

# 2SC5451

# Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

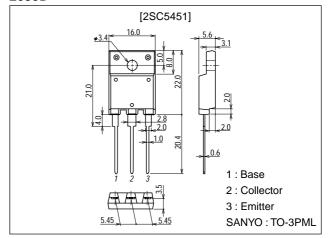
#### **Features**

- · High speed.
- · High breakdown voltage (V<sub>CBO</sub>=1600V).
- · 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>		1600	V
Collector-to-Emitter Voltage	VCEO		800	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		6	V
Collector Current	IC		15	Α
Collector Current (Pulse)	I <sub>CP</sub>		35	Α
Collector Dissipation	PC		3	W
	10	Tc=25°C	75	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

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

Parameter	Symbol	Conditions	Ratings			Unit
	Symbol		min	typ	max	Olin
Collector Cutoff Current	ICES	V <sub>CE</sub> =1600V, R <sub>BE</sub> =0			1.0	mA
Collector-to-Emitter Sustain Voltage	V <sub>CEO(sus)</sub>	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 Cutoff Current	ICBO	V <sub>CB</sub> =800V, I <sub>E</sub> =0			10	μA
DC Current Gain	h <sub>FE</sub> 1	V <sub>CE</sub> =5V, I <sub>C</sub> =1.0A	15		30	
	h <sub>FE</sub> 2	V <sub>CE</sub> =5V, I <sub>C</sub> =11A	4		7	

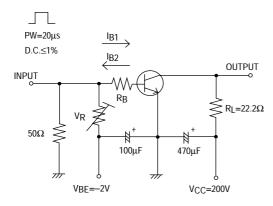
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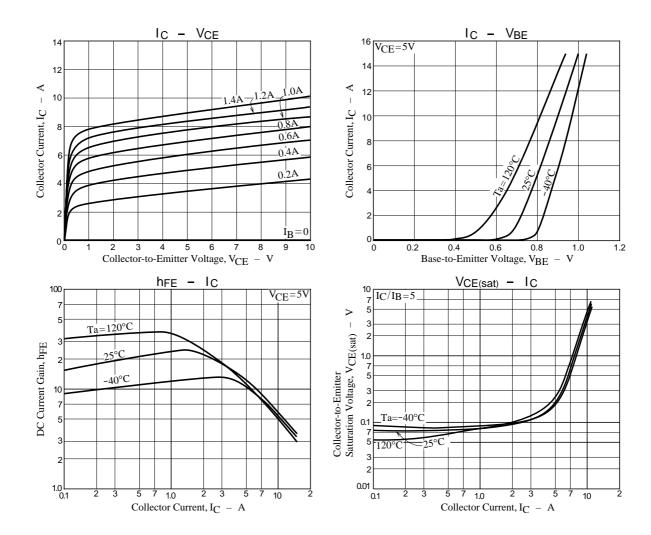
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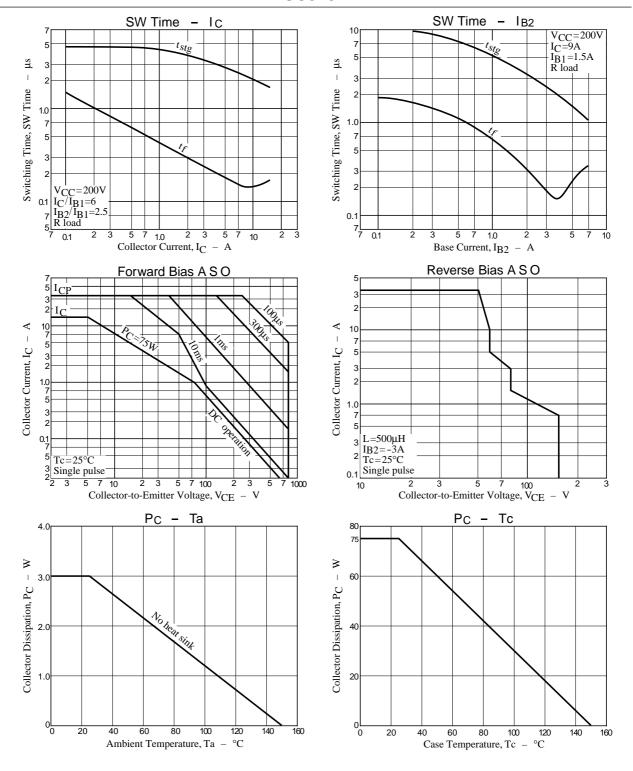
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =11A, I <sub>B</sub> =2.75A			5	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =11A, I <sub>B</sub> =2.75A			1.5	V
Storage Time	t <sub>stg</sub>	I <sub>C</sub> =9A, I <sub>B1</sub> =1.5A, I <sub>B2</sub> =-3.75A			3.0	μs
Fall Time	t <sub>f</sub>	I <sub>C</sub> =9A, I <sub>B1</sub> =1.5A, I <sub>B2</sub> =-3.75A			0.2	μs

## **Switching Time Test Circuit**







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