

**2SC3896**

## Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

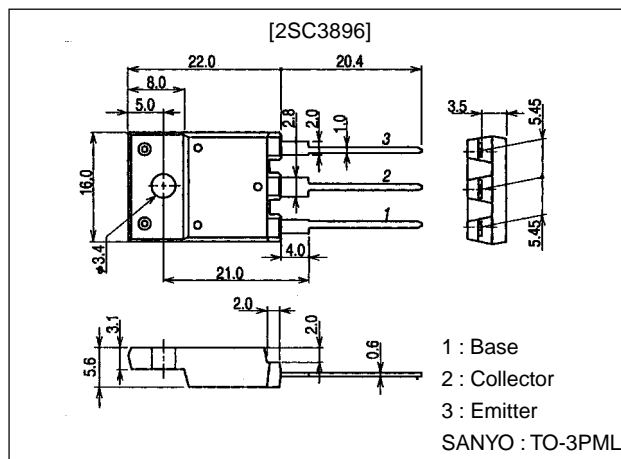
### Features

- 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.

### Package Dimensions

unit:mm

2039D



### Specifications

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

Parameter	Symbol	Conditions	Ratings	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)	$I_{CP}$		25	A
Collector Dissipation	$P_C$	$T_c=25^\circ\text{C}$	3.0	W
			70	W
Junction Temperature	$T_J$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=800\text{V}, I_E=0$			10	$\mu\text{A}$
	$I_{CES}$	$V_{CE}=1500\text{V}, R_{BE}=0$			1.0	mA
Collector-to-Emitter 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
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=6\text{A}, I_B=1.5\text{A}$			5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=6\text{A}, I_B=1.5\text{A}$			1.5	V

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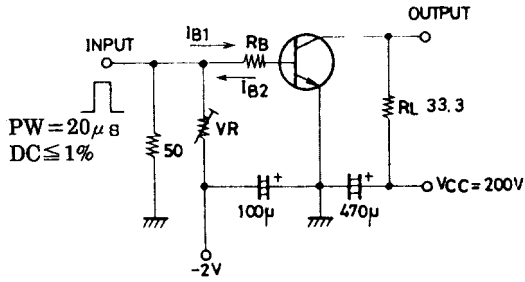
**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

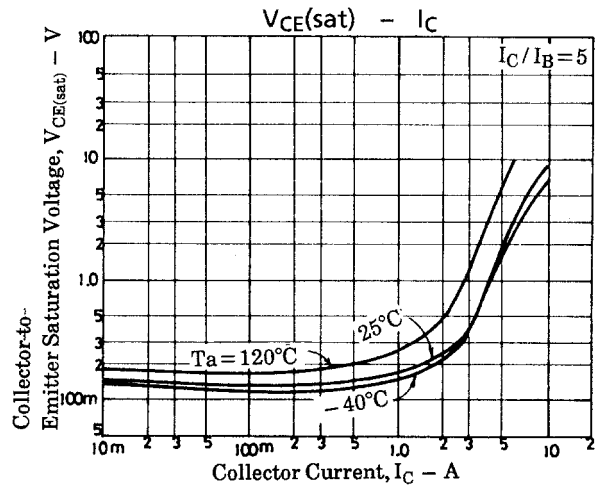
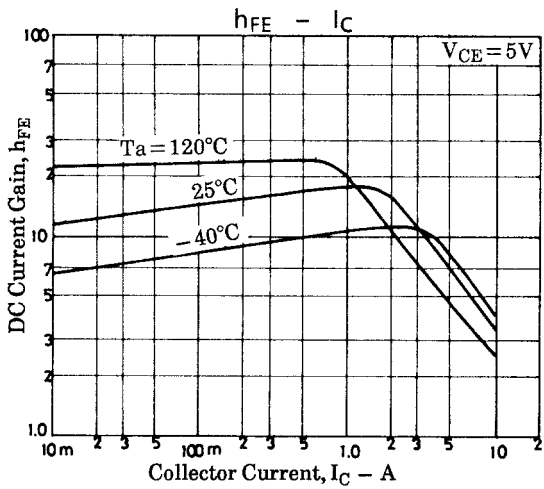
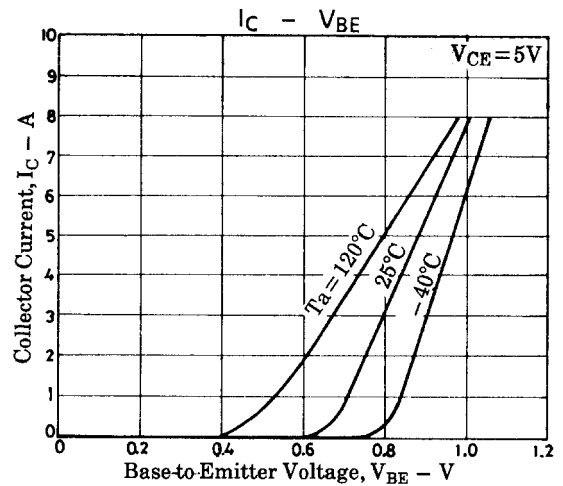
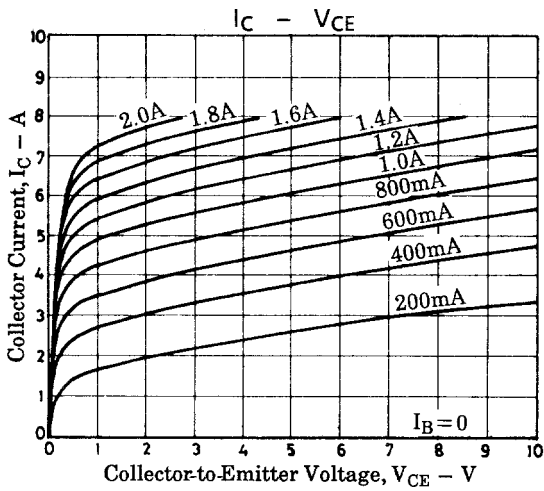
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	$h_{FE1}$	$V_{CE}=5V, I_C=1A$	8			
	$h_{FE2}$	$V_{CE}=5V, I_C=6A$	4		8	
Storage Time	$t_{stg}$	$I_C=6A, I_{B1}=1.2A, I_{B2}=-2.4A$			3.0	$\mu s$
Fall Time	$t_f$	$I_C=6A, I_{B1}=1.2A, I_{B2}=-2.4A$	0.1	0.2		$\mu s$

