



2SC6084

NPN Triple Diffused Planar Silicon Transistor

Switching Regulator Applications

Features

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

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}		5	V
Collector Current	I_C		5	A
Collector Current (Pulse)	I_{CP}		12	A
Collector Dissipation	P_C		1.75	W
		$T_c=25^\circ C$	50	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}	$V_{EB}=4V, I_C=0A$			1.0	mA
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2.7A, I_B=0.54A$			3	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2.7A, I_B=0.54A$			1.5	V
DC Current Gain	h_{FE1}	$V_{CE}=5V, I_C=0.5A$	10			
	h_{FE2}	$V_{CE}=5V, I_C=3A$	5		7	
Fall Time	t_f	$I_C=1.8A, I_{B1}=0.36A, I_{B2}=-0.72A$			0.2	μs

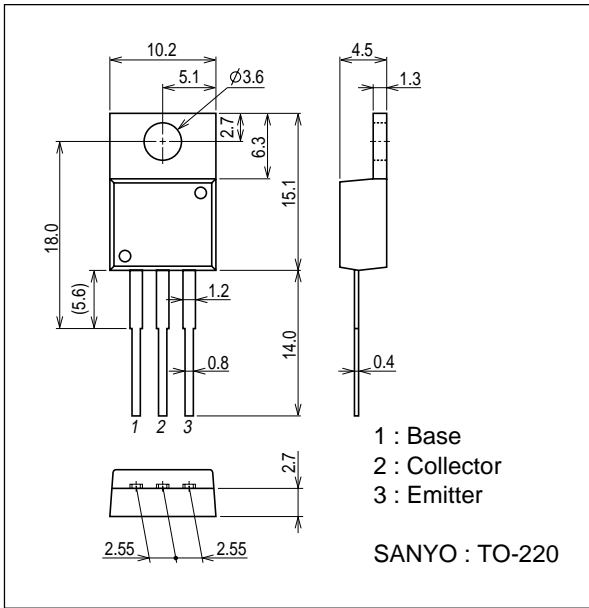
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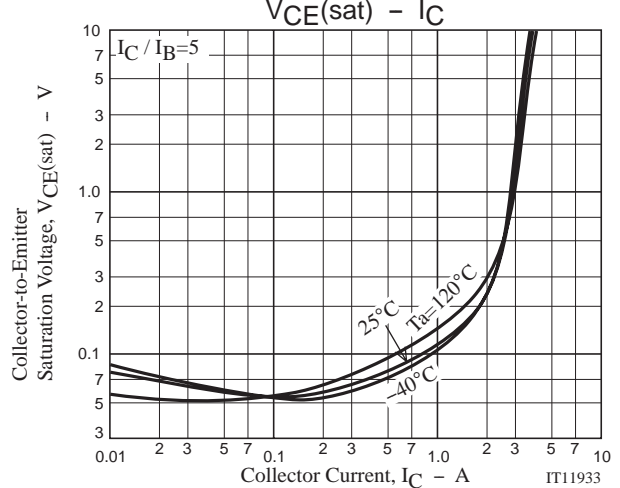
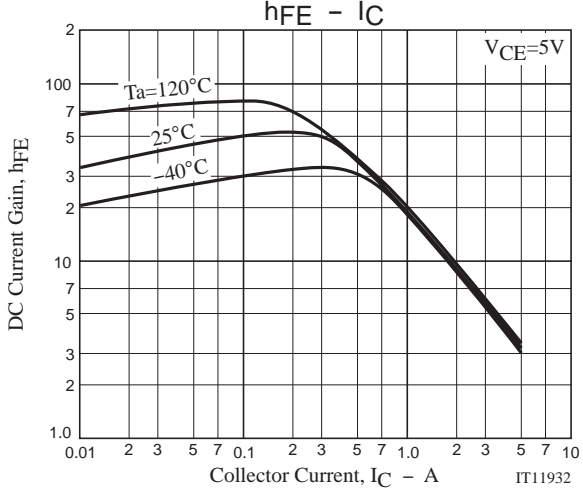
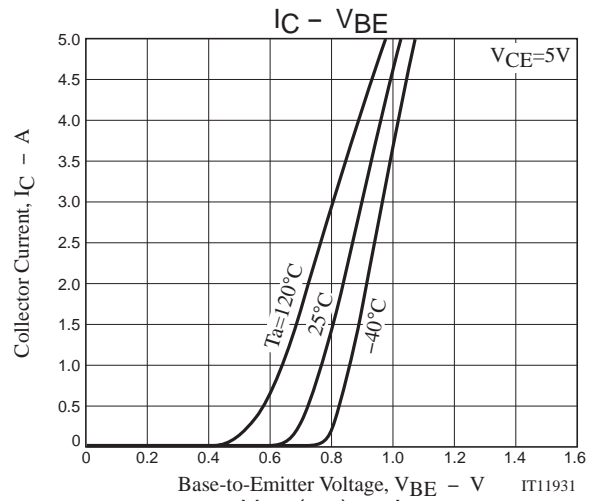
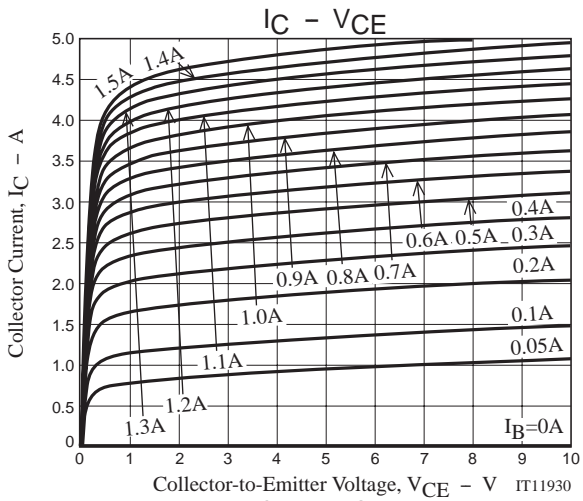
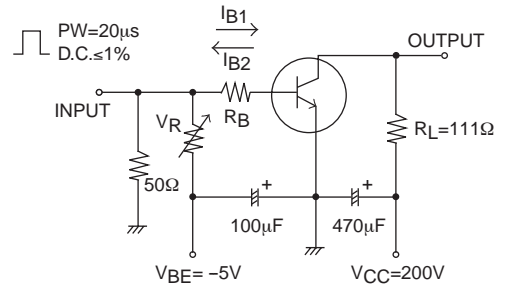
Package Dimensions

