

**2SC4124**

Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

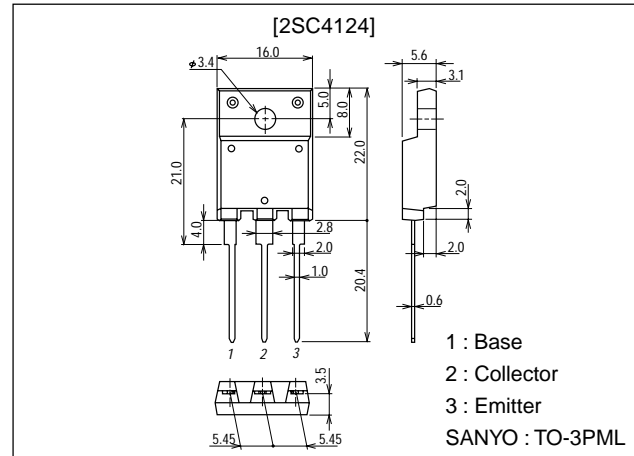
Features

- Adoption of MBIT process.
- On-chip damper diode.
- High breakdown voltage ($V_{CBO}=1500V$).
- High speed ($t_f=100ns$ typ).
- High reliability (Adoption of HVP process).

Package Dimensions

unit:mm

2039D



Specifications

Absolute Maximum Ratings at $T_a = 25^\circ C$

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		3	W
		$T_c=25^\circ C$	70	W
Junction Temperature	T_J		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Electrical Characteristics at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=800V, I_E=0$			10	μA
	I_{CES}	$V_{CE}=1500V, R_{BE}=0$			1	mA
Collector-to-Emitter Sustain Voltage	$V_{CEO(sus)}$	$I_C=100mA, I_B=0$	800			V
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0$	40		130	mA
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=6A, I_B=1.5A$			5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=6A, I_B=1.5A$			1.5	V

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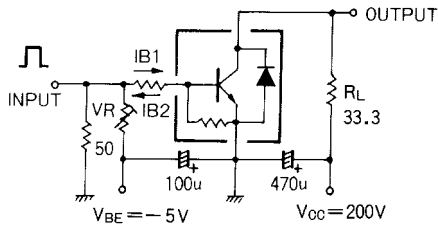
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	h_{FE1}	$V_{CE}=5V, I_C=1A$	8			
	h_{FE2}	$V_{CE}=5V, I_C=6A$	4		6	
Diode Forward Voltage	V_F	$I_{EC}=8A$			2	V
Storage Time	t_{stg}	$I_C=6A, I_{B1}=1.2A, I_{B2}=-2.4A$			3	μs
Fall Time	t_f	$I_C=6A, I_{B1}=1.2A, I_{B2}=-2.4A$		0.1	0.2	μs

