

NPN Triple Diffused Planar Silicon Transistor

**2SD2578**

Color TV Horizontal Deflection Output Applications

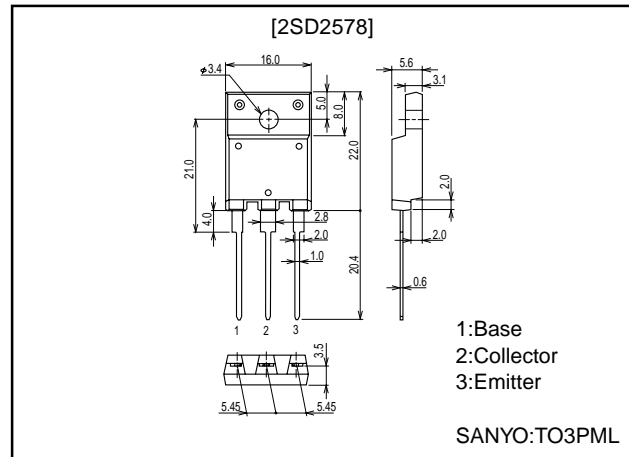
Features

- High speed.
- High breakdown voltage ($V_{CB0}=1500V$).
- High reliability (Adoption of HVP process).
- Adoption of MBIT process.
- On-chip damper diode.

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_{CB0}		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}		20	A
Collector Dissipation	P_C	$T_c=25^\circ C$	3.0	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
Collector Cutoff Current	I_{CES}	$V_{CE}=1500V, R_{BE}=0$			1.0	mA
Collector 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

