Ordering number : ENA0994

SANYO Semiconductors

DATA SHEET

NPN Triple Diffused Planar Silicon Transistor

2SC6091 — Color TV Horizontal Deflection Output Applications

Features

- High speed.
- High breakdown voltage (V_{CBO}=1500V).
- Adoption of high reliability HVP process.
- Adoption of MBIT process.

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	V_{CEO}		700	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		8	A
Collector Current (Pulse)	I_{CP}		20	A
Collector Dissipation	P_C		3.0	W
		Tc=25°C	65	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=0A			10	μA
Collector Cutoff Current	I_{CES}	V_{CE}=1500V, R_{BE}=0Ω			10	mA
Collector Sustain Voltage	V_{CEO}(sus)	I_C=100mA, I_B=0A	700			V
Emitter Cutoff Current	I_{EBO}	V_{EB}=4V, I_C=0A			1	mA

Continued on next page.

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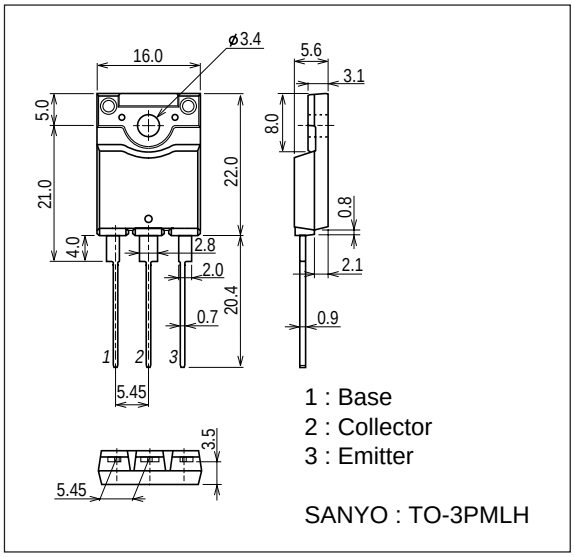
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	V_{CE}(sat)1	I_C=2.25A, I_B=0.45A	0.1		0.3	V
	V_{CE}(sat)2	I_C=4.5A, I_B=0.9A			2	V
Base-to-Emitter Saturation Voltage	V_{BE}(sat)	I_C=4.5A, I_B=0.9A			1.5	V
DC Current Gain	h_{FE}1	V_{CE}=5V, I_C=1A	10			
	h_{FE}2	V_{CE}=5V, I_C=5A	5.3		7.5	
Fall Time	t_f	I_C=3A, I_{B1}=0.6A, I_{B2}=-1.2A			0.2	μs

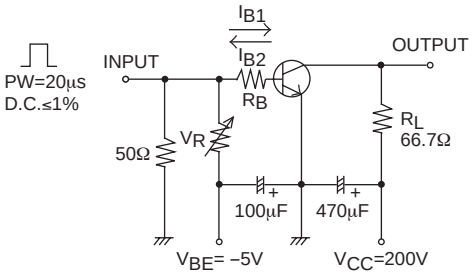
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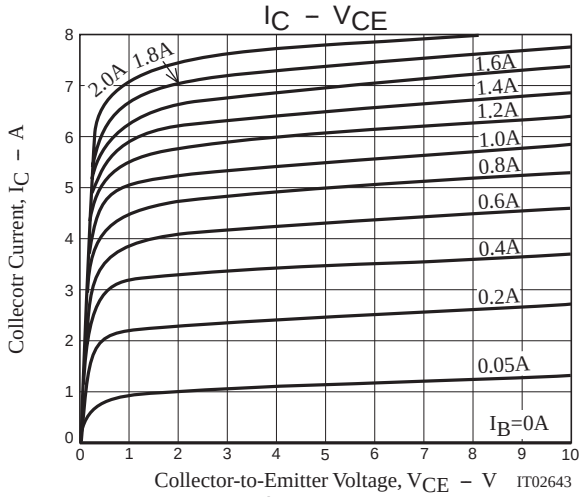
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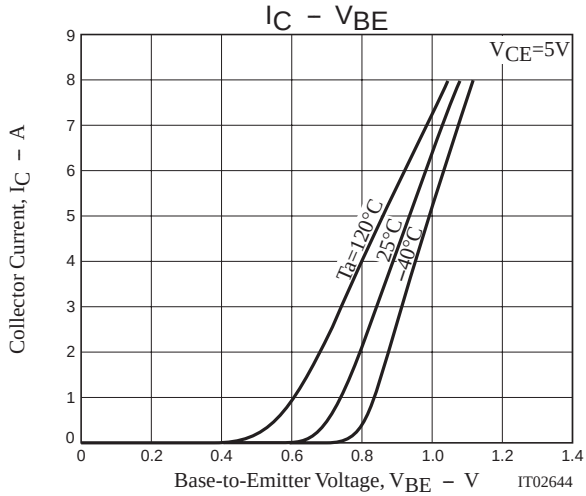
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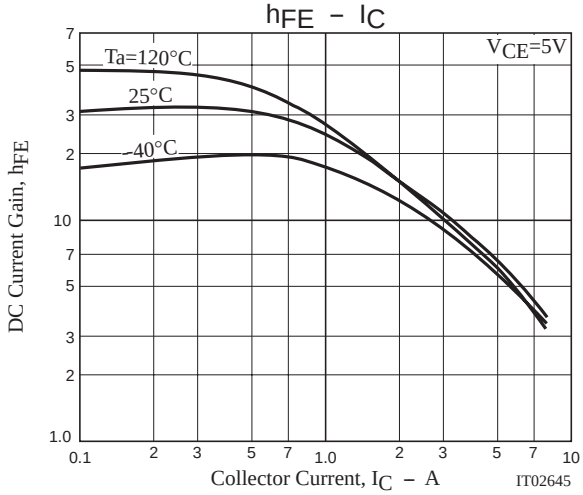


