

**2SC5299**

Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

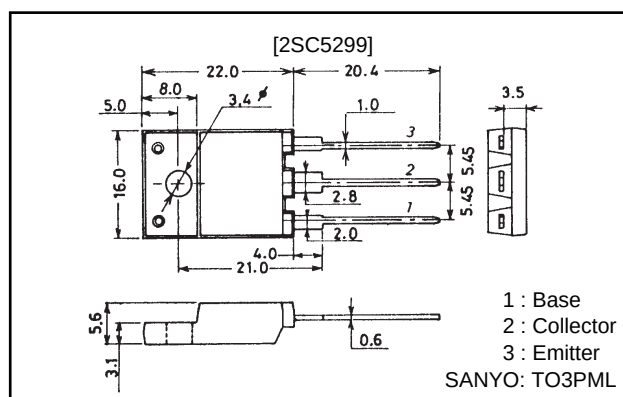
Features

- High Speed : $t_f=100\text{ns}$ typ.
- High Breakdown voltage : $V_{CBO}=1500\text{V}$.
- High reliability (Adoption of HVP process).
- Adoption of MBIT process.

Package Dimensions

unit: mm

2039C-TO3PML



Specifications

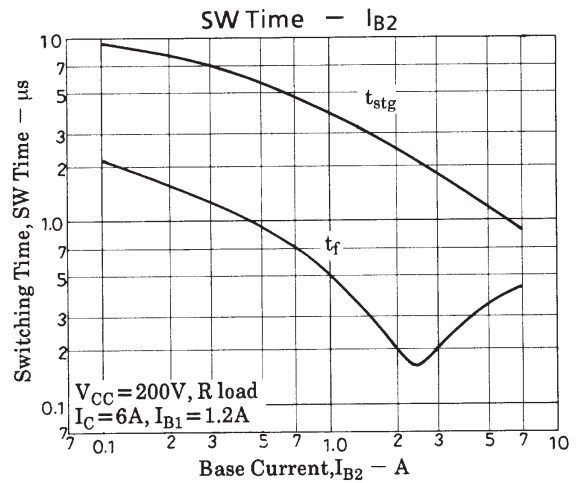
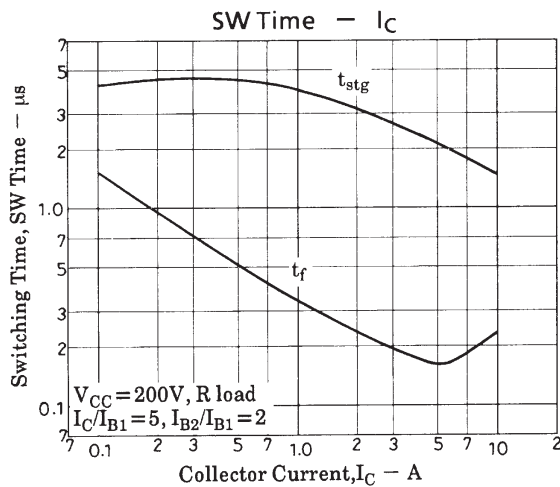
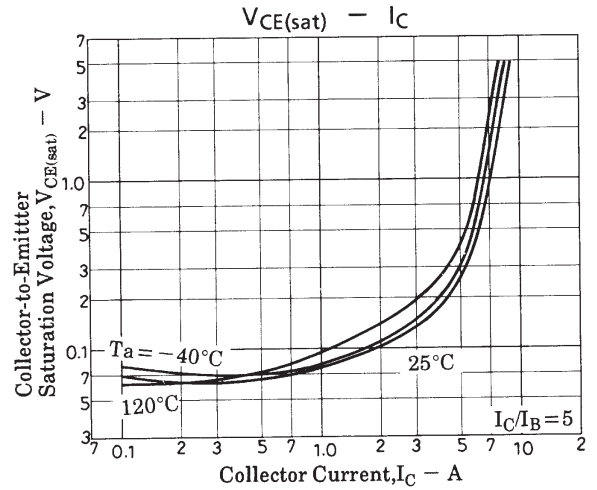
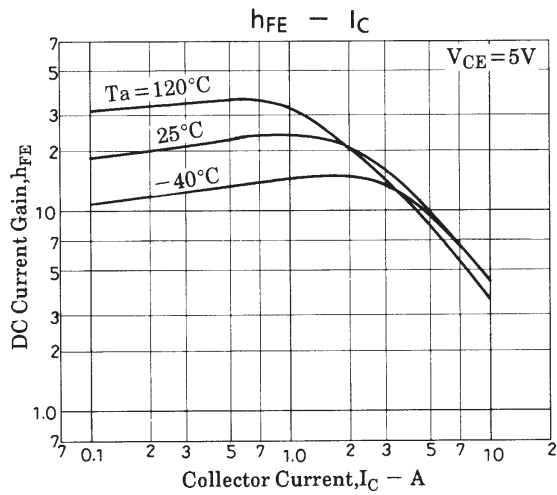
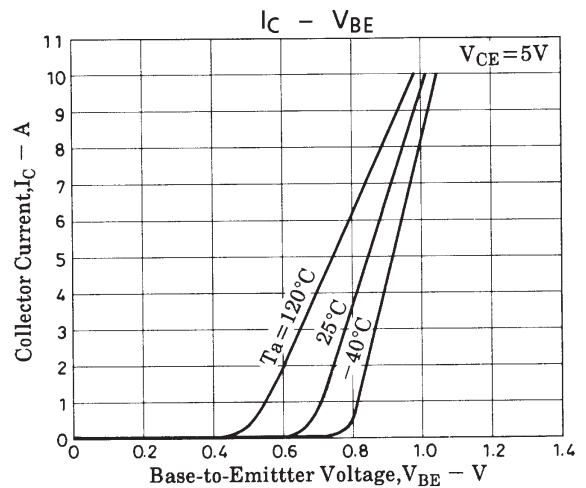
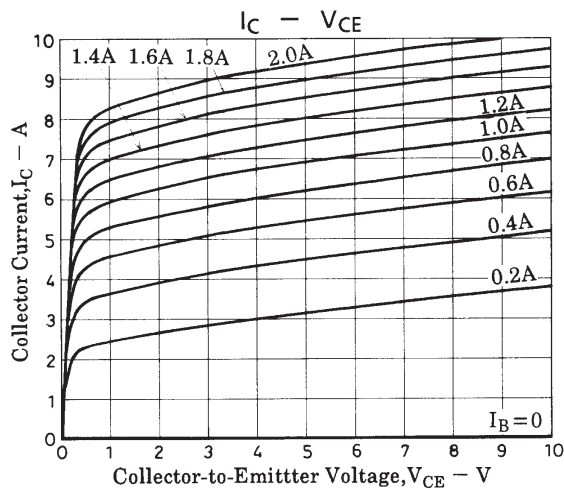
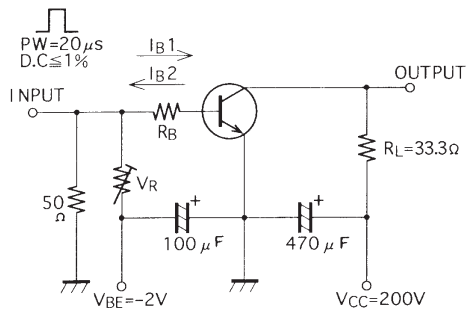
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