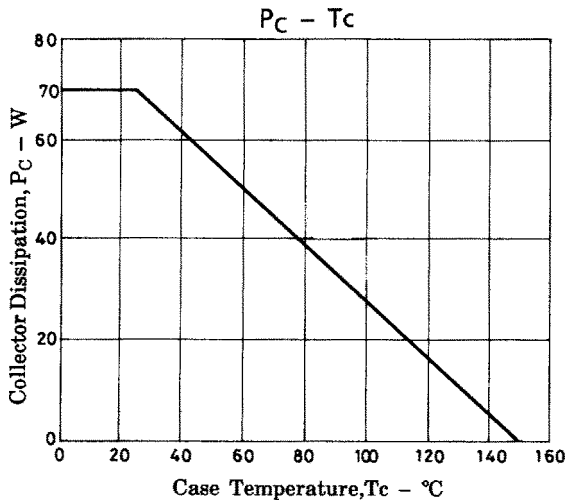
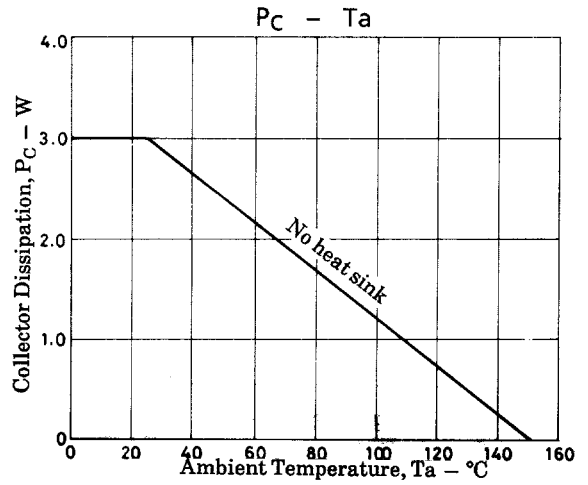
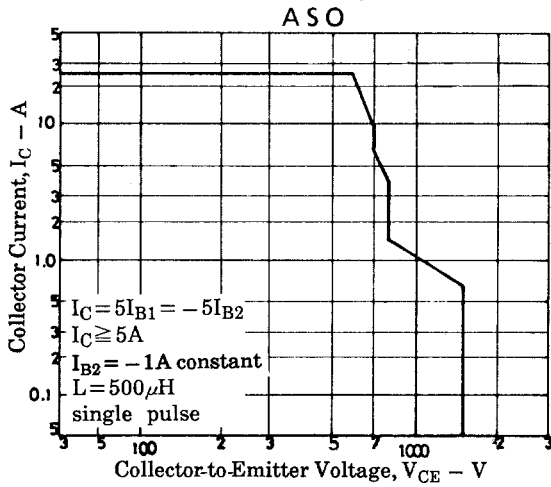
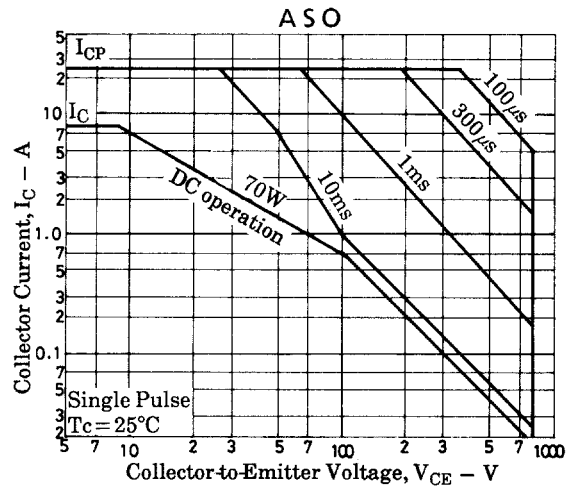
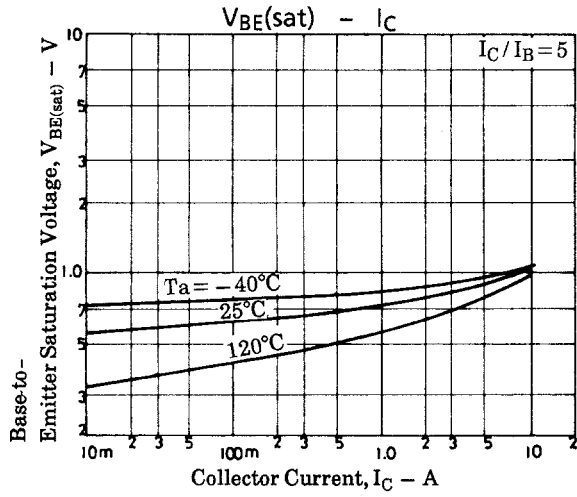
## Switching Time Test Circuit



Unit (resistance:Ω, capacitance:F)



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