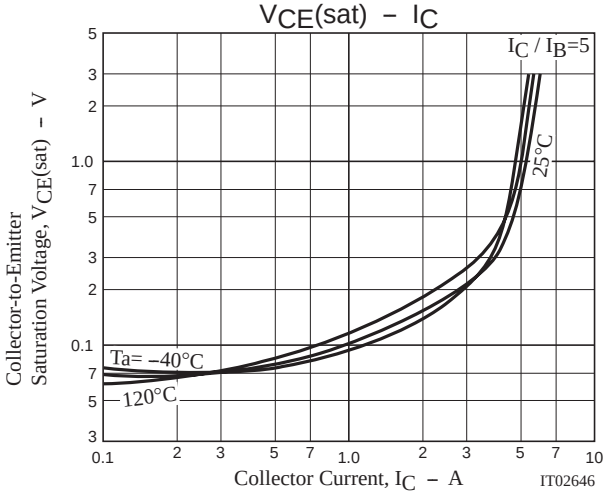
Switching Time Test Circuit



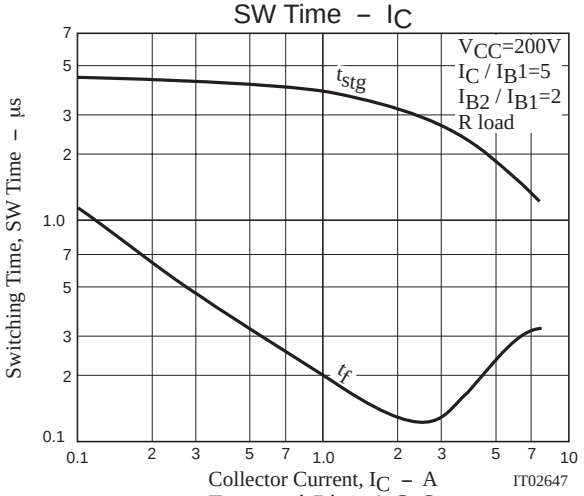




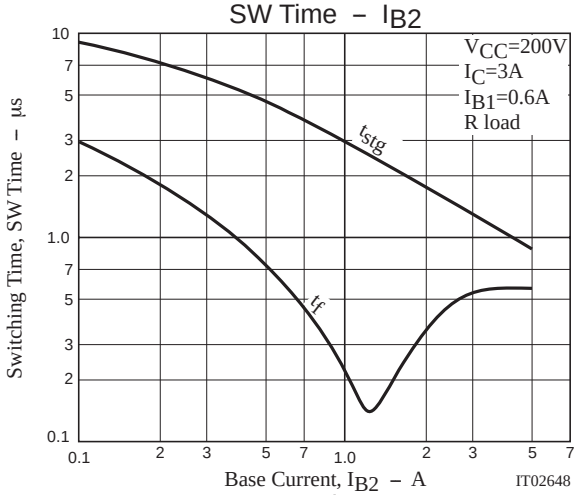




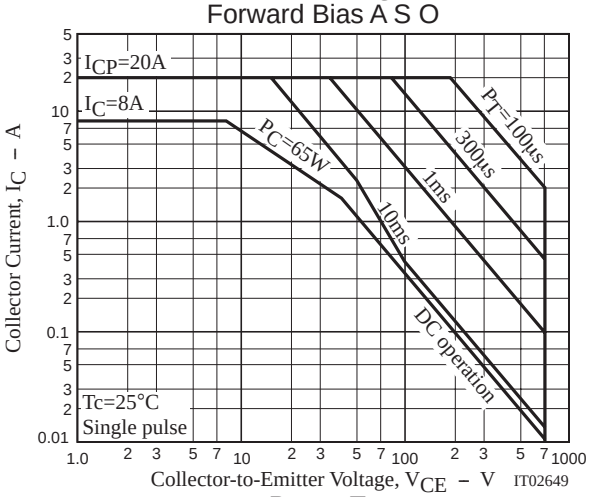
SW Time – I_C



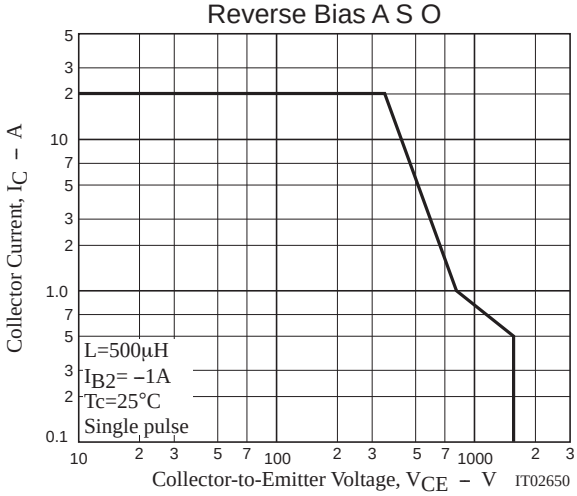