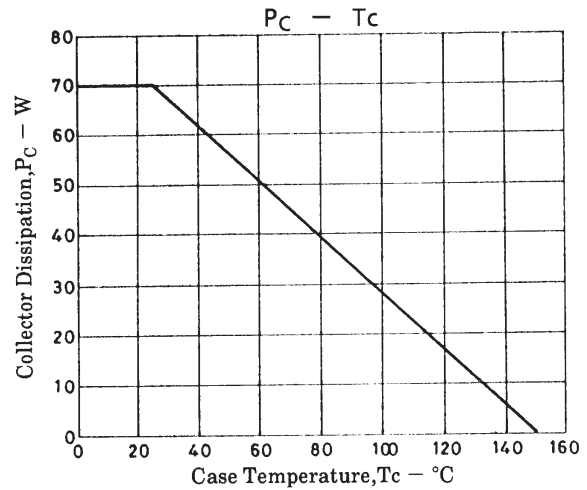
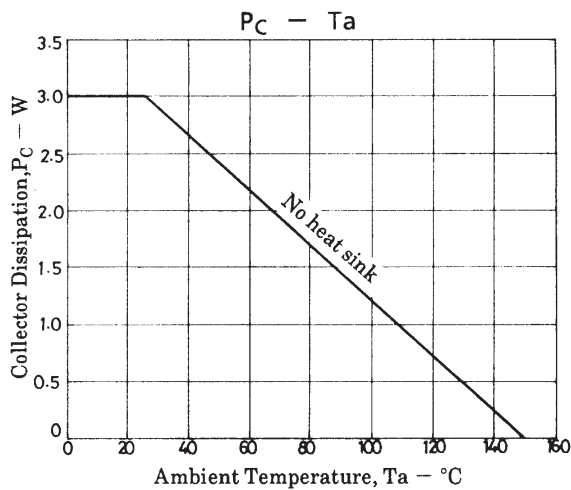
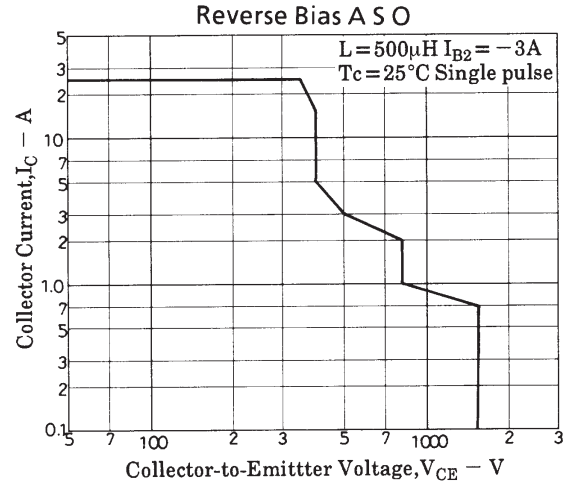
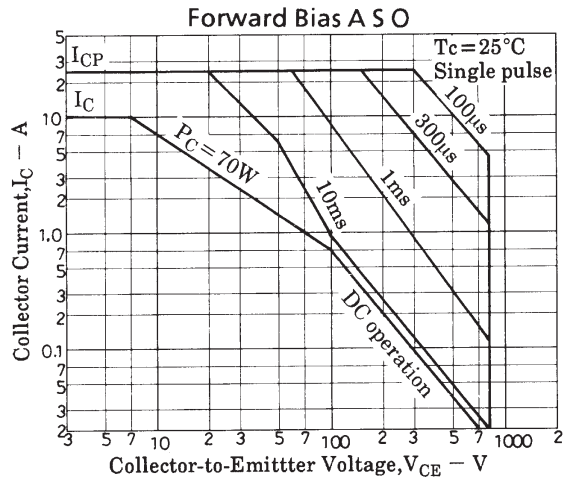
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		1500	V
Collector-to-Emitter Voltage	V_{CEO}		800	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		10	A
Collector Current (Pulse)	I_{CP}		25	A
Collector Dissipation	P_C		3.0	W
		$T_c=25^\circ\text{C}$	70	W
Junction 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	μA
Collector Cutoff Current	I_{CES}	$V_{CE}=1500\text{V}$, $R_{BE}=0$			1.0	mA
Collector 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
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=8\text{A}$, $I_B=2\text{A}$			5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=8\text{A}$, $I_B=2\text{A}$			1.5	V
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5\text{V}$, $I_C=1\text{A}$	20		30	
	$h_{FE(2)}$	$V_{CE}=5\text{V}$, $I_C=8\text{A}$	4		7	
Storage Time	t_{stg}	$I_C=6\text{A}$, $I_{B1}=1.2\text{A}$, $I_{B2}=-2.4\text{A}$			3.0	μs
Fall Time	t_f	$I_C=6\text{A}$, $I_{B1}=1.2\text{A}$, $I_{B2}=-2.4\text{A}$		0.1	0.2	μs

Switching Time Test Circuit





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