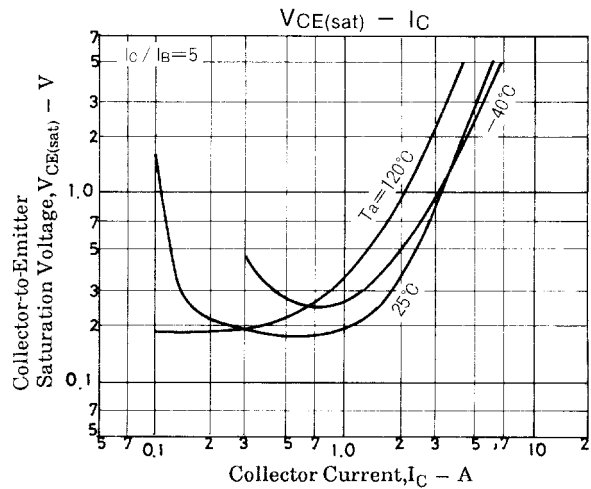
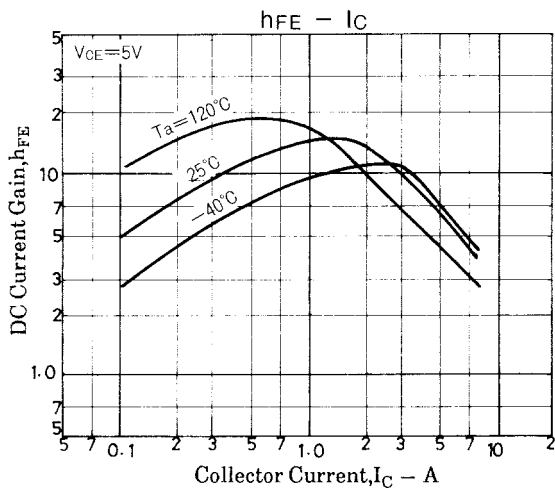
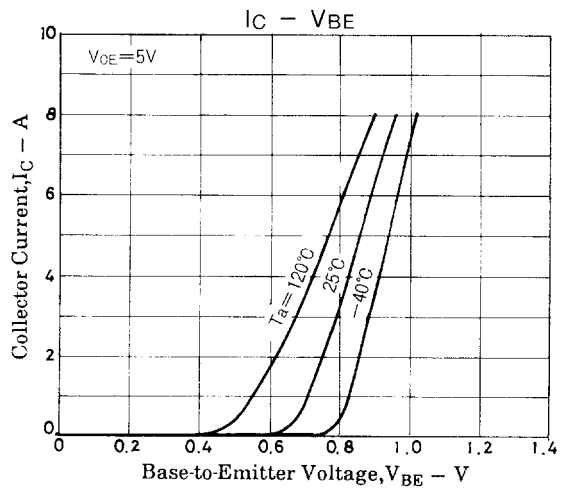
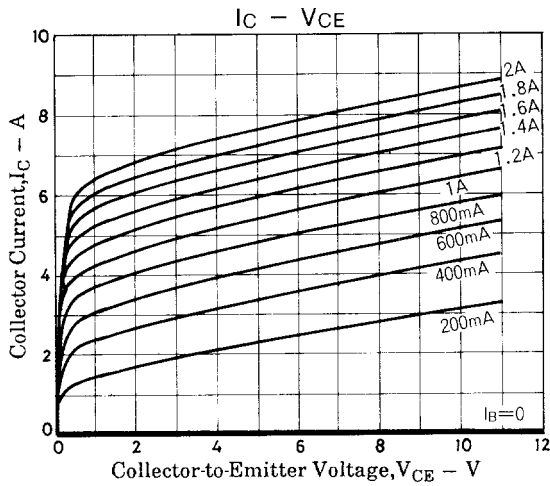
Switching Time Test Circuit