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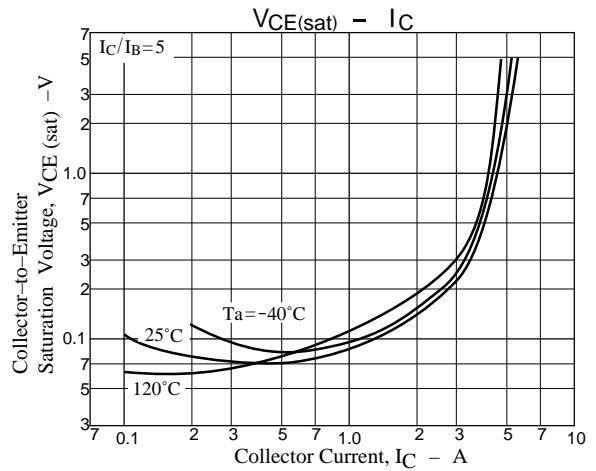
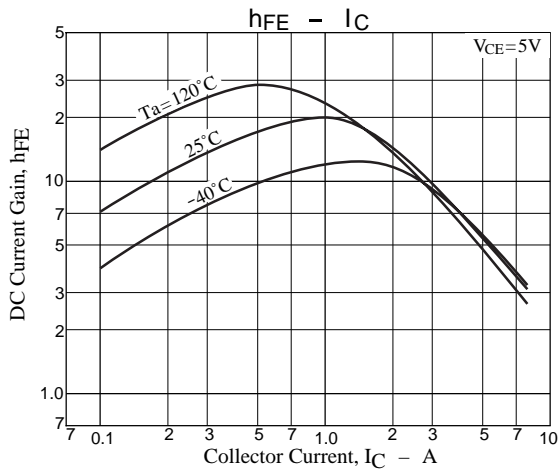
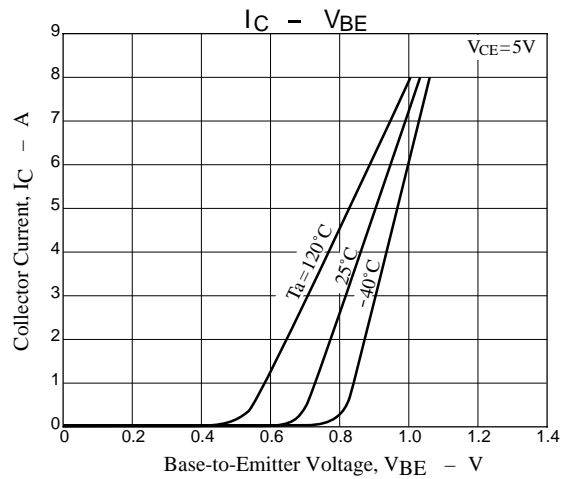
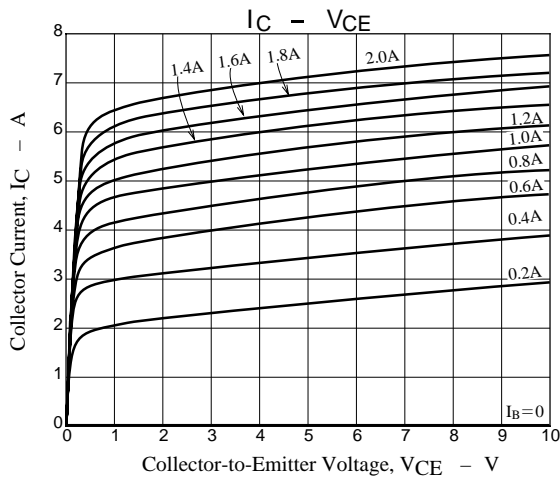
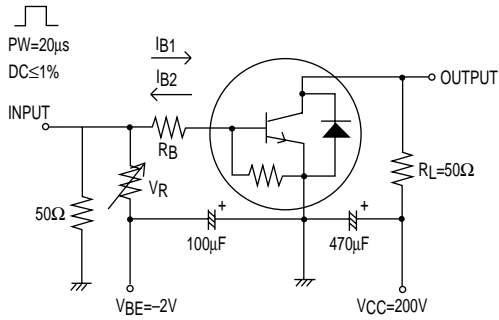
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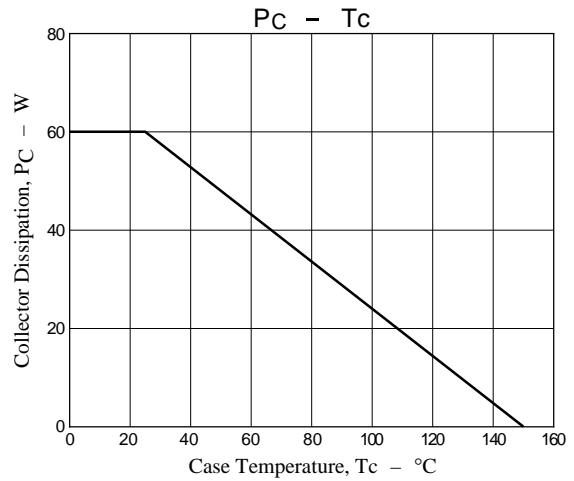
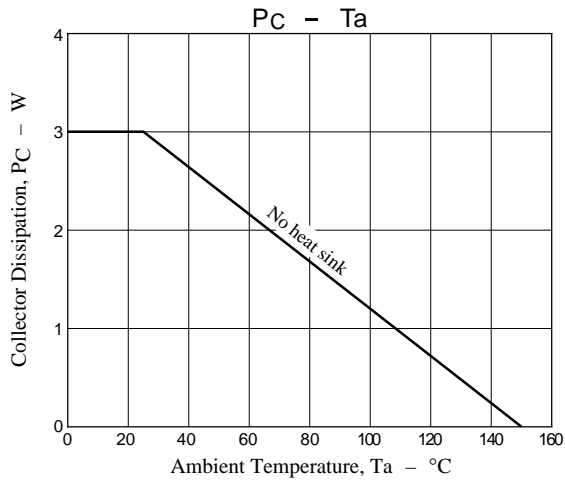
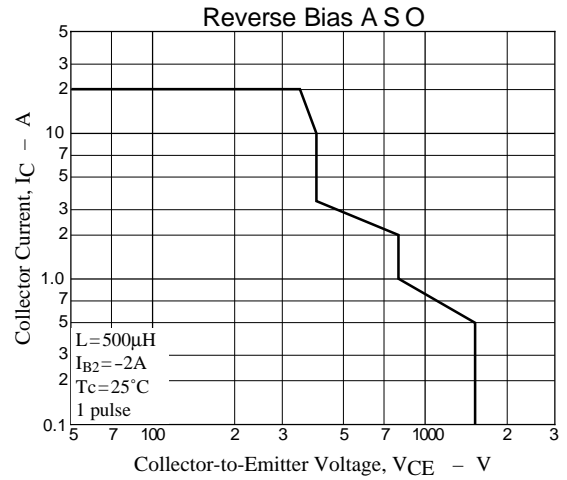
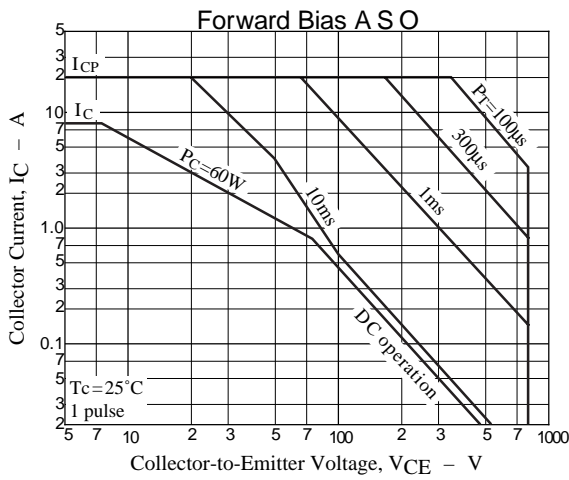
