

**SANYO**

No.2424

2SD1877

NPN Triple Diffused Planar Type  
Silicon Transistor

COLOR TV HORIZONTAL DEFLECTION OUTPUT APPLICATIONS

**Applications**

- Color TV horizontal deflection output
- Color display horizontal deflection output

**Features**

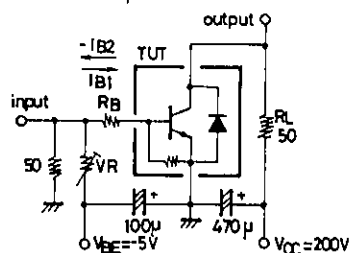
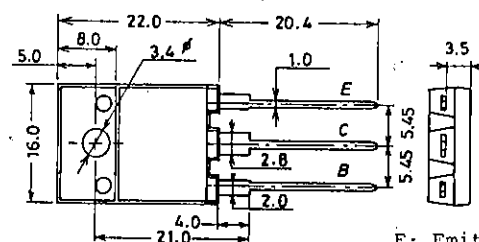
- High speed ( $t_f=100\text{ns}$ )
- high breakdown voltage ( $V_{CB0}=1500\text{V}$ )
- High reliability (adoption of HVP process)
- On-chip damper diode

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

|                              |           |             | unit             |
|------------------------------|-----------|-------------|------------------|
| Collector-to-Base Voltage    | $V_{CB0}$ | 1500        | V                |
| Collector-to-Emitter Voltage | $V_{CE0}$ | 800         | V                |
| Emitter-to-Base Voltage      | $V_{EB0}$ | 6           | V                |
| Collector Current            | $I_C$     | 4           | A                |
| Peak Collector Current       | $i_{cp}$  | 12          | A                |
| Collector Dissipation        | $P_C$     | 50          | W                |
| Junction Temperature         | $T_j$     | 150         | $^\circ\text{C}$ |
| Storage Temperature          | $T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

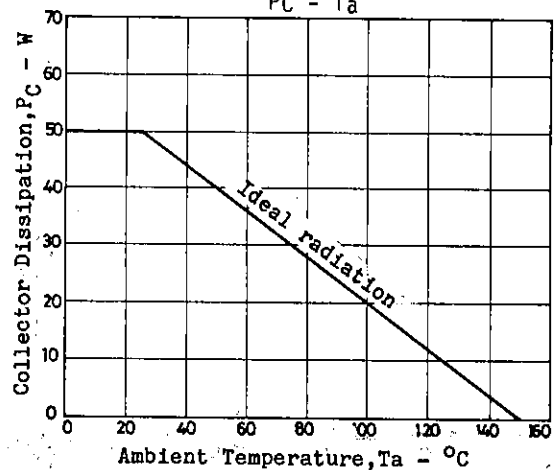
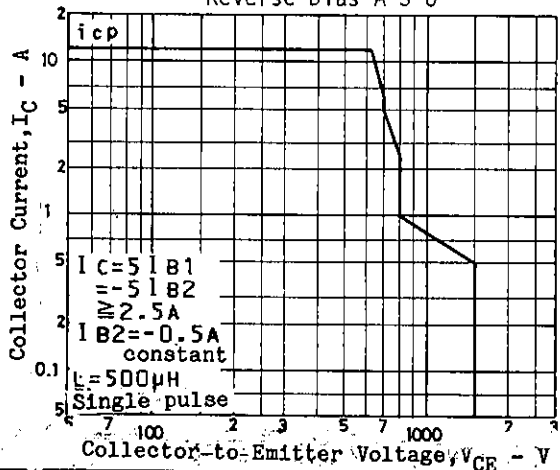
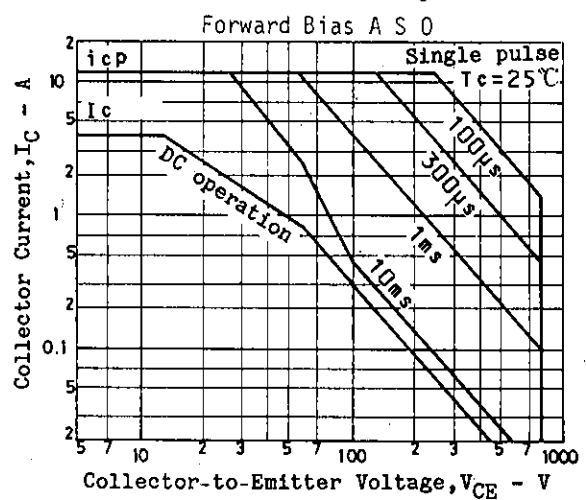
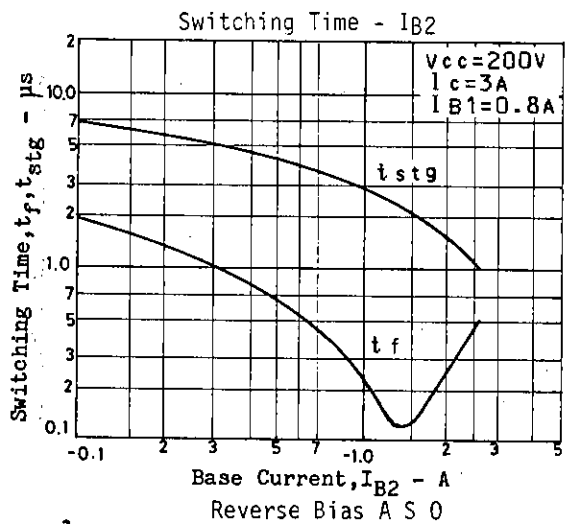
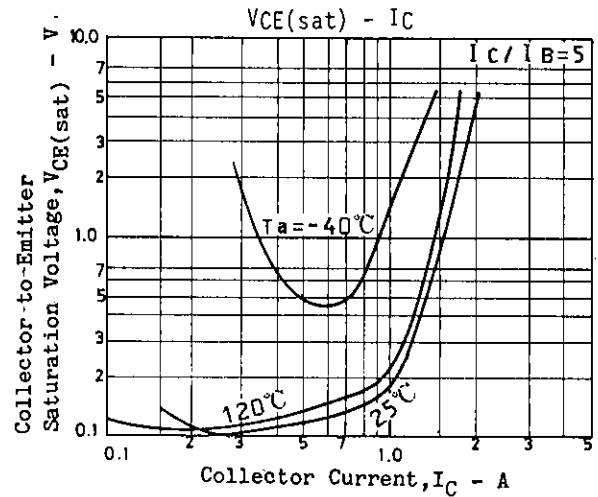
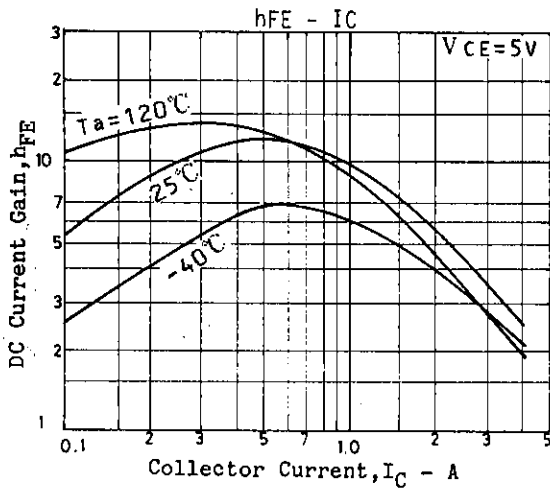
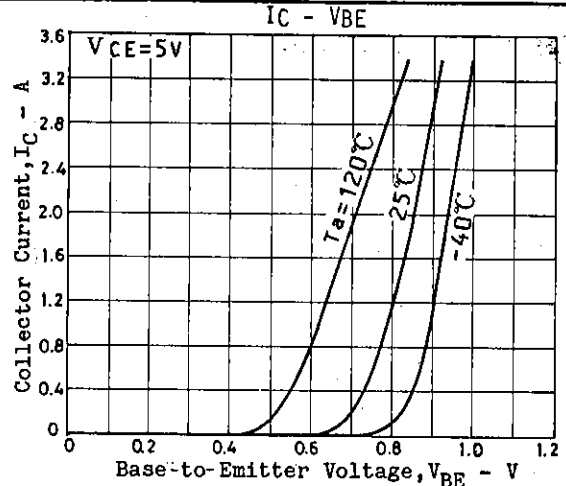
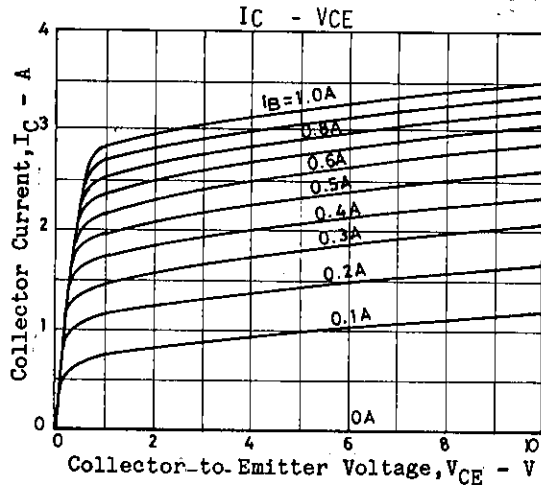
**Electrical Characteristics at  $T_a=25^\circ\text{C}$** 