PW=20 μs

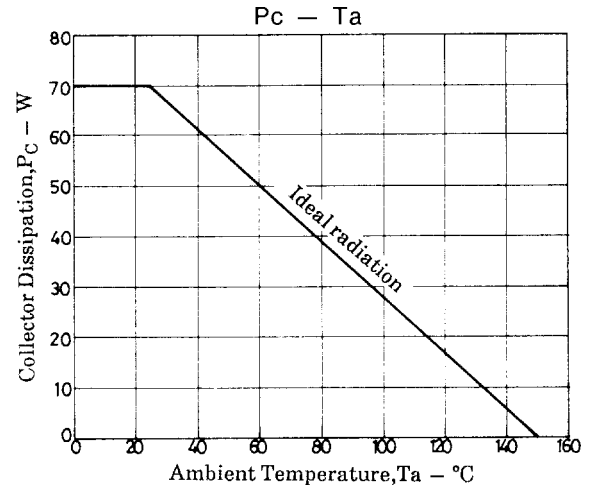
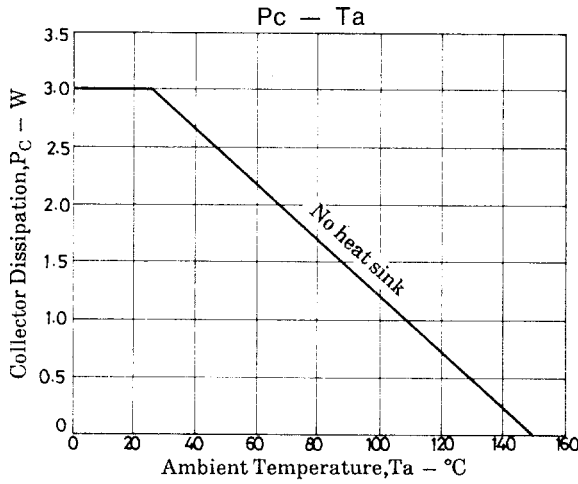
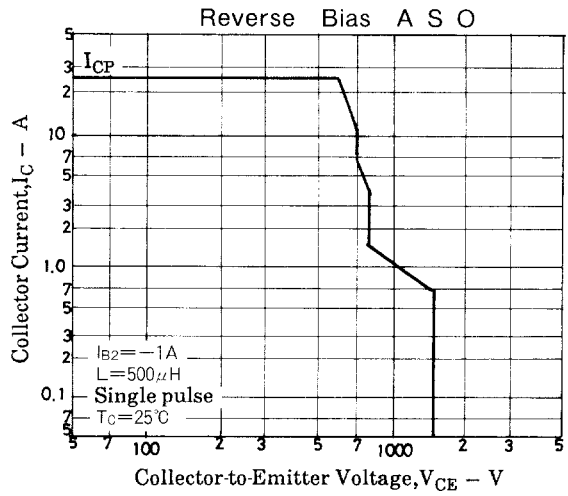
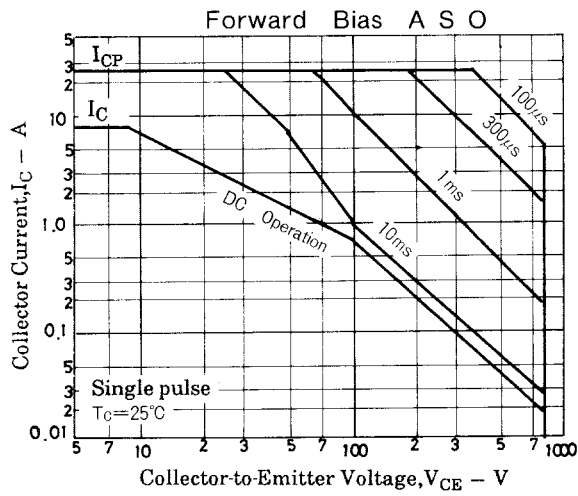
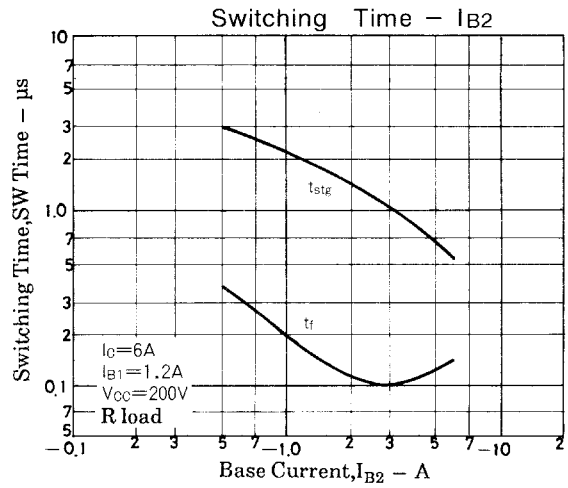
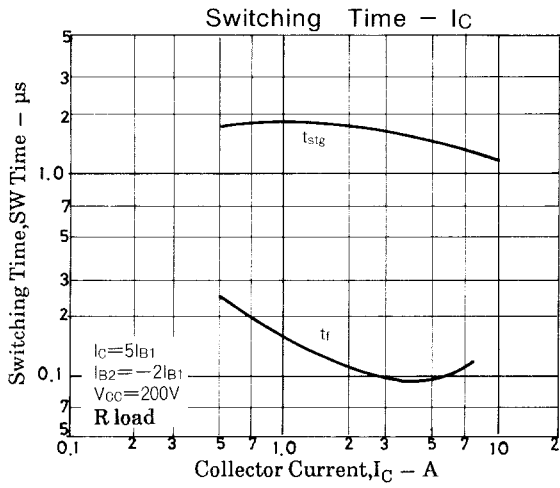
DC $\leq 1\%$



Unit (resistance : Ω , capacitance : F)



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