NPN Triple Diffused Planar Silicon Transistor



## 2SC5043

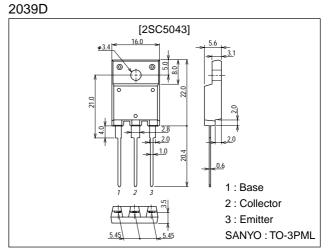
# Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

### Features

- $\cdot$  High speed (t<sub>f</sub>=100ns typ).
- $\cdot$  High reliability (HVP process).
- $\cdot$  High breakdown voltage (V\_{CBO}=1600V).
- · Adoption of MBIT process.
- · On-chip damper diode.

### Package Dimensions

unit:mm



## **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	VEBO		6	V
Collector Current	IC		10	A
Collector Current (Pulse)	ICP		25	A
Collector Dissipation	PC		3.0	W
		Tc=25°C	70	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

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

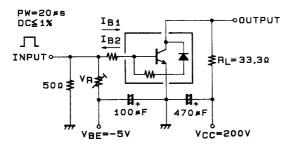
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Onit
Collector Cutoff Current	ICBO	V <sub>CB</sub> =800V, I <sub>E</sub> =0			10	μΑ
	ICES	V <sub>CE</sub> =1600V, R <sub>BE</sub> =0			1.0	mA
Collector-to-Emitter Sastain Voltage	VCEO(sus)	I <sub>C</sub> =100mA, I <sub>B</sub> =0	800			V
Emitter Cutoff Current	IEBO	V <sub>EB</sub> =4V, I <sub>C</sub> =0	40		130	mA
Collector-to-Emitter Saturation Voltage	VCE(sat)	I <sub>C</sub> =8A, I <sub>B</sub> =2A			5	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =8A, I <sub>B</sub> =2A			1.5	V

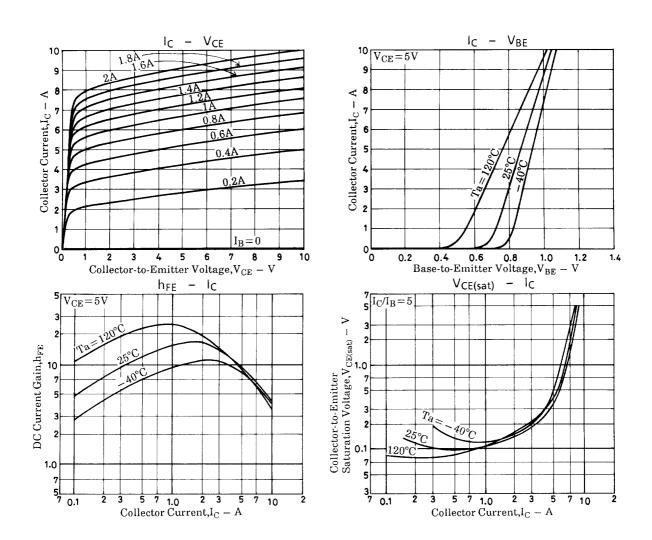
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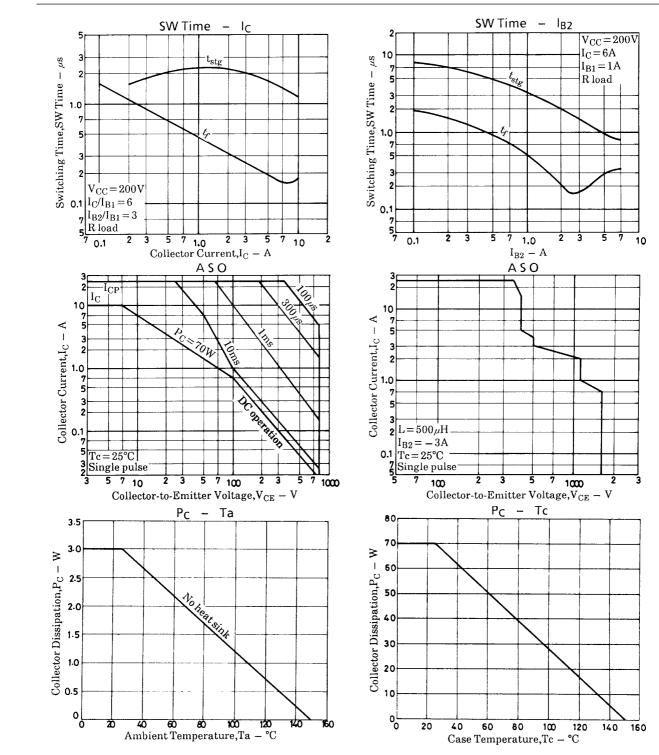
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Unit
DC Current Gain	h <sub>FE</sub> 1	V <sub>CE</sub> =5V, I <sub>C</sub> =1A	10		20	
	h <sub>FE</sub> 2	V <sub>CE</sub> =5V, I <sub>C</sub> =8A	4		7	
Storage Time	<sup>t</sup> stg	I <sub>C</sub> =6A, I <sub>B1</sub> =1.0A, I <sub>B2</sub> =-3.0A			2.0	μs
Fall Time	t <sub>f</sub>	I <sub>C</sub> =6A, I <sub>B1</sub> =1.0A, I <sub>B2</sub> =-3.0A		0.1	0.2	μs

#### **Switching Time Test Circuit**







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