



SANYO Semiconductors

DATA SHEET

2SC6084

NPN Triple Diffused Planar Silicon Transistor

Switching Regulator Applications

Features

- High speed.
- High breakdown voltage ($V_{CB0}=1500V$).
- High reliability (Adoption of 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} | | 800 | V |
| Emitter-to-Base Voltage | V_{EBO} | | 5 | V |
| Collector Current | I_C | | 5 | A |
| Collector Current (Pulse) | I_{CP} | | 12 | A |
| Collector Dissipation | P_C | | 1.75 | W |
| | | $T_c=25^\circ C$ | 50 | 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} | $V_{CE}=1500V, R_{BE}=0\Omega$ | | | 1.0 | mA |
| Collector Sustain Voltage | $V_{CEO(sus)}$ | $I_C=100mA, I_B=0A$ | 800 | | | V |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=4V, I_C=0A$ | | | 1.0 | mA |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=2.7A, I_B=0.54A$ | | | 3 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=2.7A, I_B=0.54A$ | | | 1.5 | V |
| DC Current Gain | h_{FE1} | $V_{CE}=5V, I_C=0.5A$ | 10 | | | |
| | h_{FE2} | $V_{CE}=5V, I_C=3A$ | 5 | | 7 | |
| Fall Time | t_f | $I_C=1.8A, I_{B1}=0.36A, I_{B2}=-0.72A$ | | | 0.2 | μs |

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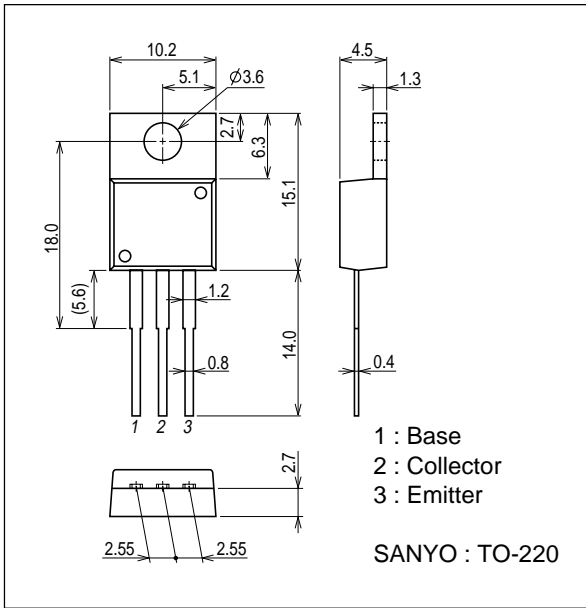
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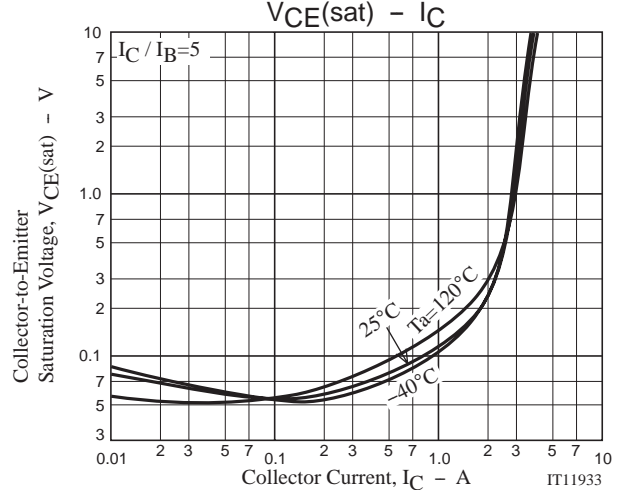
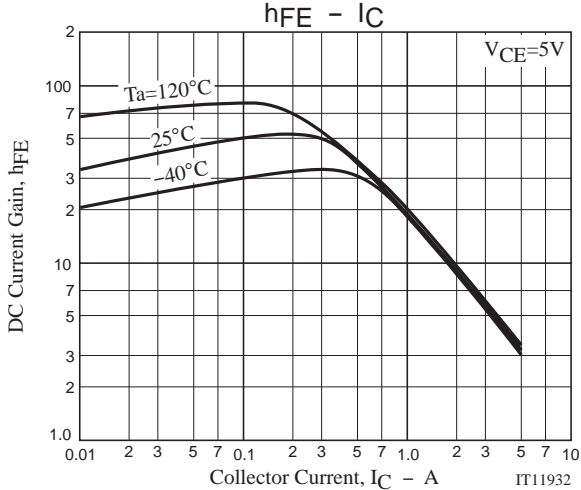
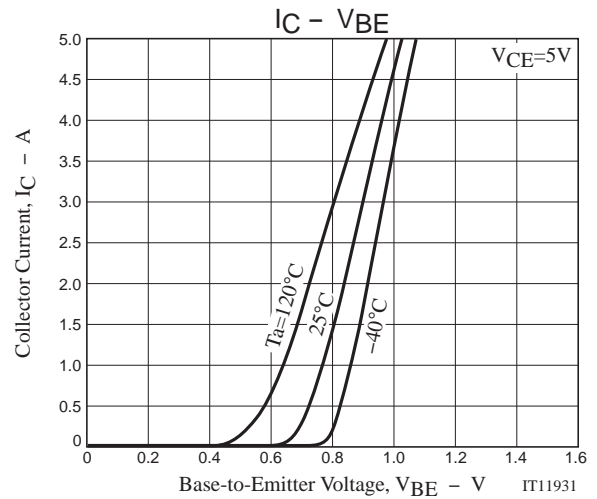
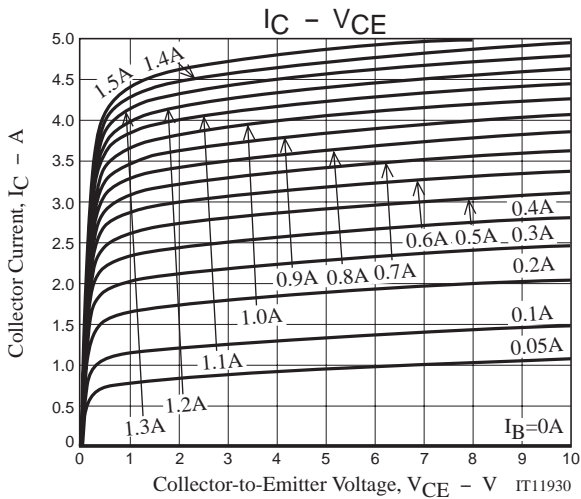
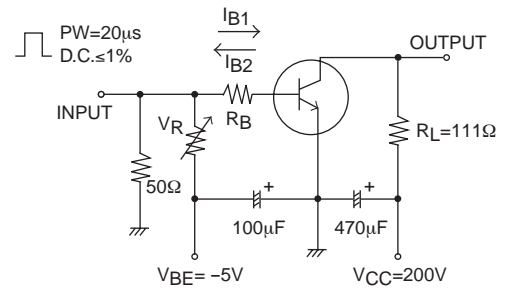
Package Dimensions

