Ordering number: EN 2426A

SANYO

No.2426A

# 2SD1879

NPN Triple Diffused Planar Silicon Transistor

## Color TV Horizontal Deflection Output Applications

### Applications

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

### Features

- High speed ($t_f$ = 100ns).
- High breakdown voltage ($V_{CBO}$ = 1500V).
- High reliability (Adoption of HVP process).
- On-chip damper diode.

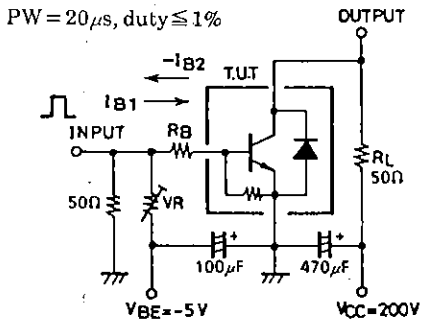
### Absolute Maximum Ratings at Ta = 25°C

| | | | | unit |
|---|---|---|---|---|
| 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 | $I_C$ | | 6 | A |
| Collector Current (Pulse) | $I_{CP}$ | | 20 | A |
| Collector Dissipation | $P_C$ | | 3.0 | W |
| | | Tc = 25°C | 60 | W |
| Junction Temperature | Tj | | 150 | °C |
| Storage Temperature | Tstg | | −55 to +150 | °C |

### Electrical Characteristics at Ta = 25°C

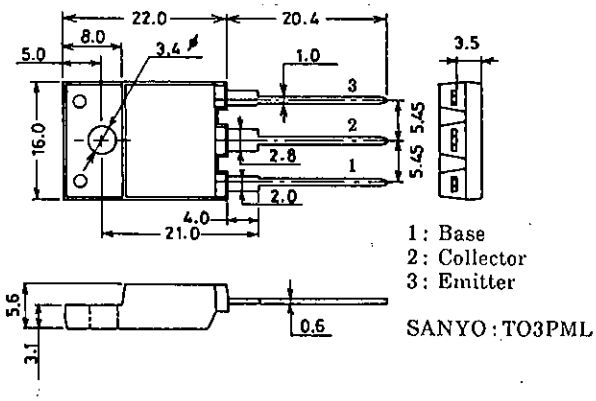
| | | | min | typ | max | unit |
|---|---|---|---|---|---|---|
| Collector Cutoff Current | $I_{CES}$ | $V_{CE}$ = 1500V | | | 1.0 | mA |
| | $I_{CBO}$ | $V_{CB}$ = 800V, $I_E$ = 0 | | | 10 | μA |
| Collector Sustain Voltage | $V_{CEO}$(sus) | $I_C$ = 100mA, $I_B$ = 0 | 800 | | | V |
| Emitter Cutoff Current | $I_{EBO}$ | $V_{EB}$ = 4V, $I_C$ = 0 | 40 | | 130 | mA |
| C-E Saturation Voltage | $V_{CE}$(sat) | $I_C$ = 5A, $I_B$ = 1A | | | 5 | V |
| B-E Saturation Voltage | $V_{BE}$(sat) | $I_C$ = 5A, $I_B$ = 1A | | | 1.5 | V |
| DC Current Gain | $h_{FE}$(1) | $V_{CE}$ = 5V, $I_C$ = 1A | 8 | | | |
| | $h_{FE}$(2) | $V_{CE}$ = 5V, $I_C$ = 5A | 5 | | 10 | |
| Diode Forward Voltage | $V_F$ | $I_{EC}$ = 6A, $I_B$ = 0 | | | 2.0 | V |
| Fall Time | $t_f$ | $I_C$ = 4A, $I_{B1}$ = 0.8A, $I_{B2}$ = −1.6A | | 0.1 | 0.3 | μs |

### Switching Time Test Circuit




### Package Dimensions 2039B

(unit : mm)




1 : Base
2 : Collector
3 : Emitter

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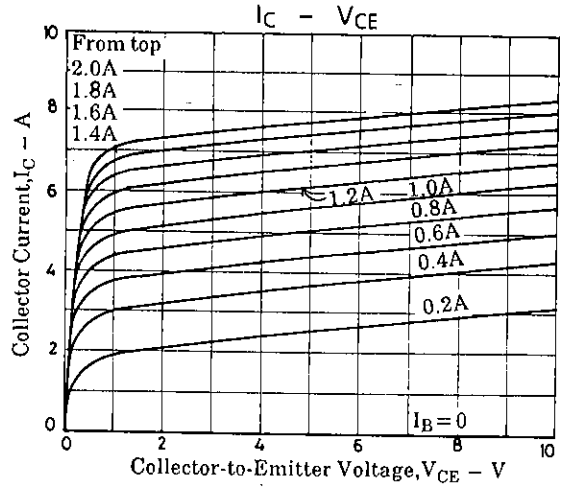
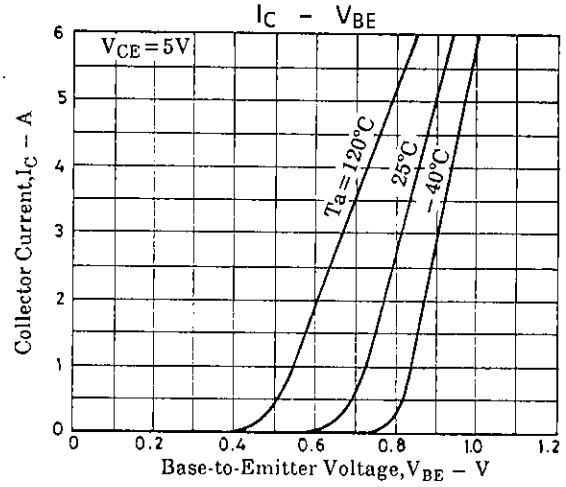
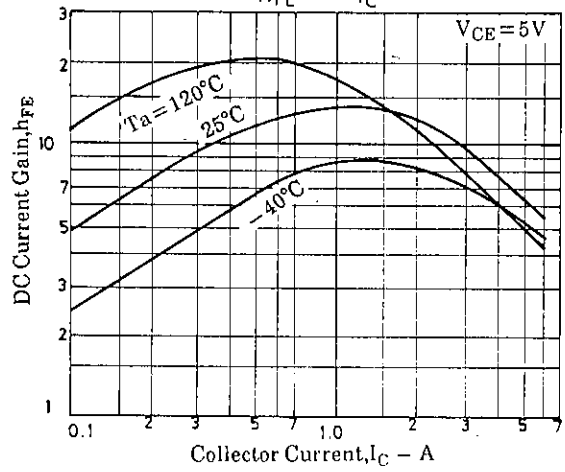
$I_C$ – $V_{CE}$



