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| SANYO | No.2509C | <h1 style="margin: 0;">2SC3996</h1> <p style="margin: 0;">NPN Triple Diffused Planar Silicon Transistor</p> <p style="margin: 0;">Ultrahigh-Definition Display Horizontal Deflection Output Applications</p> |
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Features

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

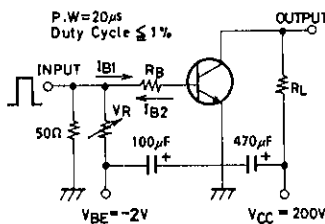
Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

| | | | | | |
|------------------------------|-----------|--------------------------|-------------|--|------------------|
| Collector-to-Base Voltage | V_{CBO} | | 1500 | | V |
| Collector-to-Emitter Voltage | V_{CEO} | | 800 | | V |
| Emitter-to-Base Voltage | V_{EBO} | | 6 | | V |
| Collector Current | I_C | | 15 | | A |
| Collector Current (Pulse) | I_{CP} | | 35 | | A |
| Collector Dissipation | P_C | $T_c = 25^\circ\text{C}$ | 180 | | W |
| Junction Temperature | T_j | | 150 | | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | | -55 to +150 | | $^\circ\text{C}$ |

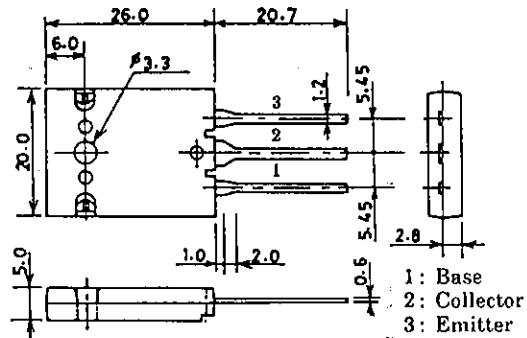
Electrical Characteristics at $T_a = 25^\circ\text{C}$

| | | | min | typ | max | |
|---------------------------|----------------|--|-----|-----|-----|---------------|
| Collector Cutoff Current | I_{CBO} | $V_{CB} = 800\text{V}, I_E = 0$ | | | 10 | μA |
| Collector Cutoff Current | I_{CES} | $V_{CE} = 1500\text{V}, R_{BE} = 0$ | | | 1.0 | mA |
| Collector Sustain Voltage | $V_{CEO(sus)}$ | $I_C = 100\text{mA}, I_B = 0$ | 800 | | | V |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = 4\text{V}, I_C = 0$ | | | 1.0 | mA |
| C-E Saturation Voltage | $V_{CE(sat)}$ | $I_C = 12\text{A}, I_B = 3.0\text{A}$ | | | 5 | V |
| B-E Saturation Voltage | $V_{BE(sat)}$ | $I_C = 12\text{A}, I_B = 3.0\text{A}$ | | | 1.5 | V |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE} = 5\text{V}, I_C = 1.0\text{A}$ | 8 | | 30 | |
| | $h_{FE(2)}$ | $V_{CE} = 5\text{V}, I_C = 12\text{A}$ | 4 | | 8 | |
| Storage Time | t_{stg} | $I_C = 8\text{A}, I_{B1} = 1.6\text{A}, I_{B2} = -3.2\text{A}$ | | | 3.0 | μs |
| Fall Time | t_f | $I_C = 8\text{A}, I_{B2} = 1.6\text{A}, I_{B1} = -3.2\text{A}$ | | | 0.2 | μs |