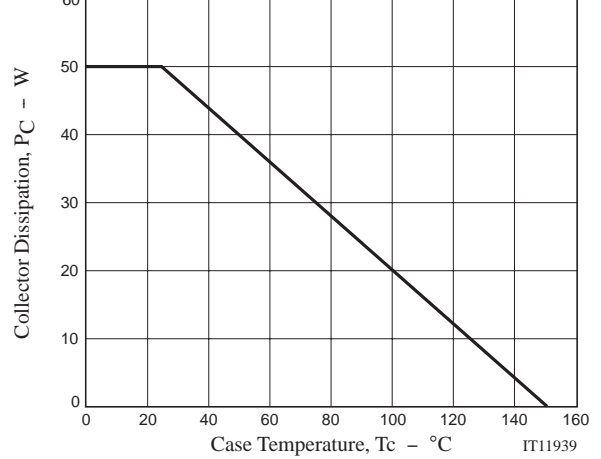
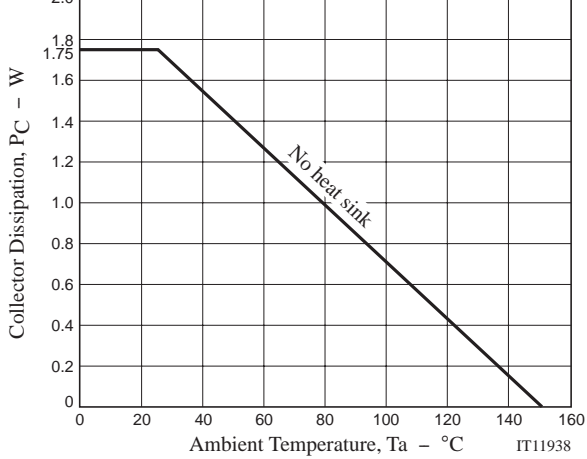
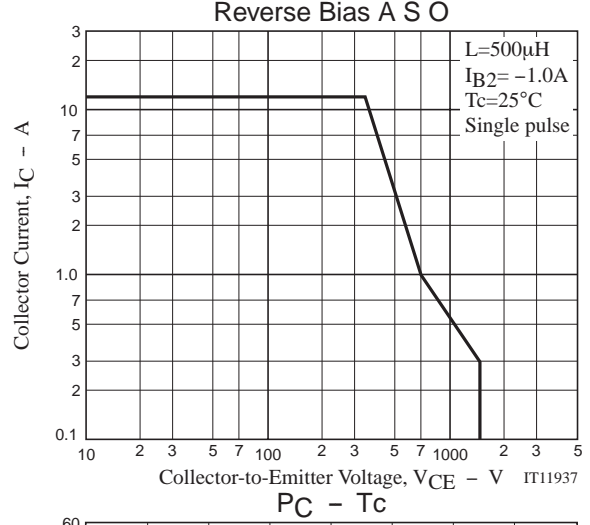
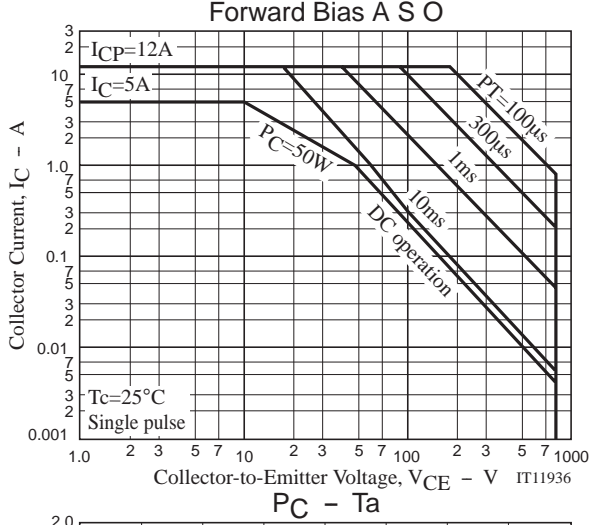
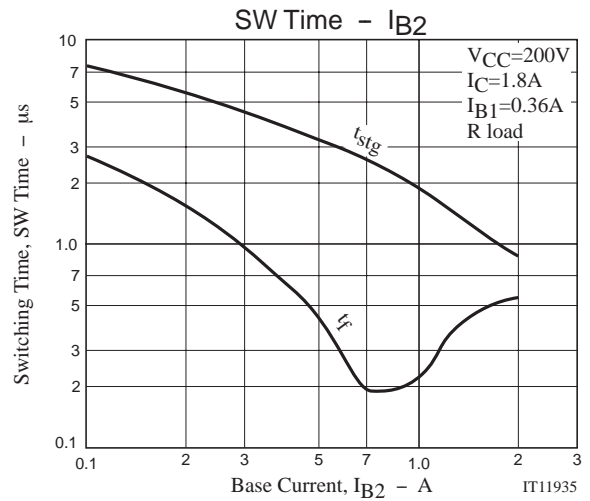
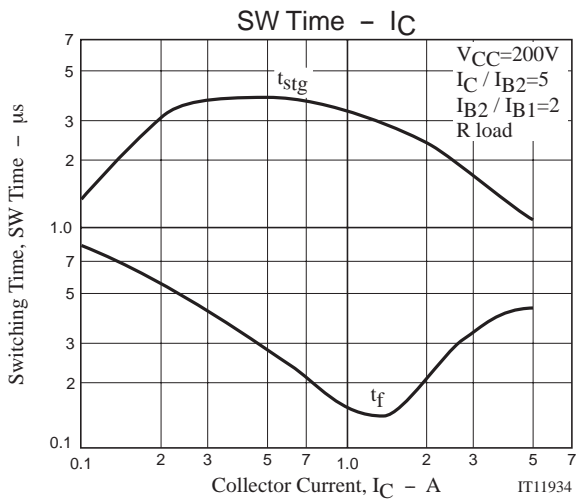
unit : mm (typ)

7507-001



Switching Time Test Circuit





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