



SANYO Semiconductors

DATA SHEET

2SC6117 — NPN Triple Diffused Planar Silicon Transistor

Color TV Horizontal Deflection Output Applications

Features

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

Specifications

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

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		8	A
Collector Current (Pulse)	I_{CP}		20	A
Collector Dissipation	P_C		3.0	W
		$T_c=25^\circ C$	65	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}	$V_{CB}=800V, I_E=0A$			10	μA
Collector Cutoff Current	I_{CES}	$V_{CE}=1500V, R_{BE}=0\Omega$			1.0	mA
Collector Sustain Voltage	$V_{CEO(sus)}$	$I_C=100mA, I_B=0A$	800			V
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0A$	40		130	mA

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2SC6117

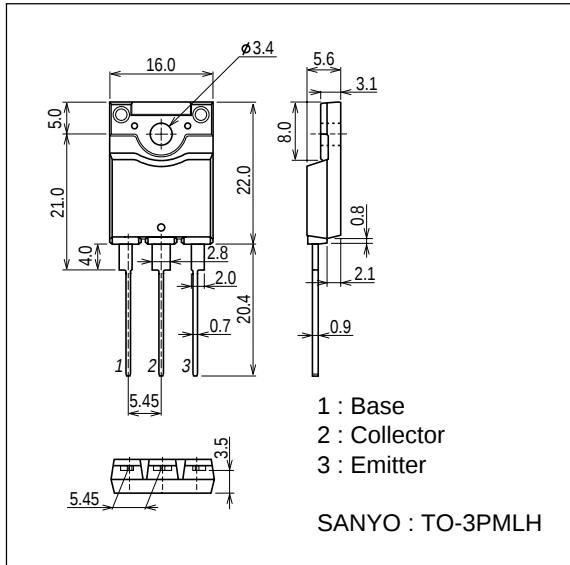
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4.5A, I_B=0.9A$			2	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=4.5A, I_B=0.9A$			1.5	V
DC Current Gain	h_{FE1}	$V_{CE}=5V, I_C=1A$	10			
	h_{FE2}	$V_{CE}=5V, I_C=5A$	5.3		7.5	
Diode Forward Voltage	V_F	$I_{EC}=7A$			2	V
Fall Time	t_f	$I_C=3A, I_{B1}=0.6A, I_{B2}=-1.2A$			0.2	μs

