

<b>SANYO</b>	No.2509C	<b>2SC3996</b>
		NPN Triple Diffused Planar Silicon Transistor Ultrahigh-Definition Display Horizontal Deflection Output Applications

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

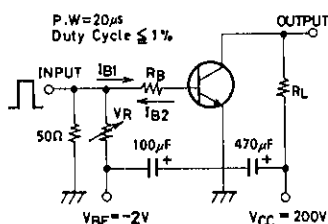
Parameter	Symbol	Value	unit
Collector-to-Base Voltage	$V_{CBO}$	1500	V
Collector-to-Emitter Voltage	$V_{CEO}$	800	V
Emitter-to-Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	15	A
Collector Current (Pulse)	$I_{CP}$	35	A
Collector Dissipation	$P_C$	180	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$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

$T_c = 25^\circ\text{C}$

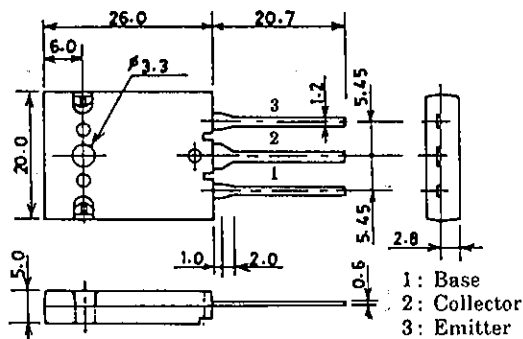
**Electrical Characteristics at  $T_a = 25^\circ\text{C}$**

Parameter	Symbol	Test Conditions	min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 800\text{V}, I_E = 0$			10	$\mu\text{A}$
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	$\mu\text{s}$
Fall Time	$t_f$	$I_C = 8\text{A}, I_{B2} = 1.6\text{A}, I_{B1} = -3.2\text{A}$			0.2	$\mu\text{s}$