|                           |                |                                                          | min | typ | max | unit          |
|---------------------------|----------------|----------------------------------------------------------|-----|-----|-----|---------------|
| Collector Cutoff Current  | $I_{CES}$      | $V_{CE}=1500\text{V}$                                    |     |     | 1.0 | mA            |
|                           | $I_{CB0}$      | $V_{CB}=800\text{V}$                                     |     |     | 10  | $\mu\text{A}$ |
| Collector Sustain Voltage | $V_{CE0(sus)}$ | $I_C=100\text{mA}, I_B=0$                                | 800 |     |     | V             |
| Emitter Cutoff Current    | $I_{EBO}$      | $V_{EB}=4\text{V}$                                       | 40  |     | 130 | mA            |
| C-E Saturation Voltage    | $V_{CE(sat)}$  | $I_C=2.5\text{A}, I_B=0.8\text{A}$                       |     |     | 5   | V             |
| B-E Saturation Voltage    | $V_{BE(sat)}$  | $I_C=2.5\text{A}, I_B=0.8\text{A}$                       |     |     | 1.5 | V             |
| DC Current Gain           | $h_{FE1}$      | $V_{CE}=5\text{V}, I_C=0.5\text{A}$                      | 8   |     |     |               |
|                           | $h_{FE2}$      | $V_{CE}=5\text{V}, I_C=2.5\text{A}$                      | 3.5 |     | 7   |               |
| Diode Forward Voltage     | $V_F$          | $I_{EC}=4\text{A}$                                       |     |     | 2.0 | V             |
| Fall Time                 | $t_f$          | $I_C=3\text{A}, I_{B1}=0.8\text{A}, I_{B2}=-1.6\text{A}$ | 0.1 | 0.3 |     | $\mu\text{s}$ |

**Switching Time  
Test Circuit**PW=20 $\mu\text{s}$ , duty  $\leq 1\%$ Unit (resistance: $\Omega$ , capacitance:F)**Package Dimensions 2039  
(unit:mm)**E: Emitter  
C: Collector  
B: Base

SANYO:TO3PML

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