	No.2771	<h1 style="margin: 0;">2SC3997</h1> <p style="margin: 0;">NPN Triple Diffused Planar Silicon Transistor</p> <p style="margin: 0;">Very High-Definition Color Display Horizontal Deflection Output Applications</p>
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Features

- . High speed ($t_f=100\text{ns typ}$)
- . High breakdown voltage ($V_{CBO}=1500\text{V}$)
- . High reliability (adoption of HVP process)
- . 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	20	A
Peak Collector Current	i_{cp}	40	A
Collector Dissipation	P_C	250	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

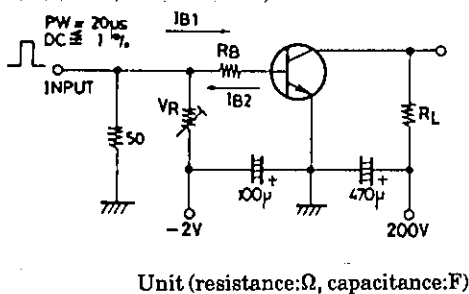
$T_c=25^\circ\text{C}$

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

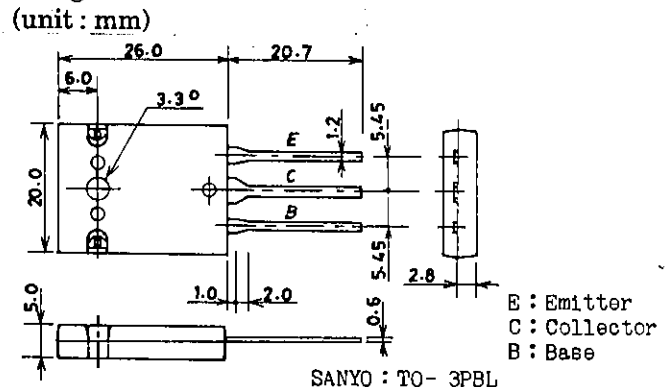
		min	typ	max	
Collector Cutoff Current	I_{CES}			1.0	mA
Collector Sustain Voltage	$V_{CEO(sus)}$	800			V
Emitter Cutoff Current	I_{EBO}			1.0	mA
Collector Cutoff Current	I_{CBO}			10	μA
DC Current Gain	$h_{FE}(1)$	8		30	
	$h_{FE}(2)$	4		8	
C-E Saturation Voltage	$V_{CE(sat)}$			5	V
B-E Saturation Voltage	$V_{BE(sat)}$			1.5	V
Storage Time	t_{stg}			3.0	μs
Fall Time	t_f			0.2	μs

