Ordering number:EN5955

NPN Triple Diffused Planar Silicon Transistor

2SC5450

Ultrahigh-Definition CRT Display Horizontal Deflection Output Applications

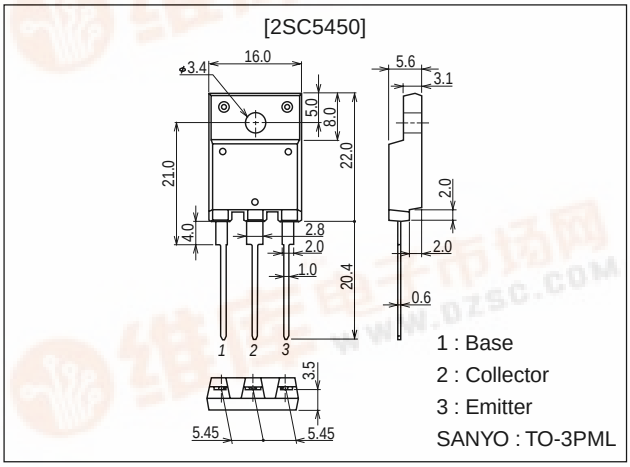
Features

- High speed.
- High breakdown voltage (V_{CBO}=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_{CBO}		1600	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
		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	
Collector Cutoff Current	I_{CBO}	V_{CB}=800V, I_E=0			10	μA
Collector Cutoff Current	I_{CES}	V_{CE}=1600V, R_{BE}=0			1.0	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			1.0	mA
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=7A, I_B=1.75A			5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=7A, I_B=1.75A			1.5	V

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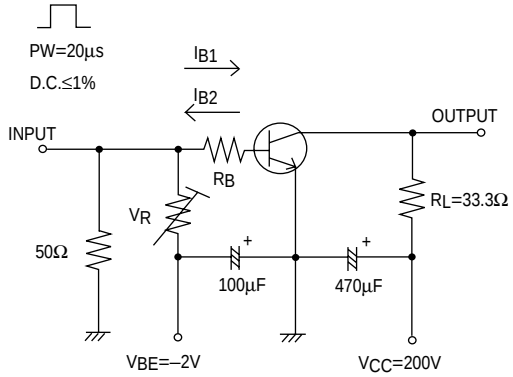
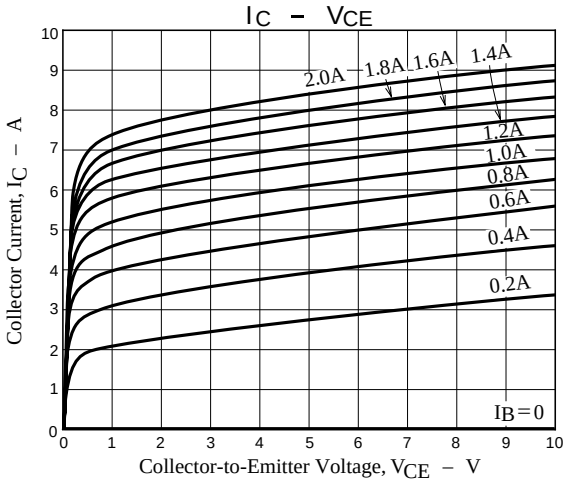
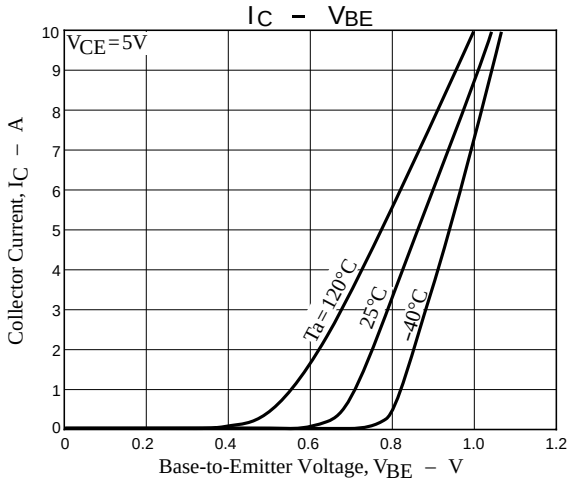
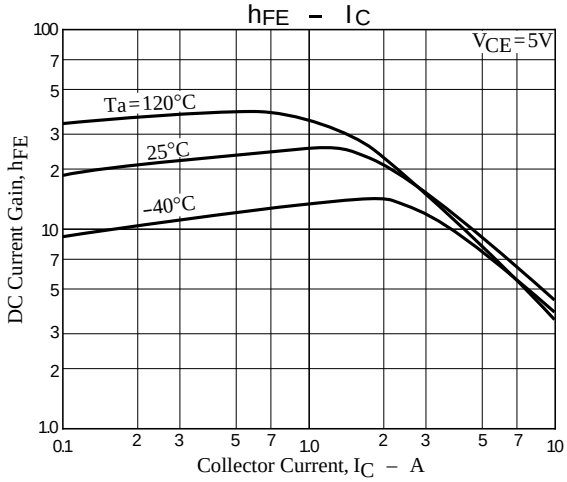
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	$h_{FE}1$	V_{CE}=5V, I_C=1A	15		30	
	$h_{FE}2$	V_{CE}=5V, I_C=7A	4		7	
Storage Time	t_{stg}	I_C=6A, I_{B1}=1.0A, I_{B2}=–2.5A			3.0	μs
Fall Time	t_f	I_C=6A, I_{B1}=1.0A, I_{B2}=–2.5A			0.2	μs