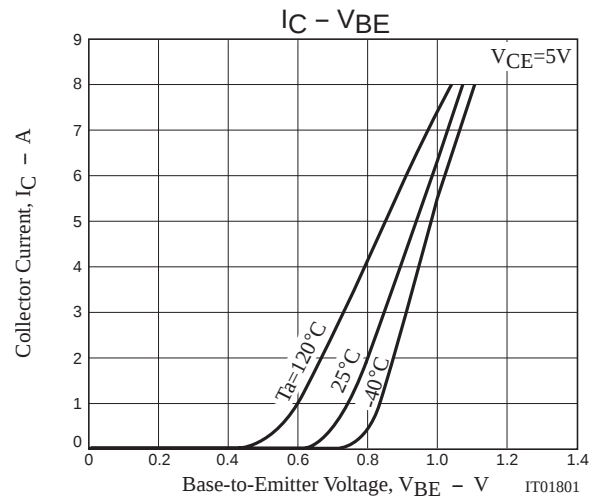
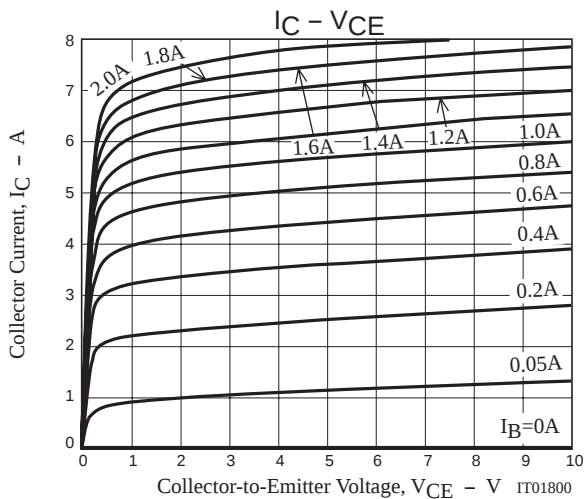
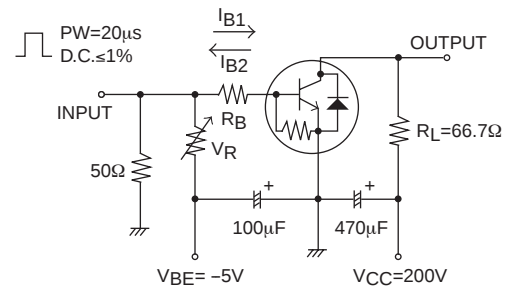
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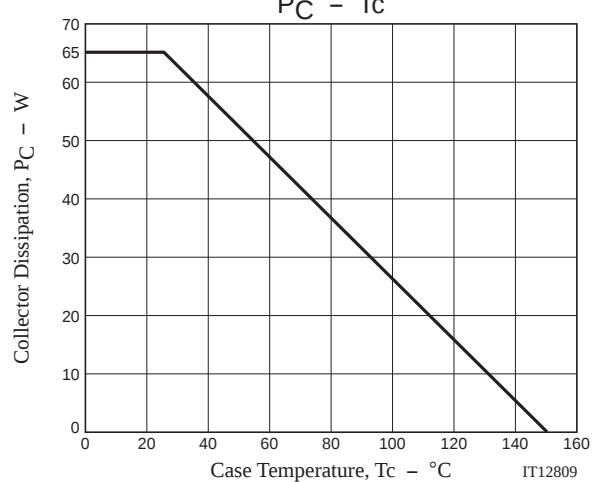
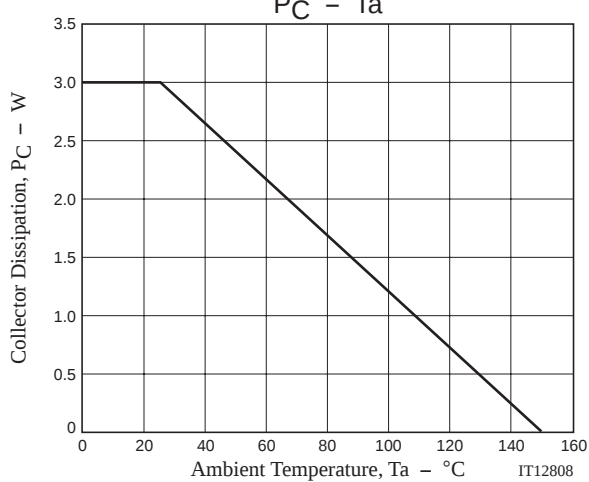
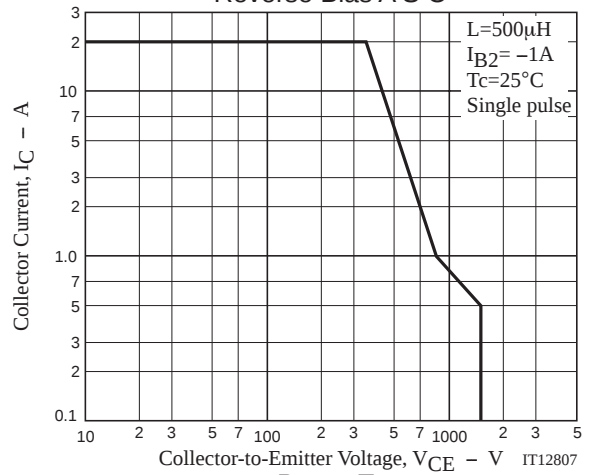