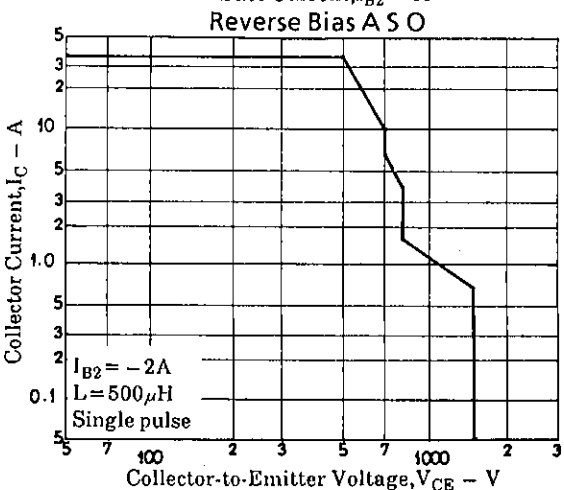
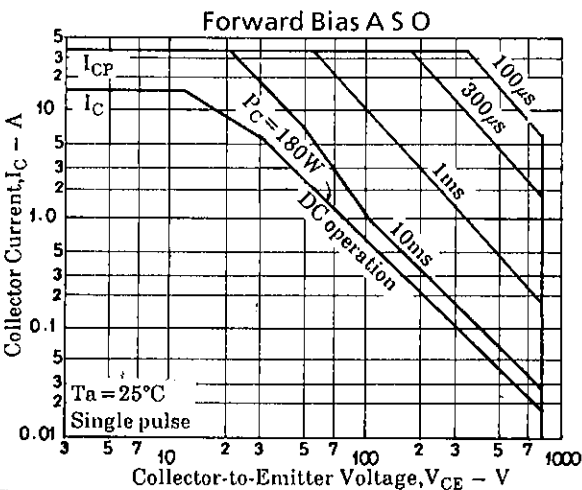
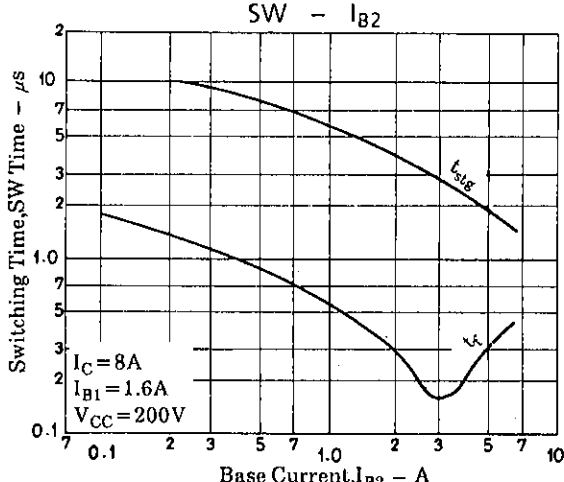
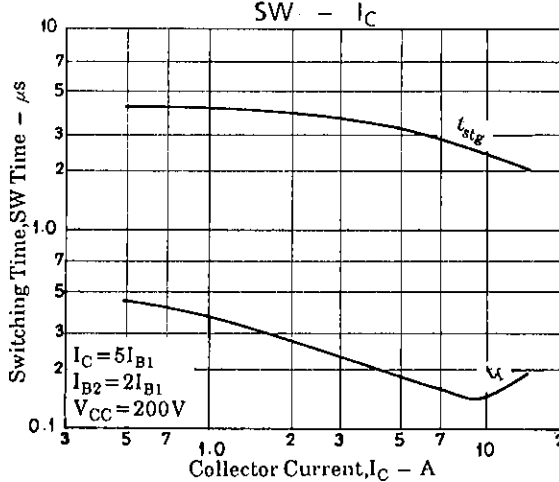
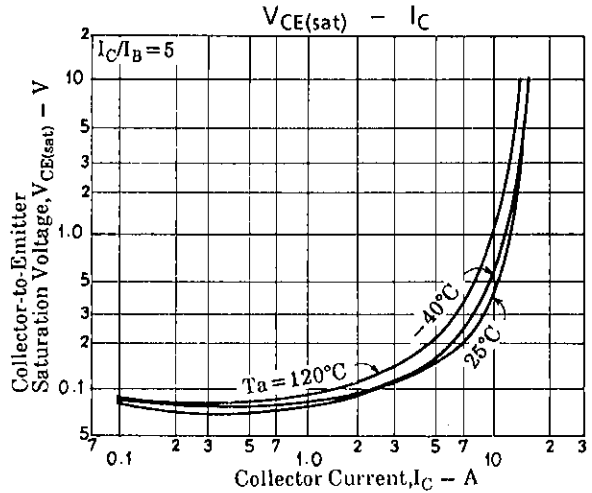
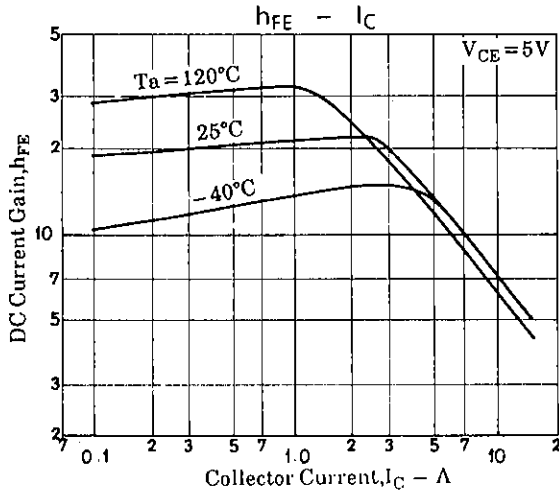
