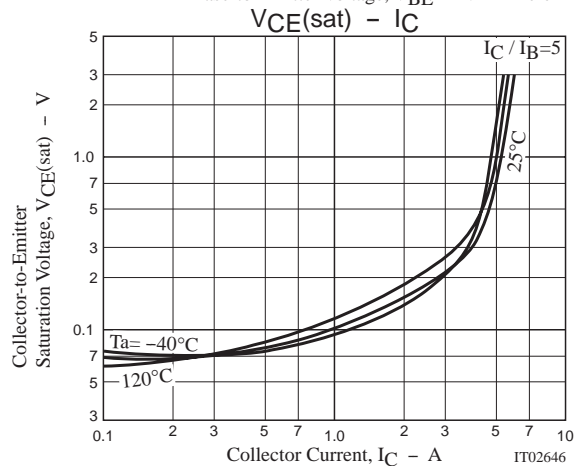
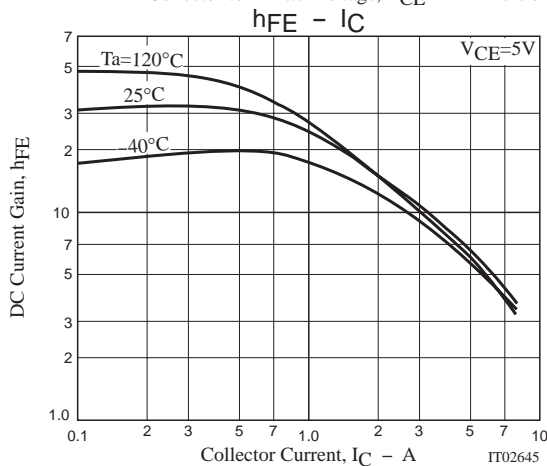
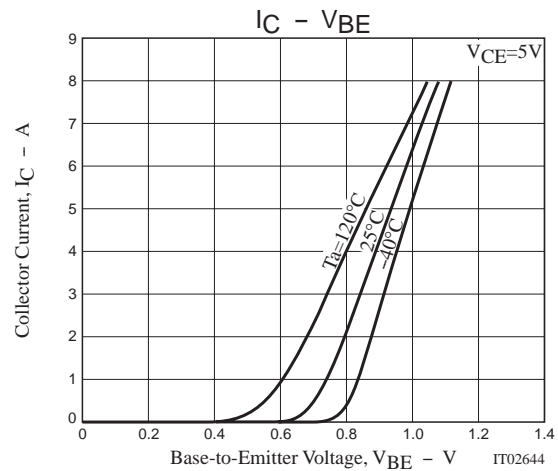
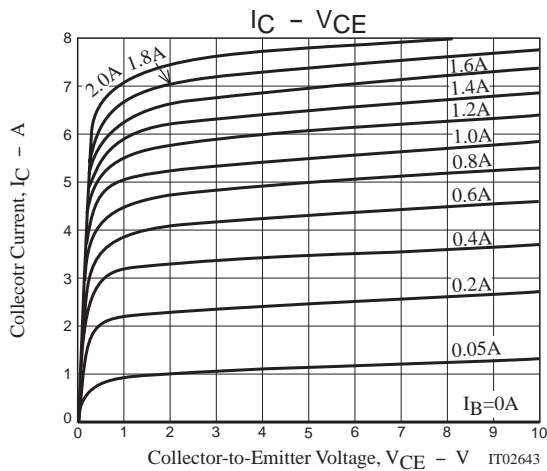
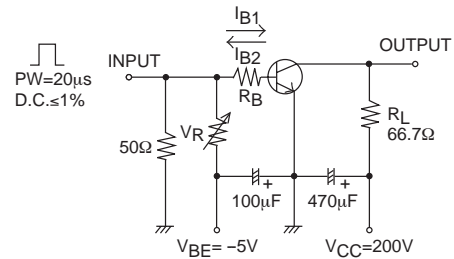
Package Dimensions