unit : mm (typ)

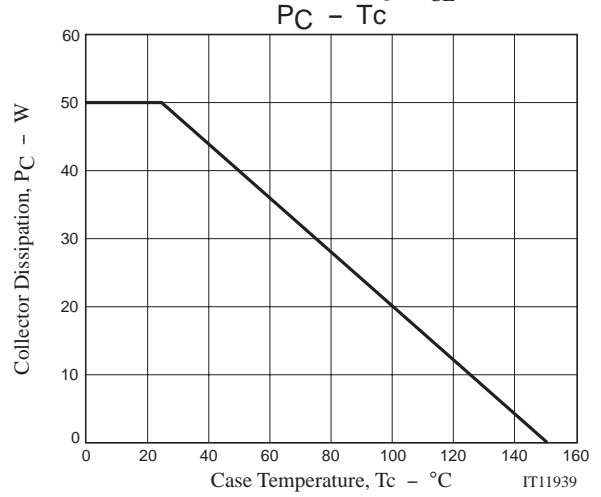
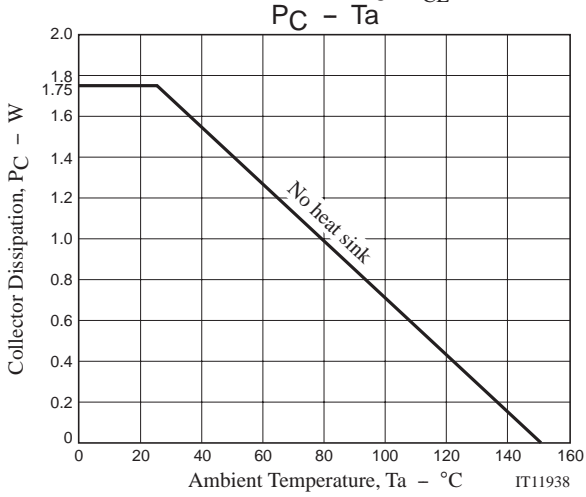
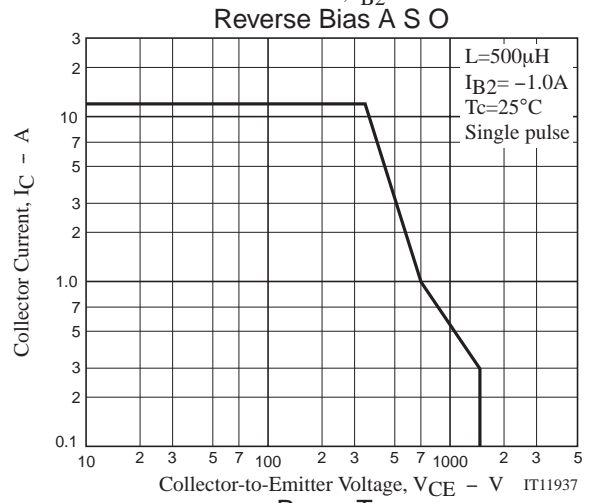
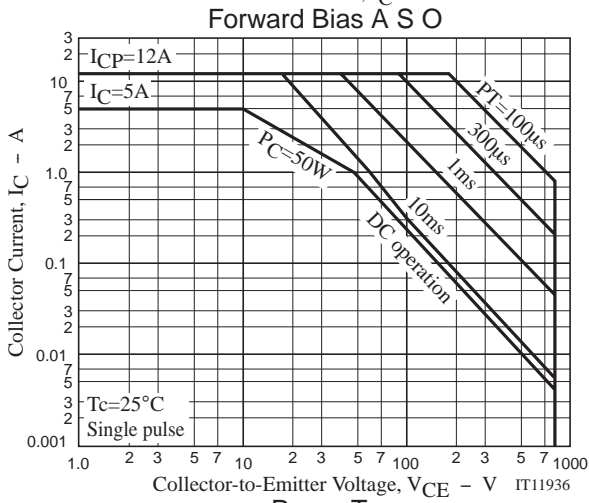
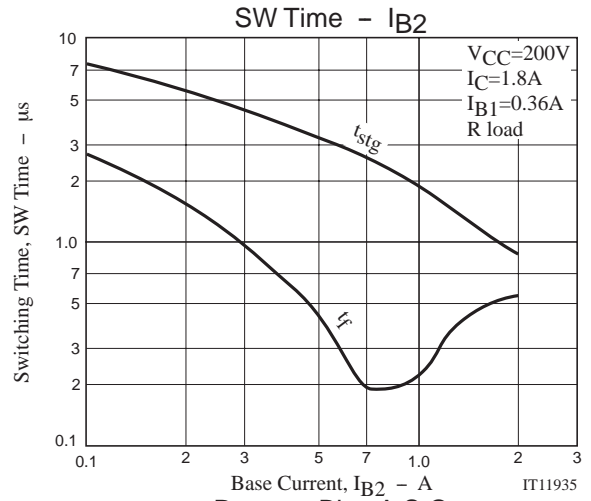
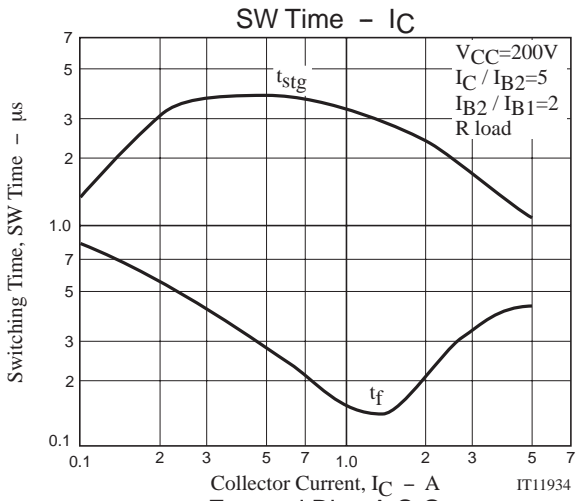
7507-001



Switching Time Test Circuit



2SC6084



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