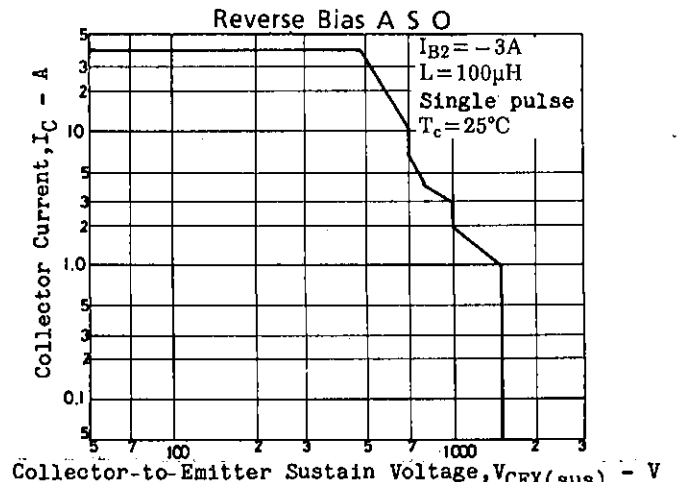
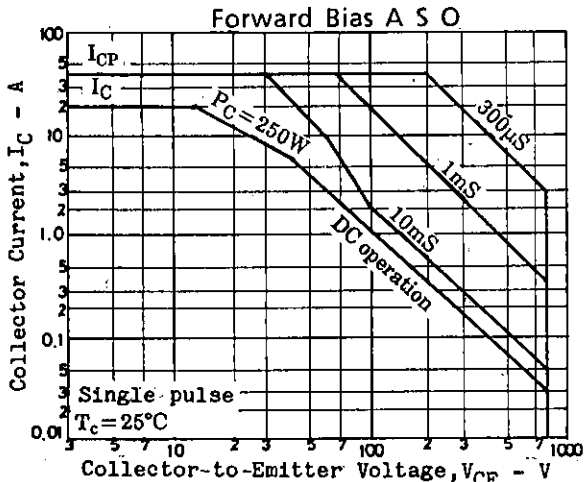
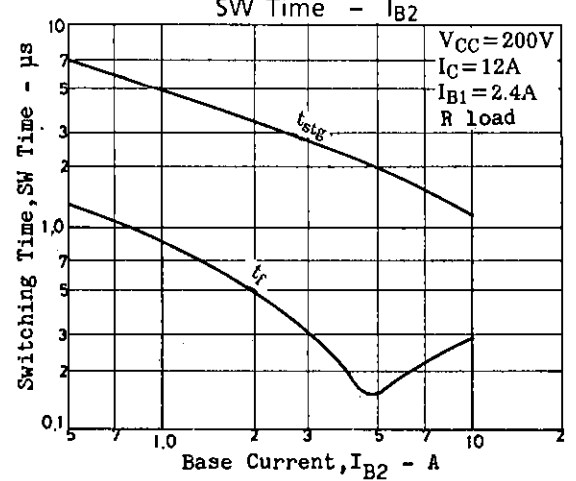
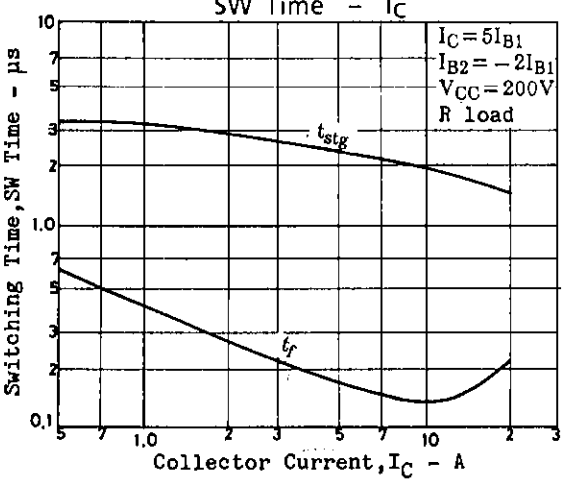
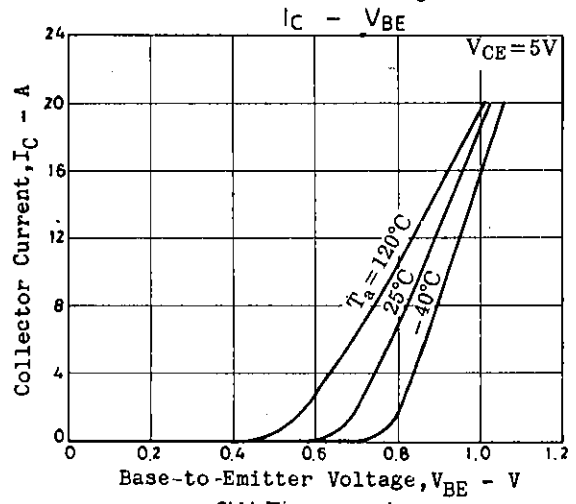
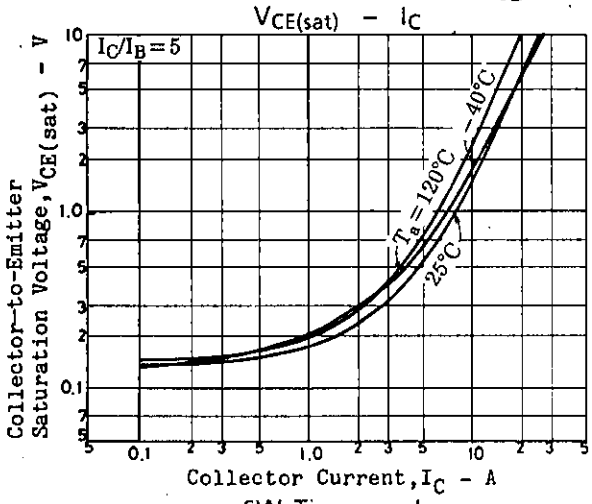
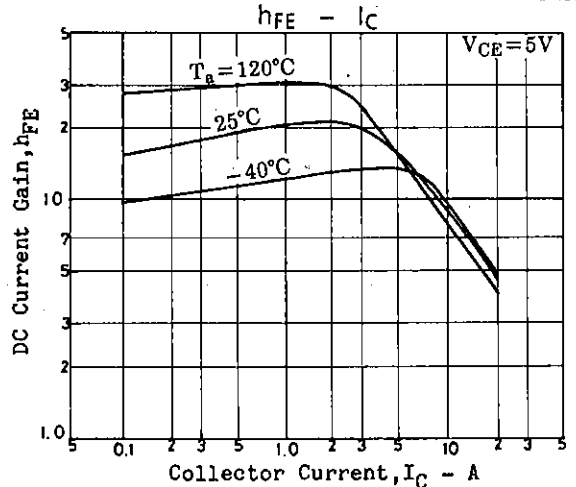
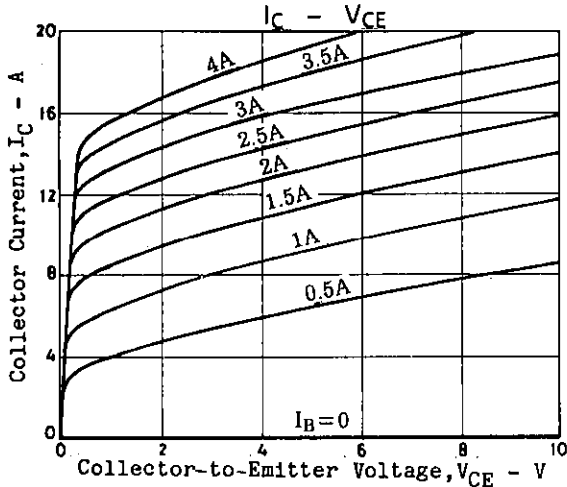
$V_{CE}=1500\text{V}$
 $I_C=100\text{mA}, I_B=0$
 $V_{EB}=4\text{V}, I_C=0$
 $V_{CB}=800\text{V}, I_E=0$
