

# 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	$\mu A$
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	$\mu s$

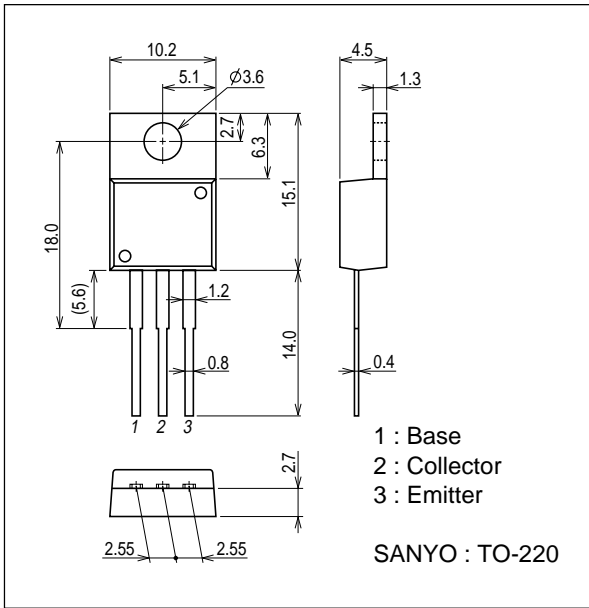
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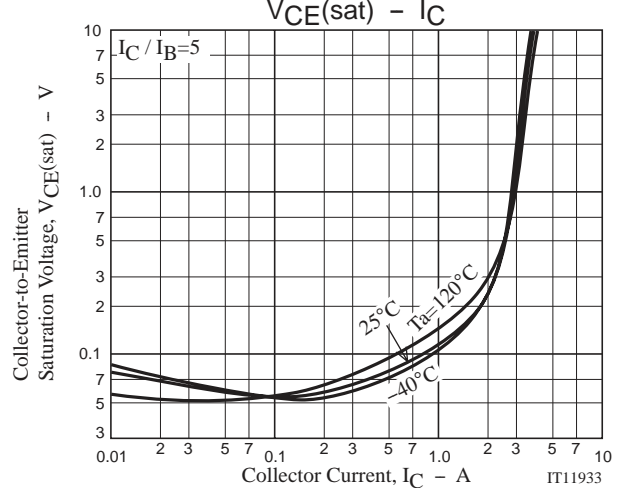
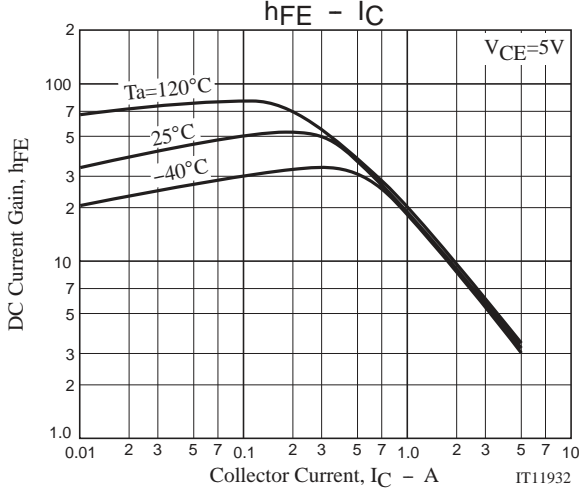
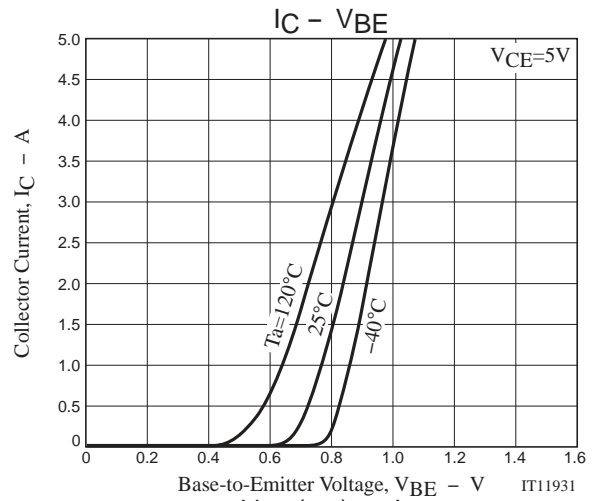
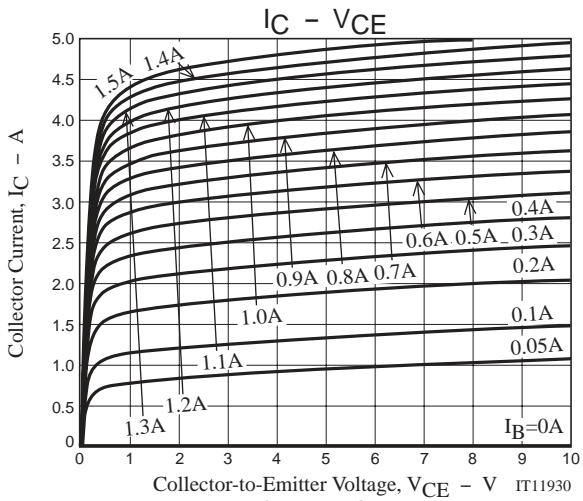
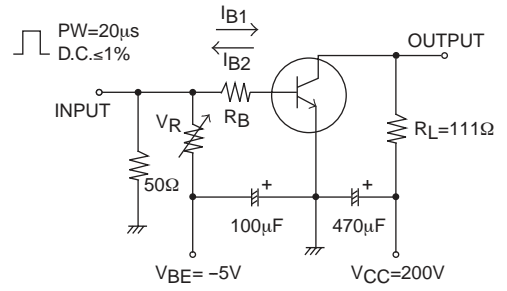
Package Dimensions