SW Time – I_{B2}



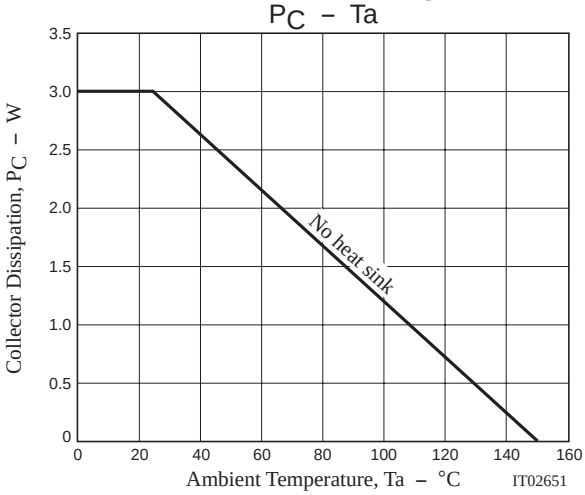
Forward Bias A S O



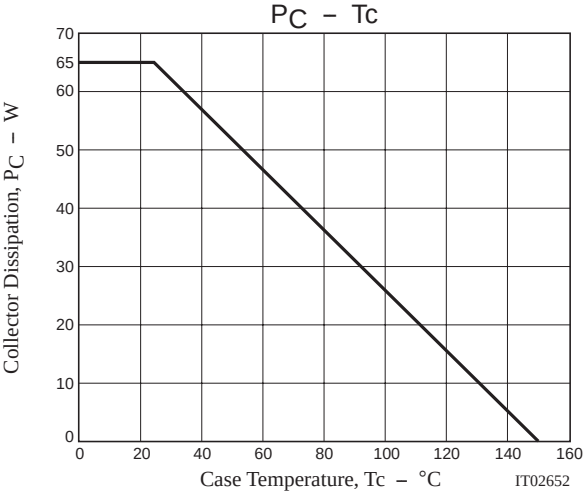
Reverse Bias A S O



P_C – Ta



P_C – Tc



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