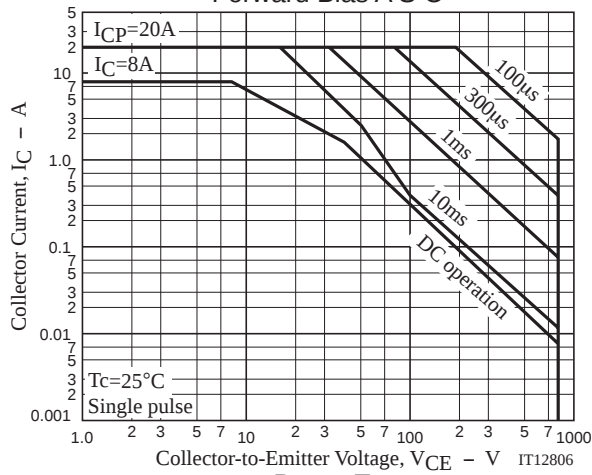
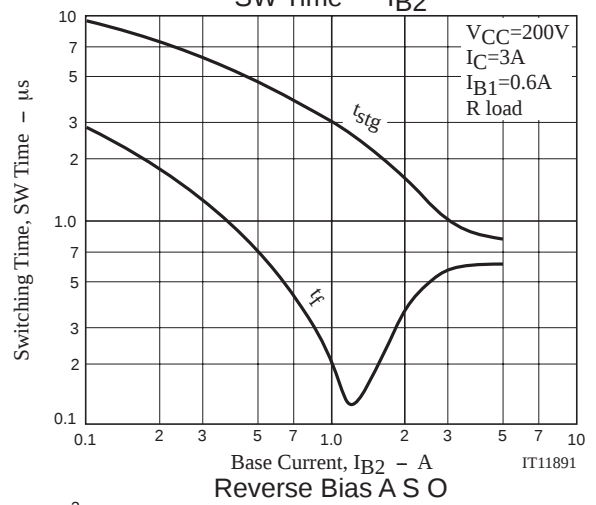
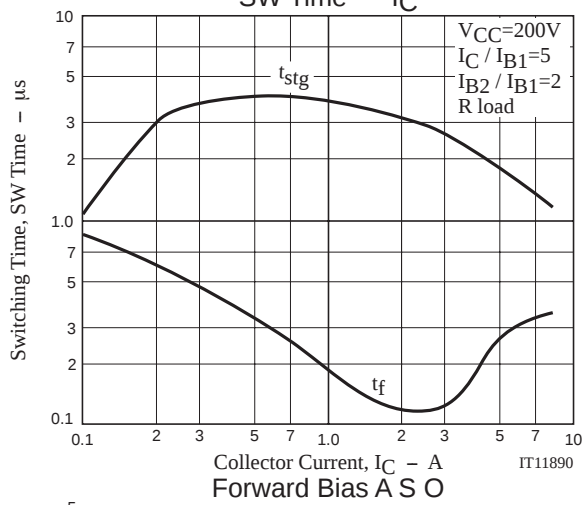
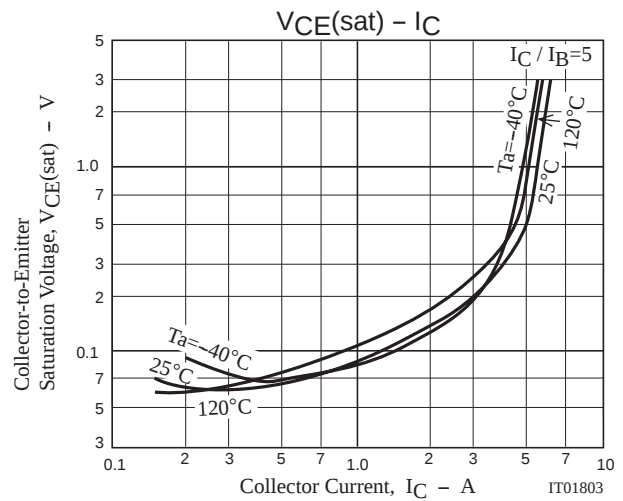
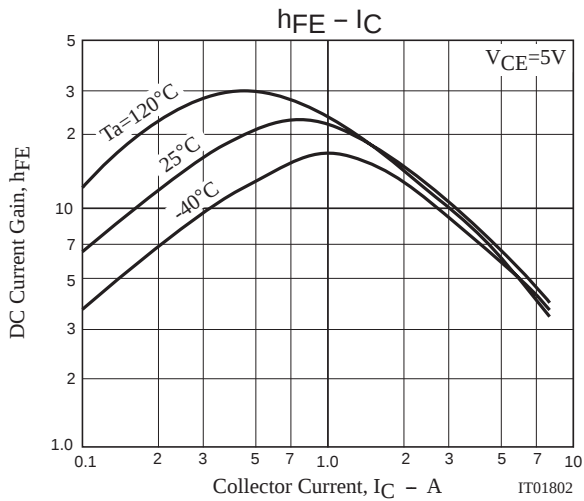
unit : mm (typ)

7504-001



Switching Time Test Circuit





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