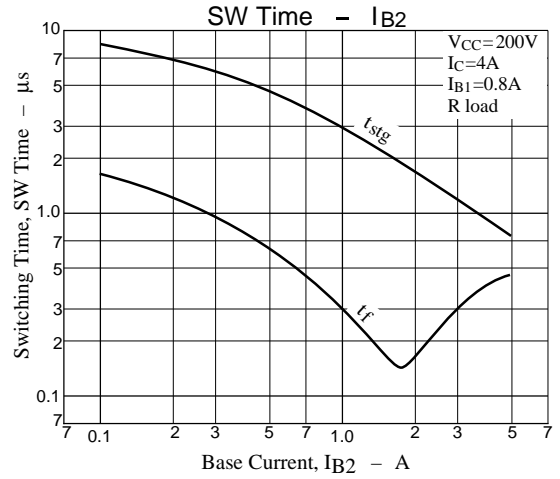
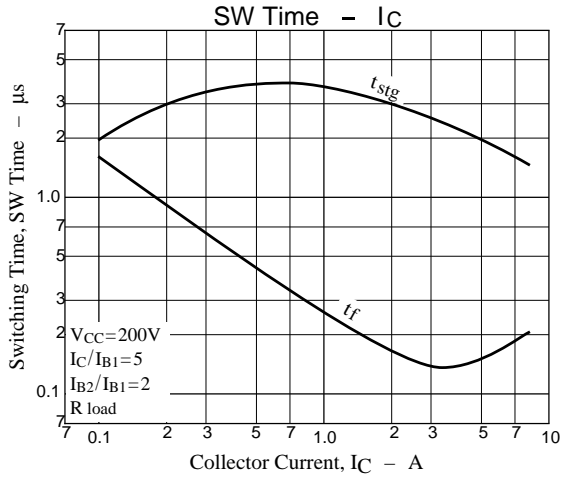
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=5A, I_B=1A$			5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=5A, I_B=1A$			1.5	V
DC Current Gain	h_{FE1}	$V_{CE}=5V, I_C=1A$		15	30	
	h_{FE2}	$V_{CE}=5V, I_C=5A$		5	8	
Fall Time	t_f	$I_C=4A, I_{B1}=0.8A, I_{B2}=-1.6A$			0.3	μs

Switching Time Test Circuit



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