 $V_{CE}=5\text{V}, I_C=1.0\text{A}$
 $V_{CE}=5\text{V}, I_C=16\text{A}$
 $I_C=16\text{A}, I_B=4\text{A}$
 $I_C=16\text{A}, I_B=4\text{A}$
 $I_C=12\text{A}, I_{B1}=2.4\text{A}$
 $I_{B2}=-4.8\text{A}$
 $I_C=12\text{A}, I_{B1}=2.4\text{A}$
 $I_{B2}=-4.8\text{A}$

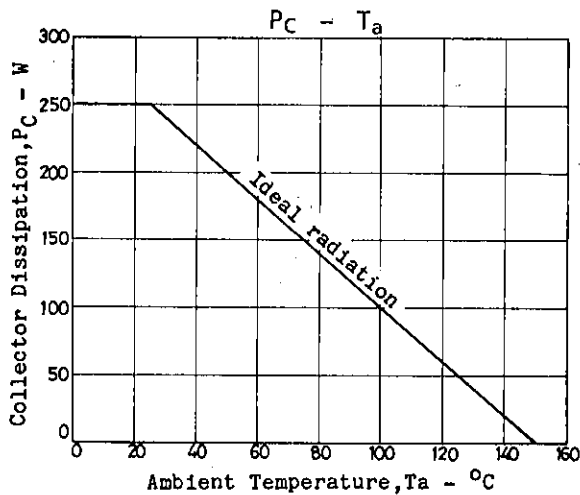
Switching Time Test Circuit



Package Dimensions 2048







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