NPN Triple Diffused Planar Silicon Transistor



2SC5300

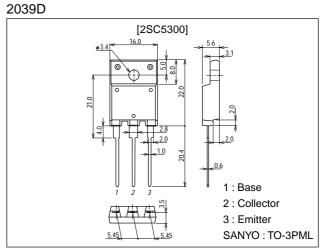
Ultrahigh-Definition Color Display Horizontal Deflection Output Applications

Features

- · High speed (t_f =100ns typ).
- \cdot High breakdown voltage (V_{CBO} = 1500V).
- \cdot High reliability (Adoption of HVP process).
- \cdot Adoption of MBIT process.

Package Dimensions

unit:mm



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		1500	V
Collector-to-Emitter Voltage	VCEO		800	V
Emitter-to-Base Voltage	VEBO		6	V
Collector Current	IC		20	A
Collector Current (Pulse)	I _{CP}		40	A
Collector Dissipation	PC		3	W
		Tc=25°C	75	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	ICES	V _{CE} =1500V, 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	IEBO	V _{EB} =4V, I _C =0			1.0	mA
Collector Cutoff Current	ICBO	V _{CB} =800V, I _E =0			10	μA
DC Current Gain	h _{FE} 1	V _{CE} =5V, I _C =1.0A	20		30	
	h _{FE} 2	V _{CE} =5V, I _C =16A	4		7	

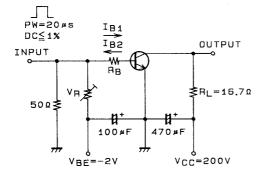
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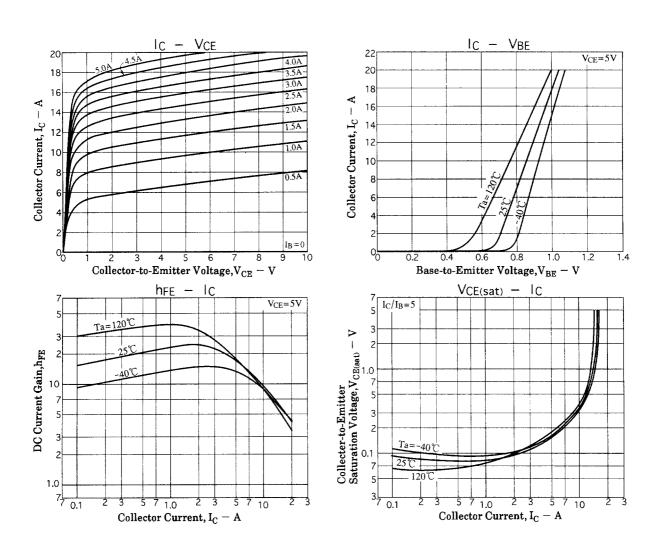
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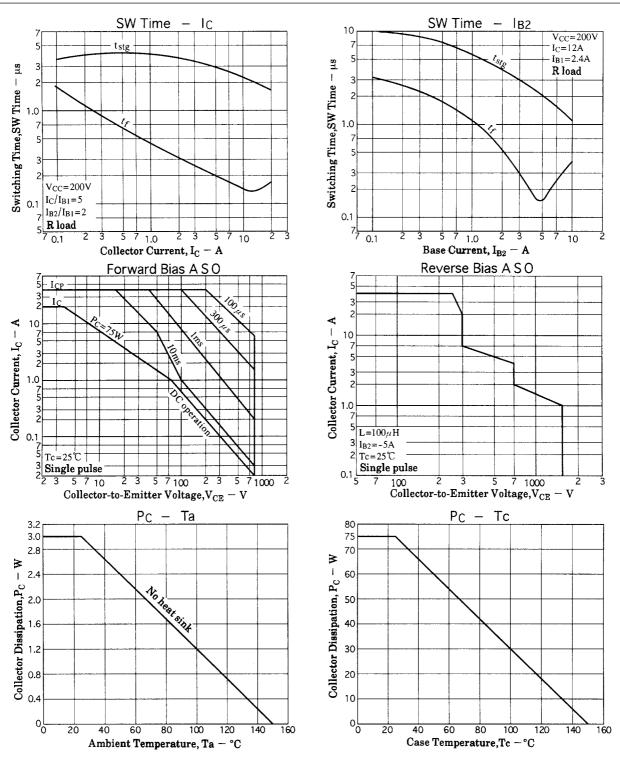
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Onit
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =16A, I _B =4A			5	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =16A, I _B =4A			1.5	V
Storage Time	^t stg	I _C =12A, I _{B1} =2.4A, I _{B2} =-4.8A			3.0	μs
Fall Time	t _f	I _C =12A, I _{B1} =2.4A, I _{B2} =-4.8A		0.1	0.2	μs

Switching Time Test Circuit







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