unit : mm (typ)

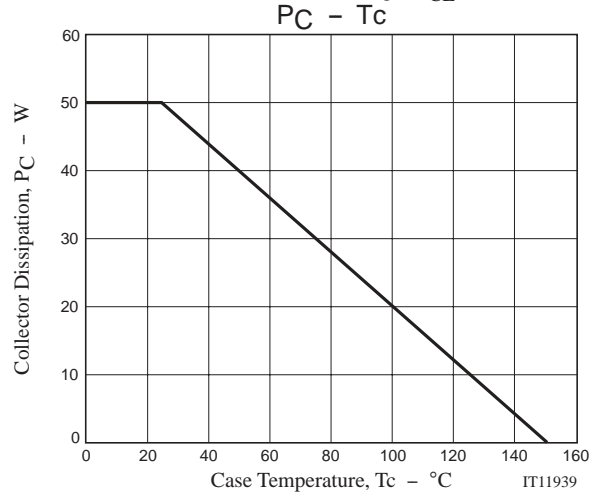
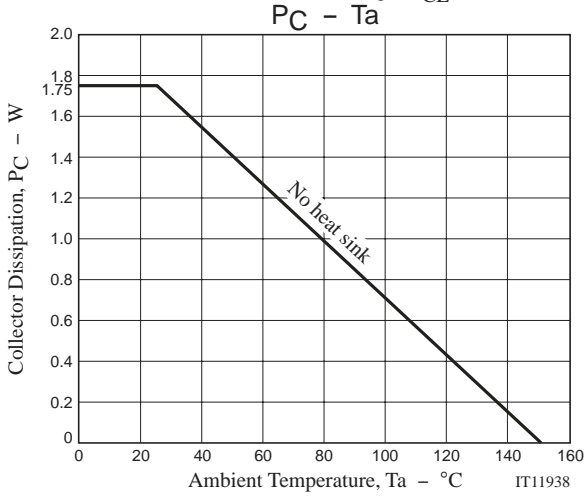
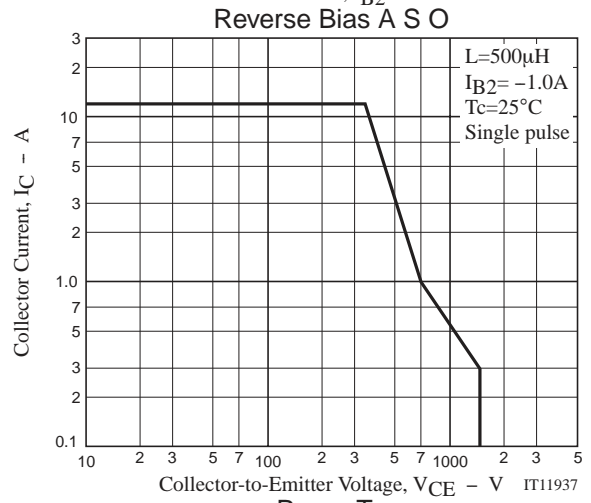
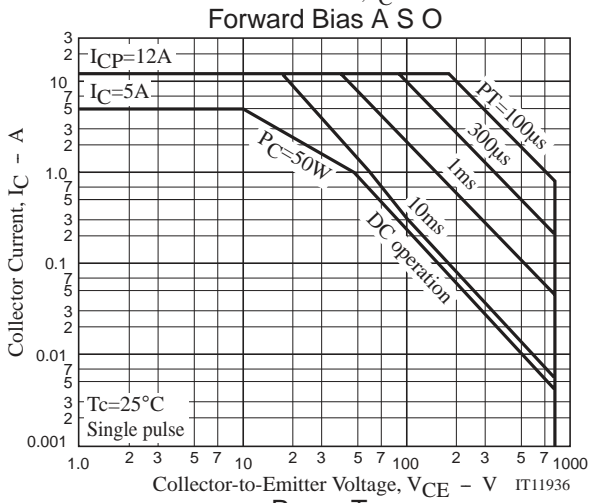
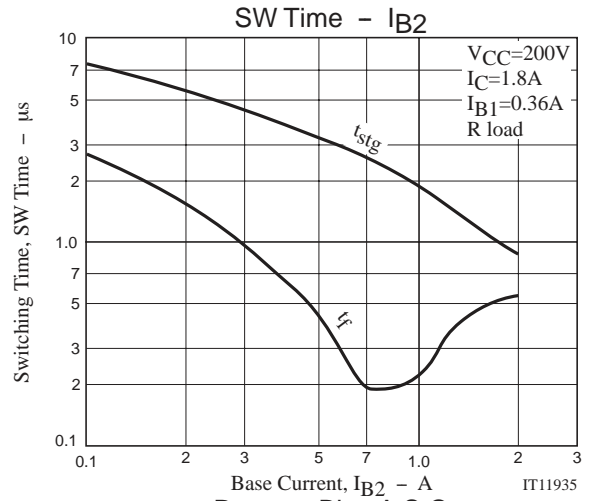
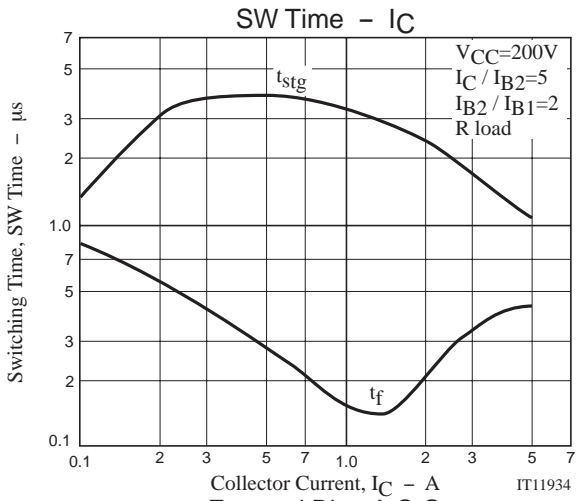
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Switching Time Test Circuit



# 2SC6084



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