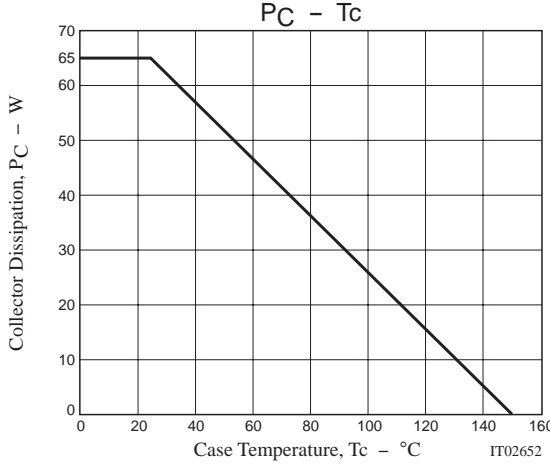
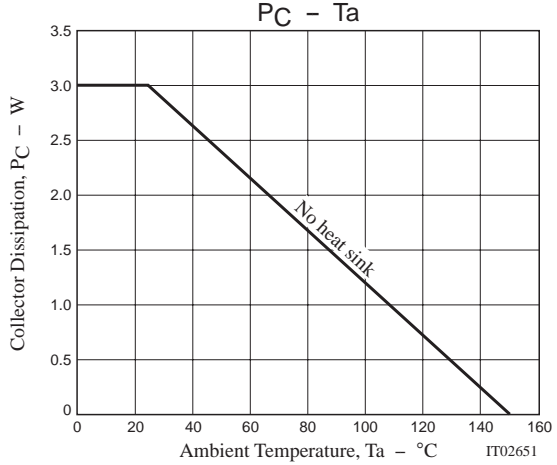
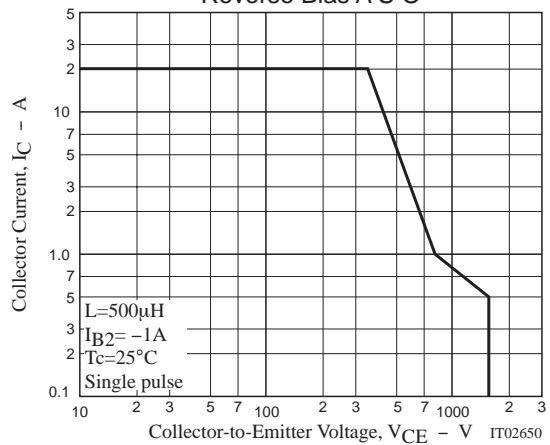
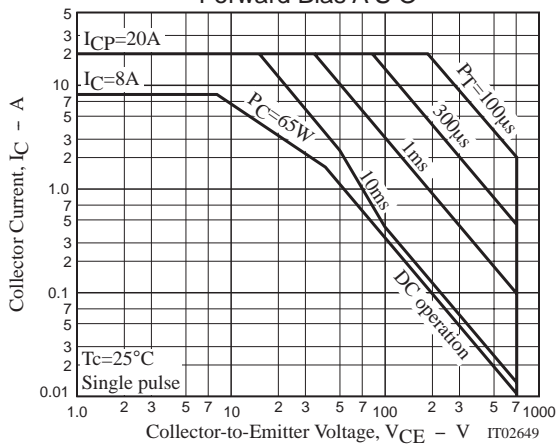
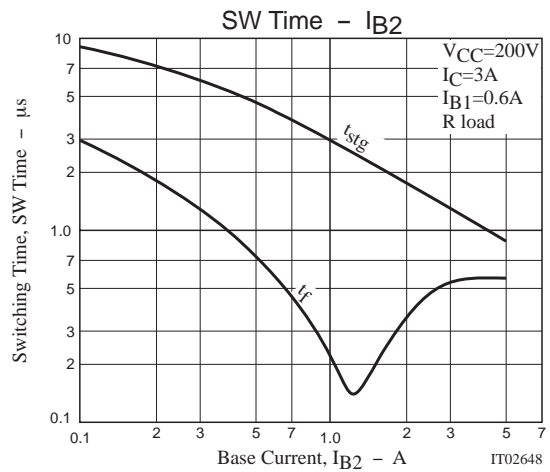
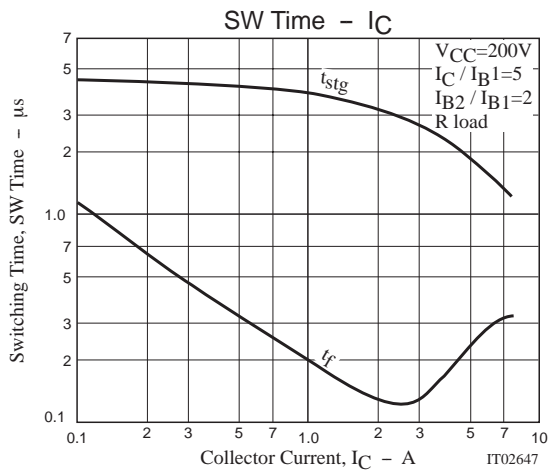
unit : mm (typ)

7504-001



Switching Time Test Circuit





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