	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	$^\circ\text{C}$

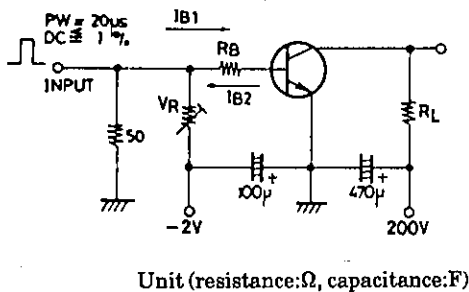
$T_c=25^\circ\text{C}$

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

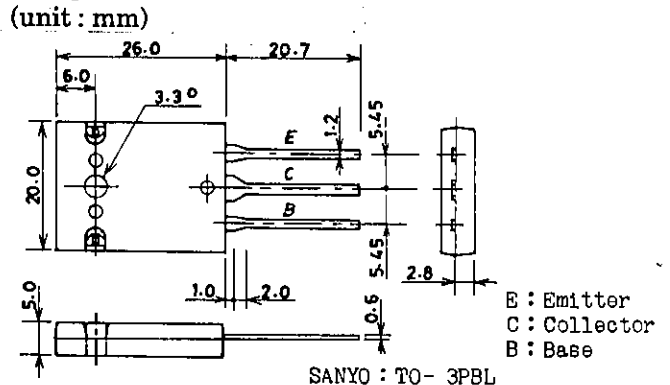
		min	typ	max	
Collector Cutoff Current	$I_{CES}$			1.0	mA
Collector Sustain Voltage	$V_{CEO(sus)}$	800			V
Emitter Cutoff Current	$I_{EBO}$			1.0	mA
Collector Cutoff Current	$I_{CBO}$			10	$\mu\text{A}$
DC Current Gain	$h_{FE(1)}$	8		30	
	$h_{FE(2)}$	4		8	
C-E Saturation Voltage	$V_{CE(sat)}$			5	V
B-E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