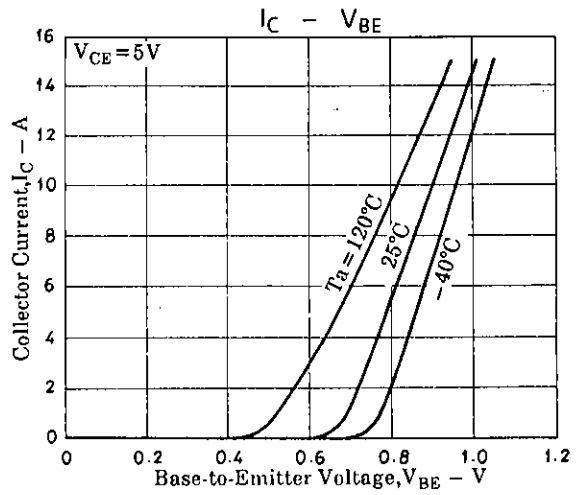
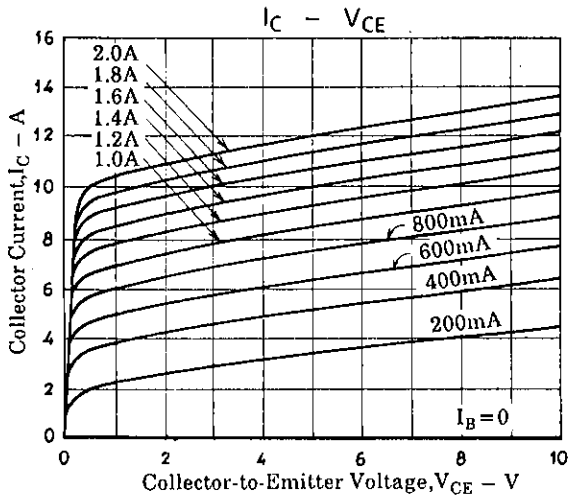
Switching Time Test Circuit

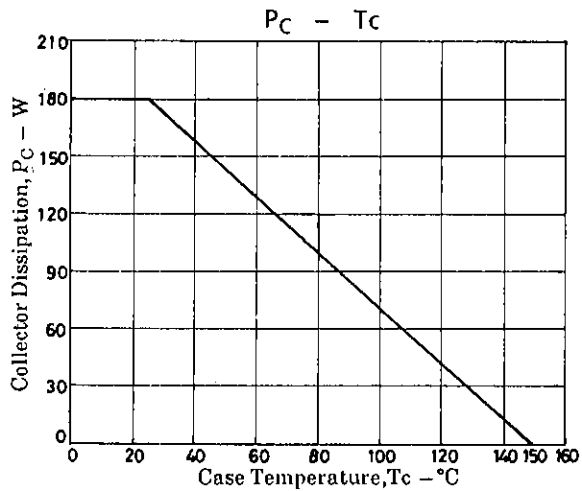


**Package Dimensions 2048B
(unit: mm)**



SANYO: TO-3PBL





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