

2SC3894

# **Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications**

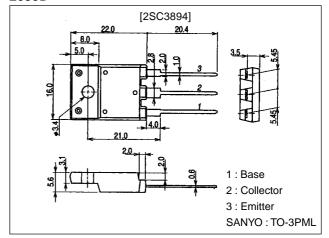
#### **Features**

- · High speed ( $t_f=100$ ns typ).
- · High breakdown voltage (V<sub>CBO</sub>=1500V).
- · High reliability (Adoption of HVP process).
- · Adoption of MBIT process.

## **Package Dimensions**

unit:mm

2039D



## **Specifications**

### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CBO</sub>		1500	V
Collector-to-Emitter Voltage	VCEO		800	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		6	V
Collector Current	IC		6	Α
Collector Current (Pulse)	I <sub>CP</sub>		16	Α
Collector Dissipation	PC		3.0	W
		Tc=25°C	60	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

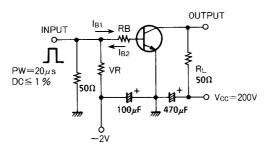
#### Electrical Characteristics at Ta = 25°C

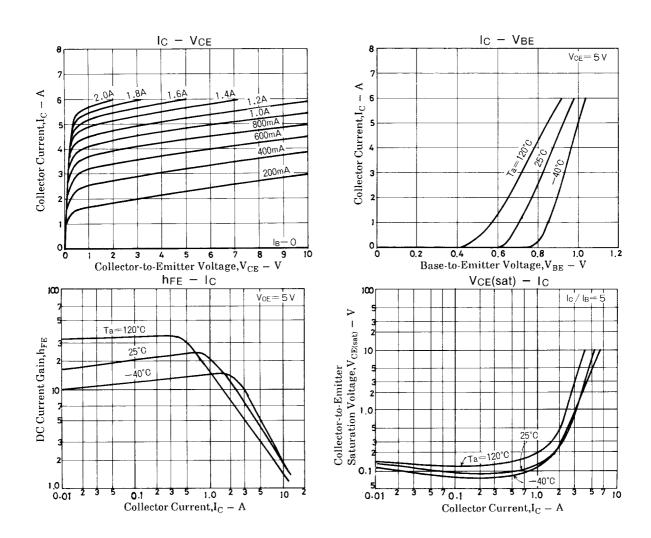
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Oille
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =800V, I <sub>E</sub> =0			10	μΑ
	ICES	V <sub>CE</sub> =1500V, R <sub>BE</sub> =0			1.0	mA
Collector-to-Emitter Sastain Voltage	VCEO(sus)	I <sub>C</sub> =100mA, I <sub>B</sub> =0	800			V
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =4V, I <sub>C</sub> =0			1.0	mA
Collector-to-Emitter Saturation Voltage	VCE(sat)	I <sub>C</sub> =4A, I <sub>B</sub> =1A			5	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =4A, I <sub>B</sub> =1A			1.5	V

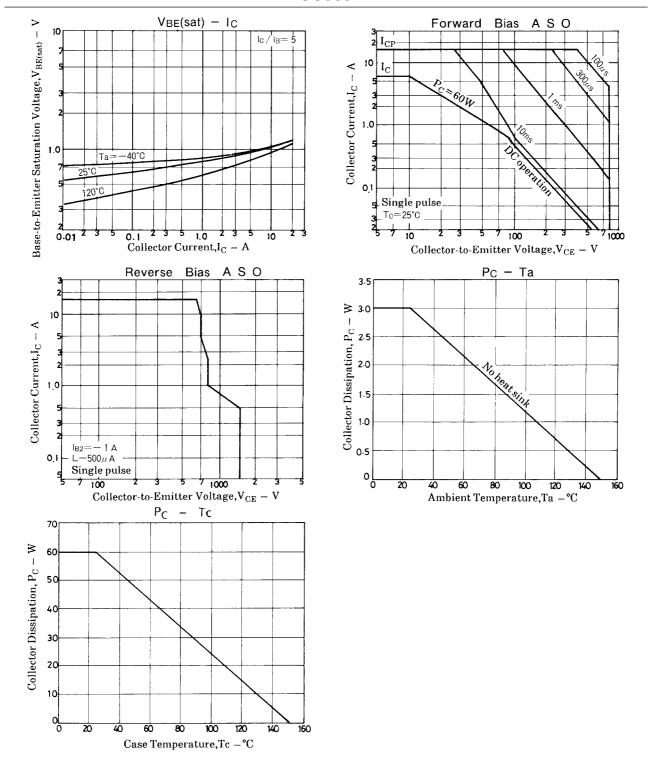
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Onit
DC Current Gain	h <sub>FE</sub> 1	V <sub>CE</sub> =5V, I <sub>C</sub> =1.0A	8			
	h <sub>FE</sub> 2	V <sub>CE</sub> =5V, I <sub>C</sub> =4A	4		8	
Storage Time	t <sub>stg</sub>	I <sub>C</sub> =4A, I <sub>B1</sub> =0.8A, I <sub>B2</sub> =-1.6A			3.0	μs
Fall Time	t <sub>f</sub>	I <sub>C</sub> =4A, I <sub>B1</sub> =0.8A, I <sub>B2</sub> =-1.6A		0.1	0.2	μs

## **Switching Time Test Circuit**







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