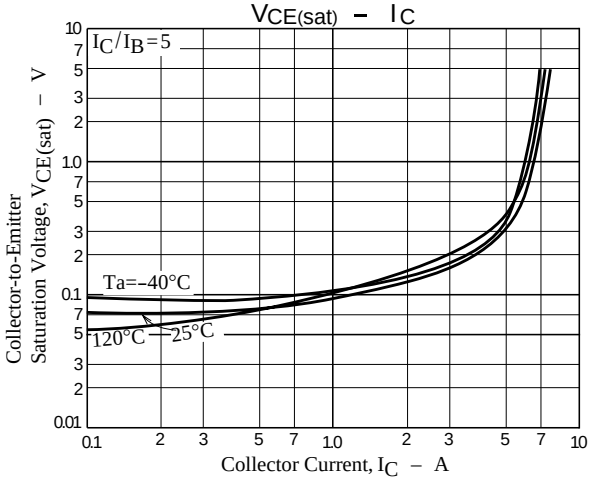
Switching Time Test Circuit



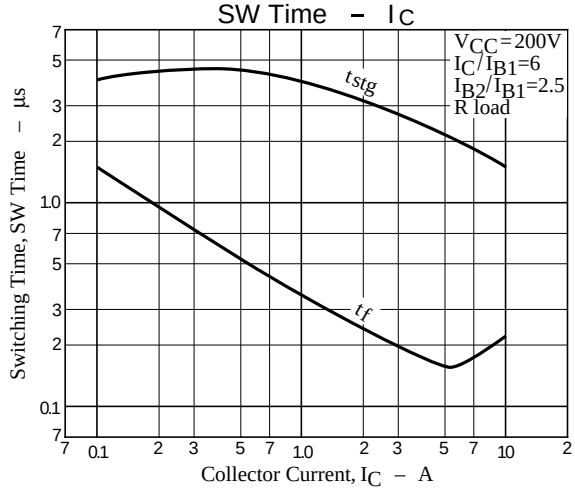




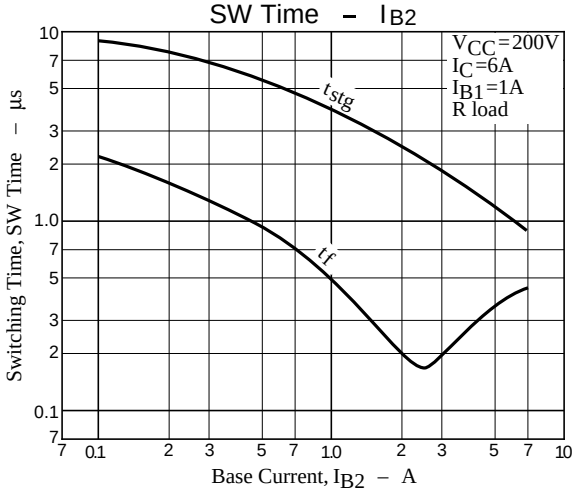




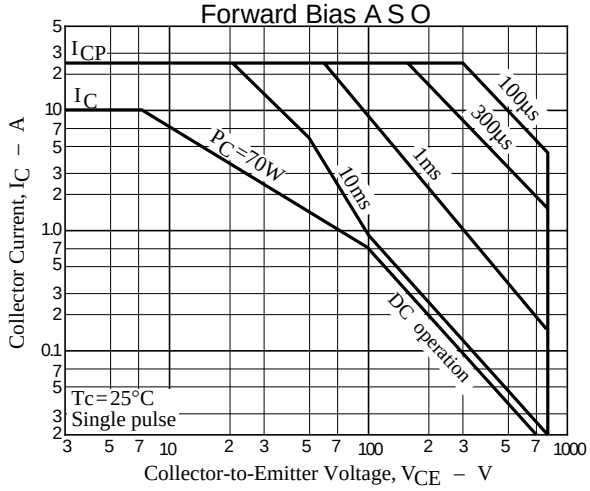
SW Time – I_C



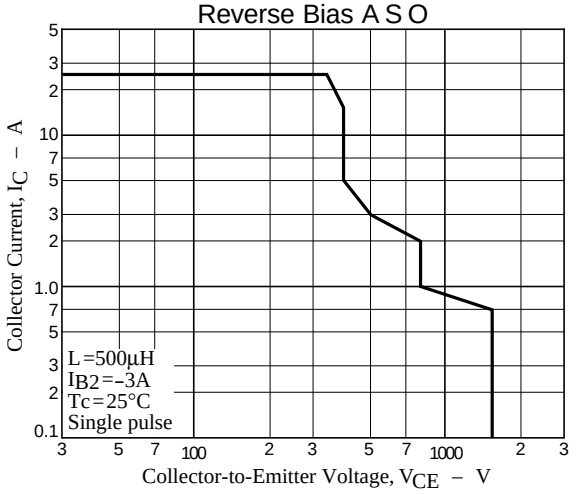
SW Time – I_{B2}



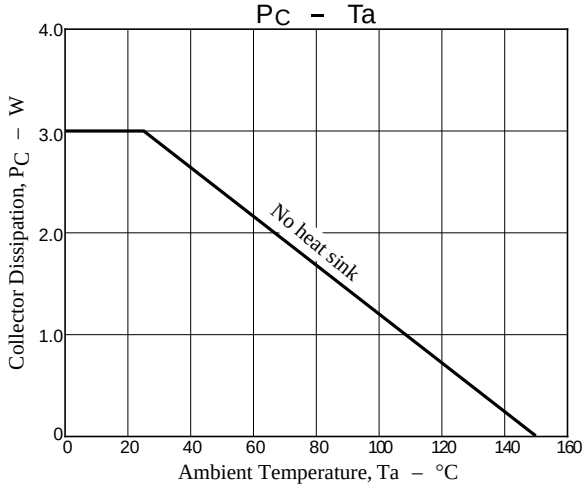
Forward Bias A S O



Reverse Bias A S O



P_C – Ta



P_C – Tc