

**SANYO**

No.2427A

**2SD1880**

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

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

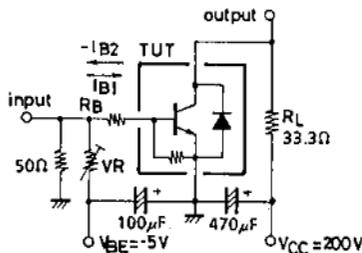
			unit
Collector-to-Base Voltage	$V_{CBO}$	1500	V
Collector-to-Emitter Voltage	$V_{CEO}$	800	V
Emitter-to-Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	8	A
Collector Current (Pulse)	$I_{CP}$	30	A
Collector Dissipation	$P_C$	70	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-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
	$I_{CBO}$	$V_{CB} = 800\text{V}$			10	$\mu\text{A}$
Collector Sustain Voltage	$V_{CEO(sus)}$	$I_C = 100\text{mA}, I_B = 0$	800			V
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4\text{V}$	40		130	mA
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 6\text{A}, I_B = 1.2\text{A}$			5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 6\text{A}, I_B = 1.2\text{A}$			1.5	V
DC Current Gain	$h_{FE1}$	$V_{CE} = 5\text{V}, I_C = 1\text{A}$	8			
	$h_{FE2}$	$V_{CE} = 5\text{V}, I_C = 6\text{A}$	5		10	
Diode Forward Voltage	$V_F$	$I_{EC} = 8\text{A}$			2.0	V
Fall Time	$t_f$	$I_C = 6\text{A}, I_{B2} = 1.2\text{A}, I_{B1} = -2.4\text{A}$		0.1	0.3	$\mu\text{s}$

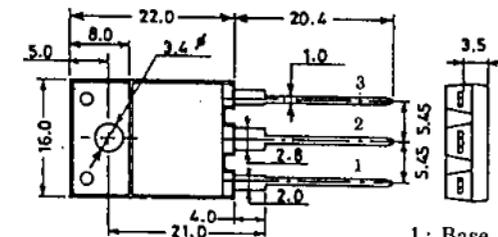
**Switching Time Test Circuit**

PW = 20  $\mu\text{s}$ , duty  $\leq 1\%$

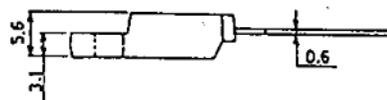


**Package Dimensions 2039B**

(unit : mm)