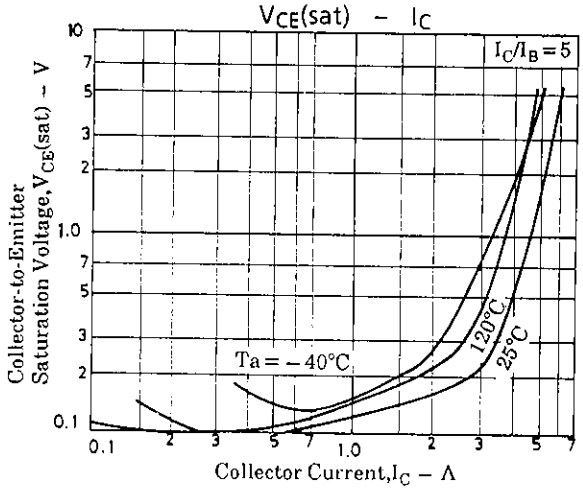

$I_C$ – $V_{BE}$



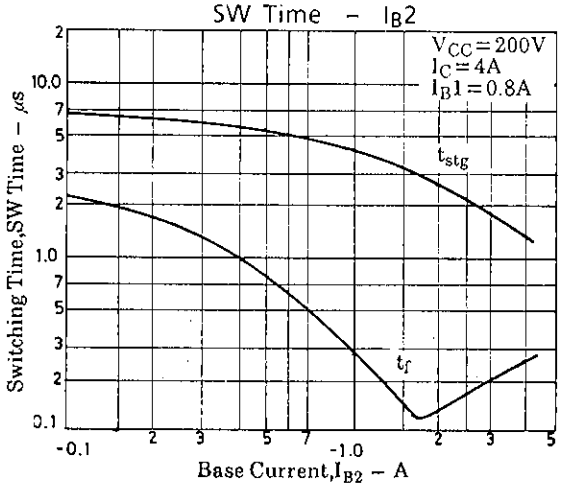

$h_{FE}$ – $I_C$



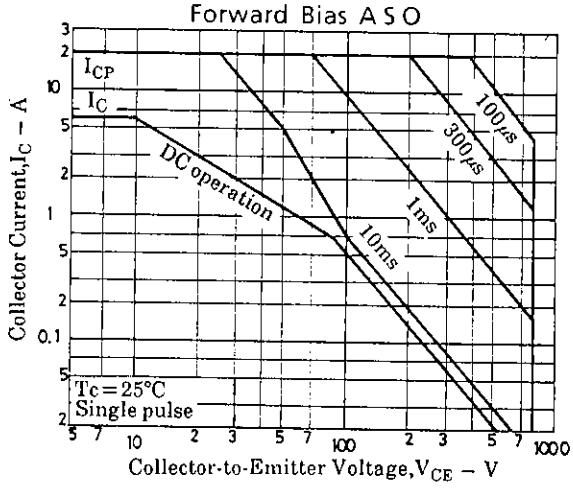

$V_{CE}$(sat) – $I_C$



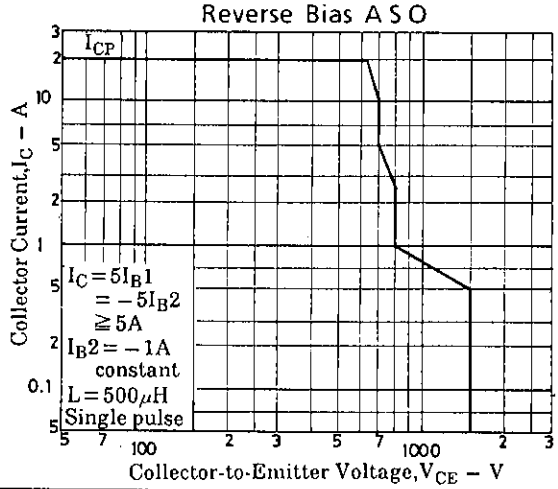

SW Time – $I_{B2}$




Forward Bias A S O




Reverse Bias A S O




$P_C$ – Ta