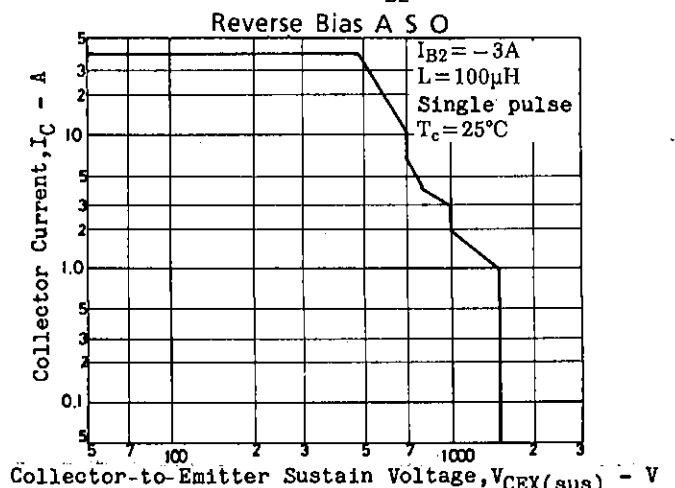
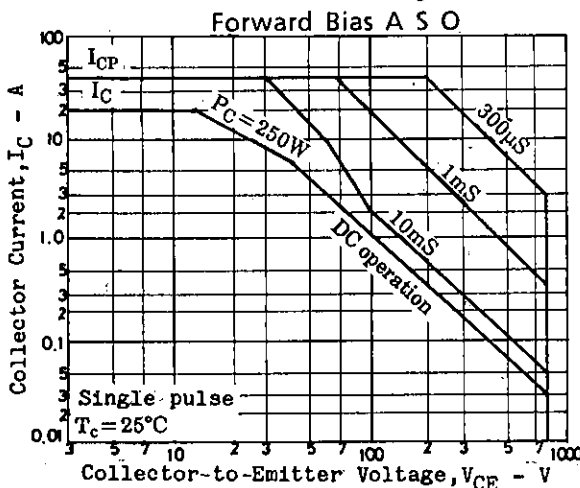
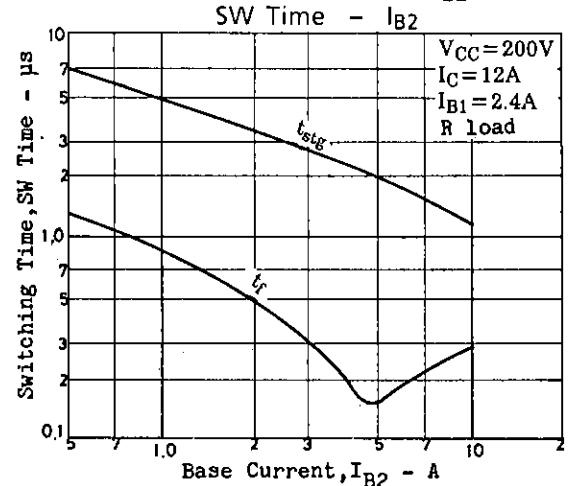
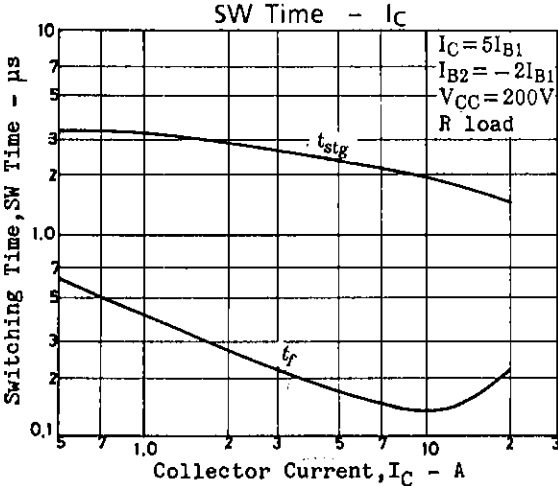
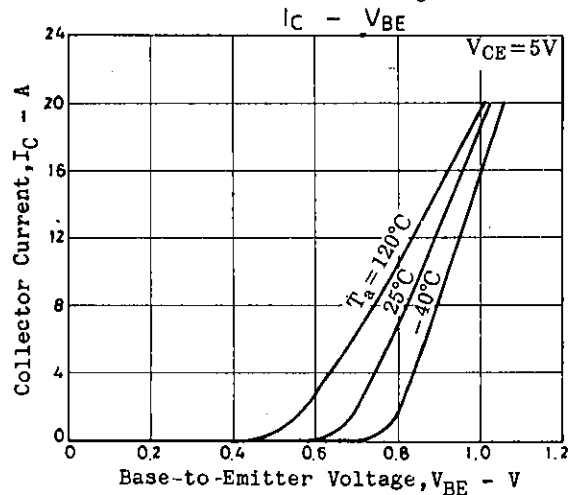
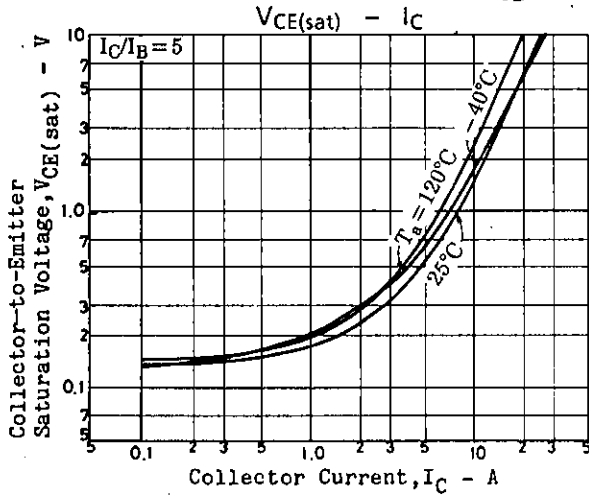
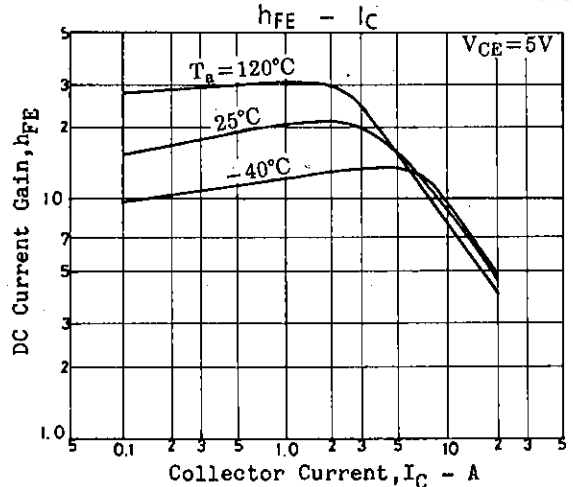
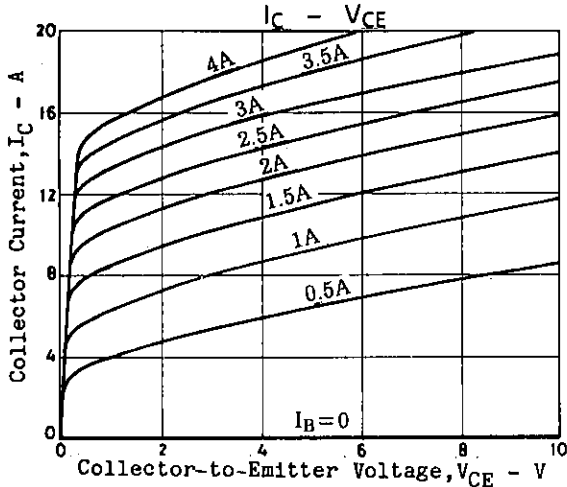
$V_{CE}=1500\text{V}$   
 $I_C=100\text{mA}, I_B=0$   
 $V_{EB}=4\text{V}, I_C=0$   
 $V_{CB}=800\text{V}, I_E=0$   
 $V_{CE}=5\text{V}, I_C=1.0\text{A}$   
 $V_{CE}=5\text{V}, I_C=16\text{A}$   
 $I_C=16\text{A}, I_B=4\text{A}$   
 $I_C=16\text{A}, I_B=4\text{A}$   
 $I_C=12\text{A}, I_{B1}=2.4\text{A}$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

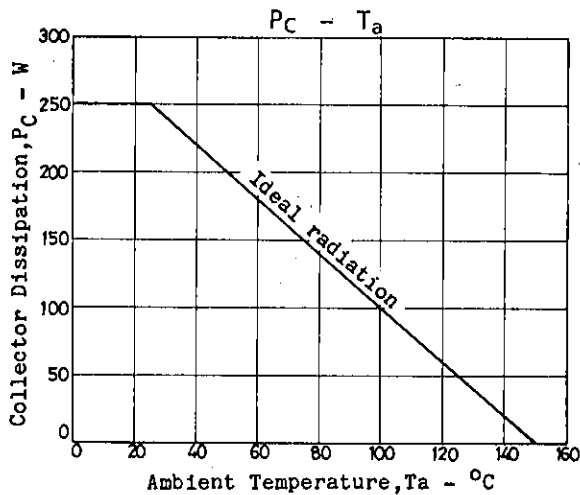
**Switching Time Test Circuit**



**Package Dimensions 2048**







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