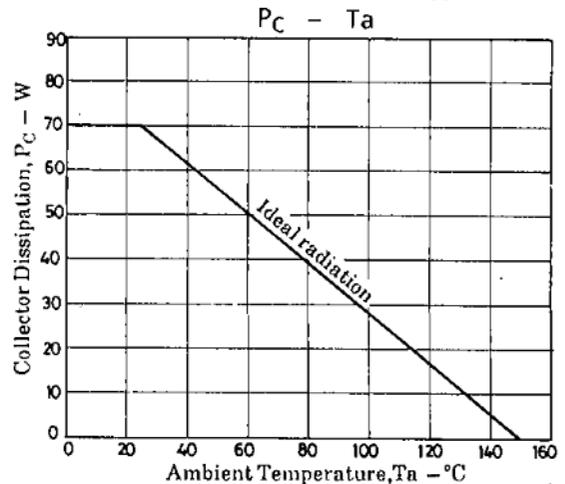
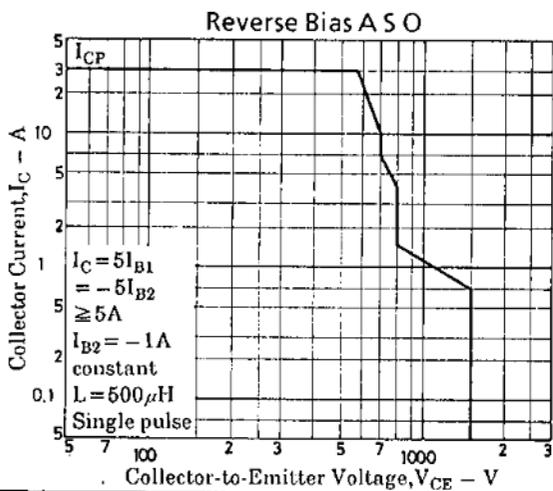
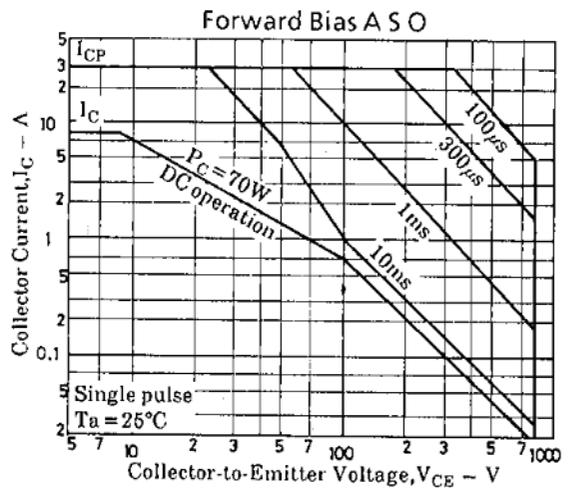
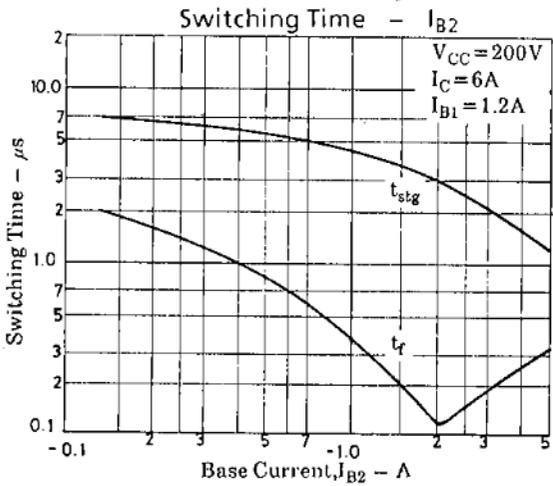
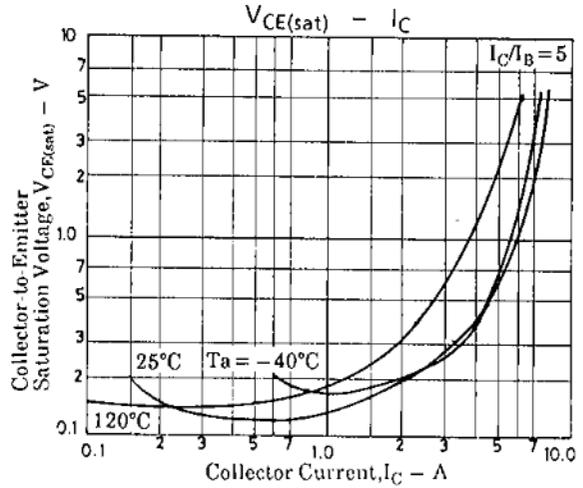
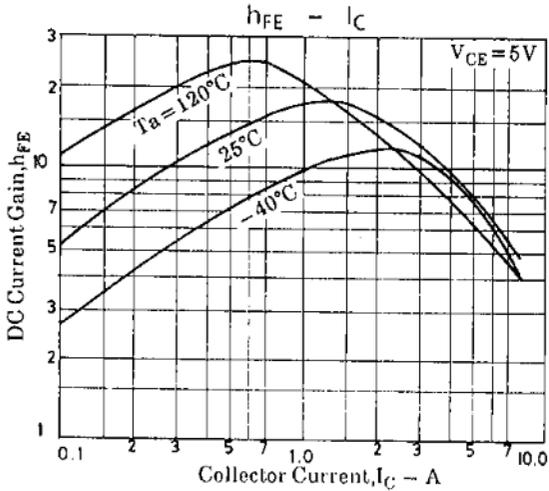
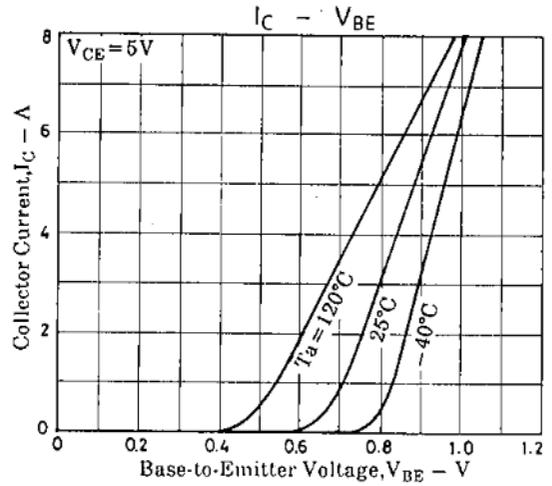
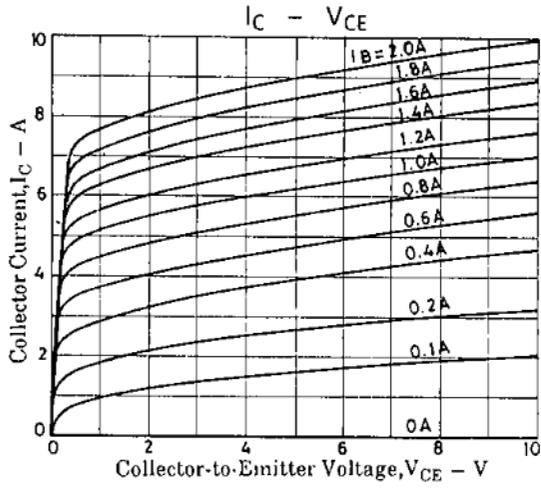
- 1: Base
- 2: Collector
- 3: Emitter



SANYO: TO3PML

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