

Ordering number : ENN6921

NPN Triple Diffused Planar Silicon Transistor



**TS7920**

**For Inverter Lighting Equipment**

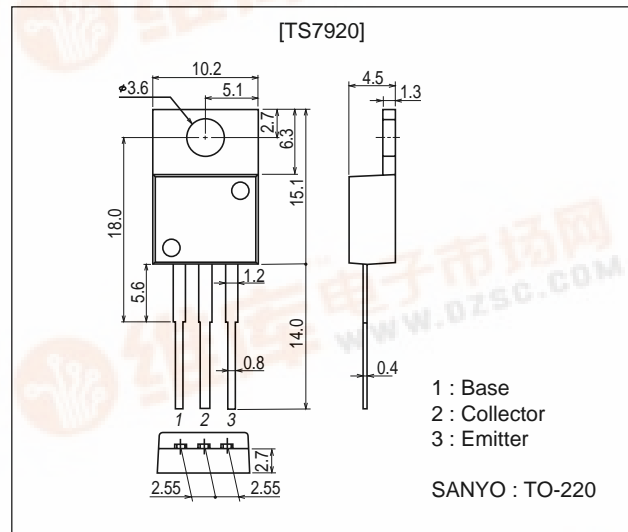
**Features**

- Best suited for push-pull inverter circuit.
- High breakdown voltage ( $V_{CBO}=1200V$ ).
- High reliability (Adoption of HVP process).
- Adoption of MBIT process.

**Package Dimensions**

unit : mm

2010C



**Specifications**

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		1200	V
Collector-to-Emitter Voltage	$V_{CEO}$		600	V
Emitter-to-Base Voltage	$V_{EBO}$		9	V
Collector Current	$I_C$		4	A
Collector Current (Pulse)	$I_{CP}$		8	A
Collector Dissipation	$P_C$		1.75	W
		$T_c=25^{\circ}C$	70	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	$I_{CBO}$	$V_{CB}=600V, I_E=0$			10	$\mu A$
Collector Cutoff Current	$I_{CES}$	$V_{CE}=1200V, R_{BE}=0$			1.0	mA
Collector Sustain Voltage	$V_{CEO(sus)}$	$I_C=100mA, I_B=0$	600			V
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=9V, I_C=0$			1.0	mA