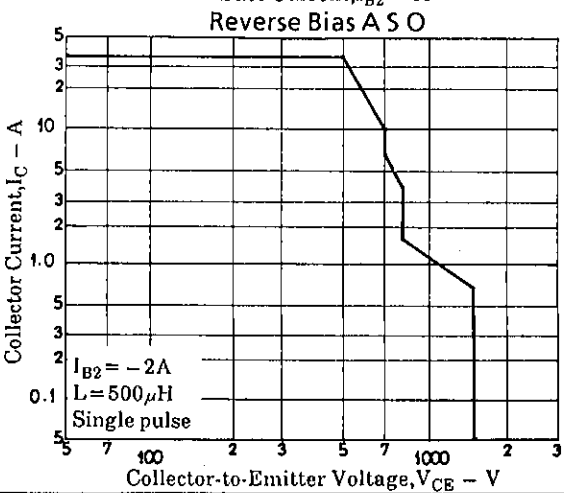
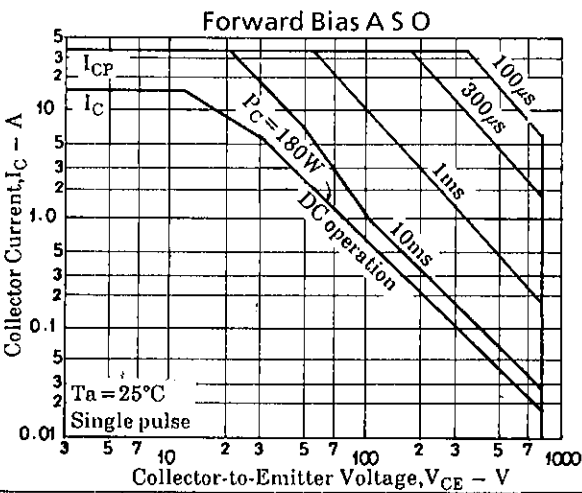
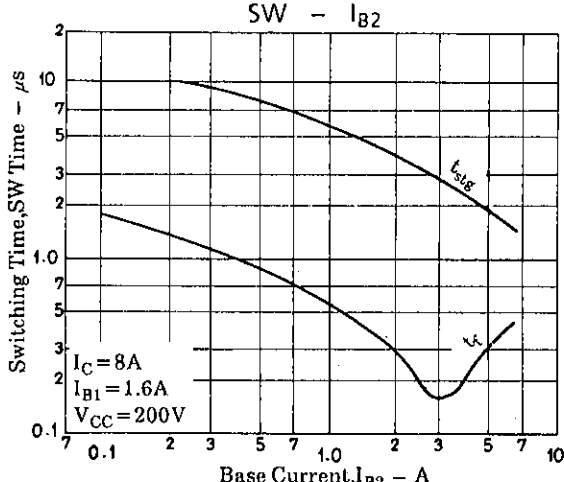
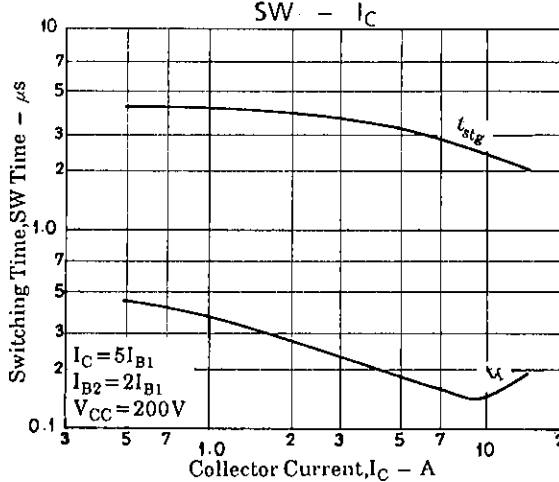
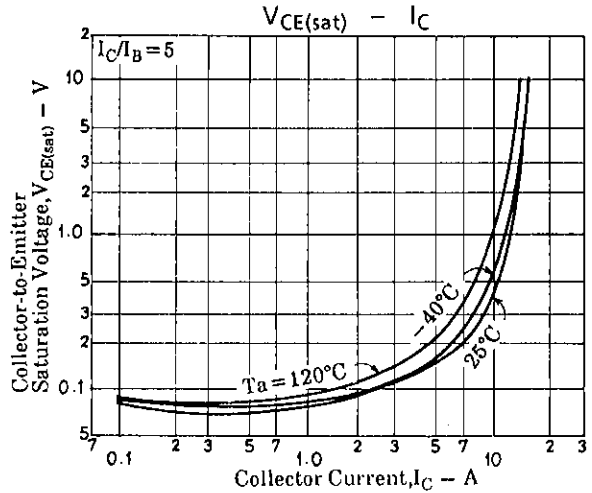
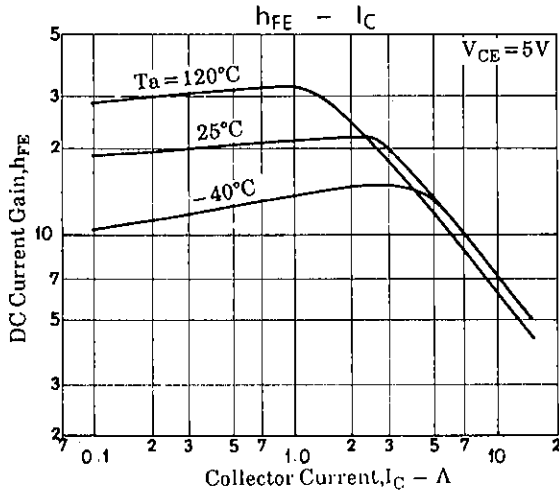
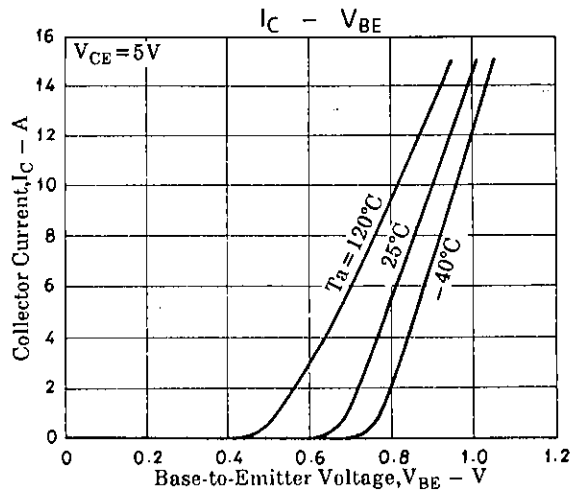
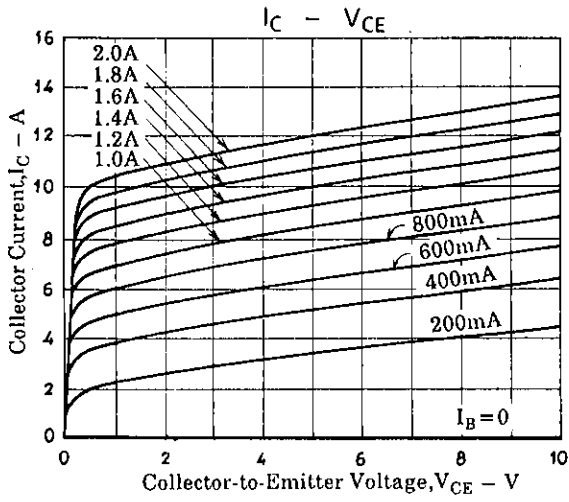
**Switching Time Test Circuit**

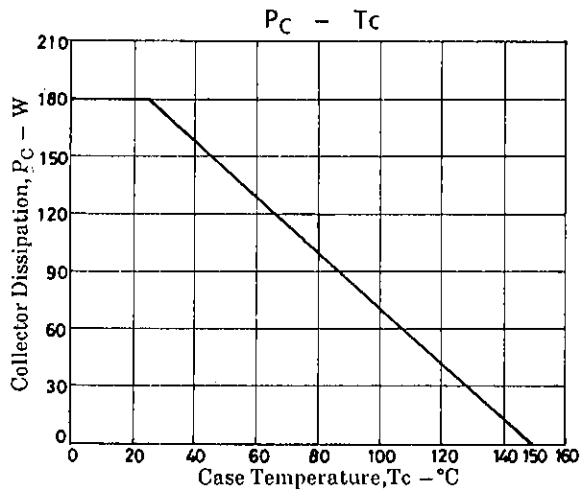


**Package Dimensions 2048B (unit: mm)**



SANYO: TO-3PBL





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