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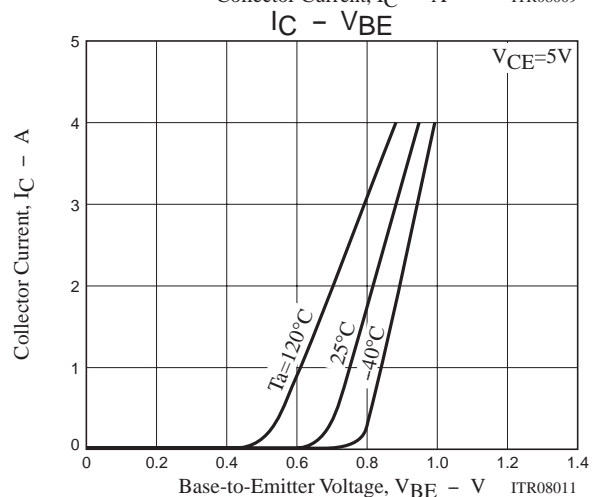
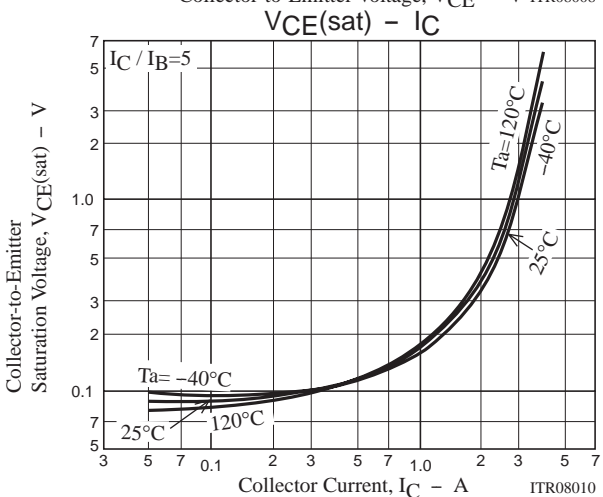
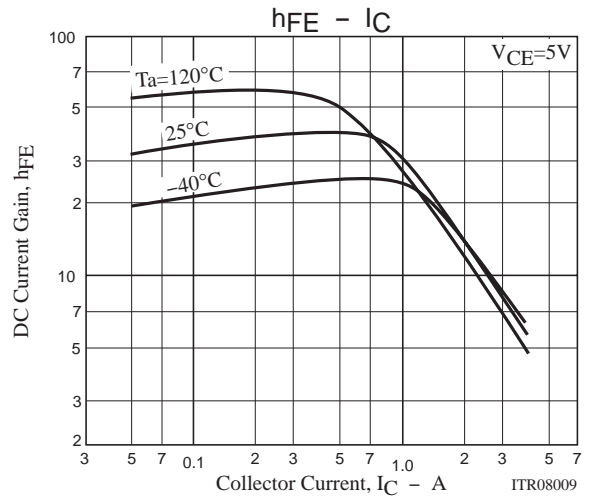
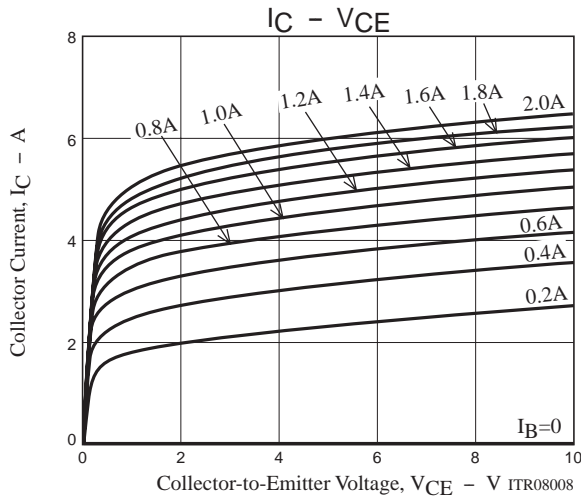
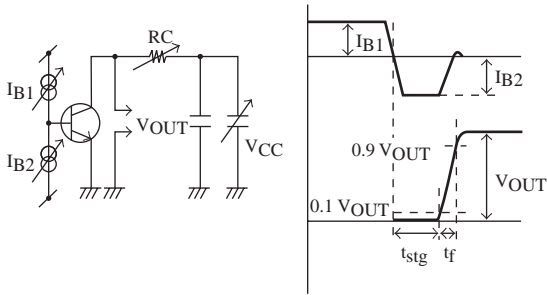


# TS7920

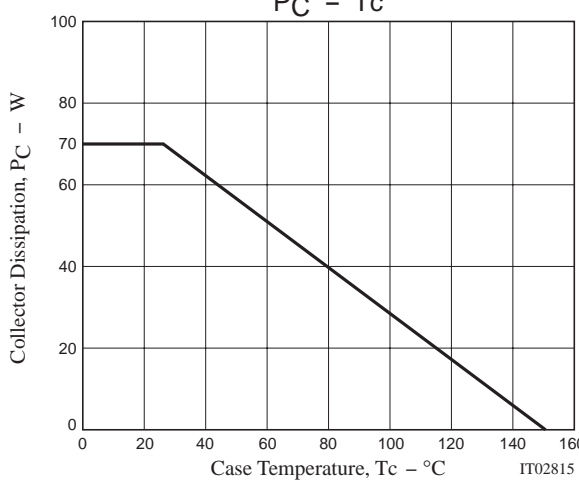
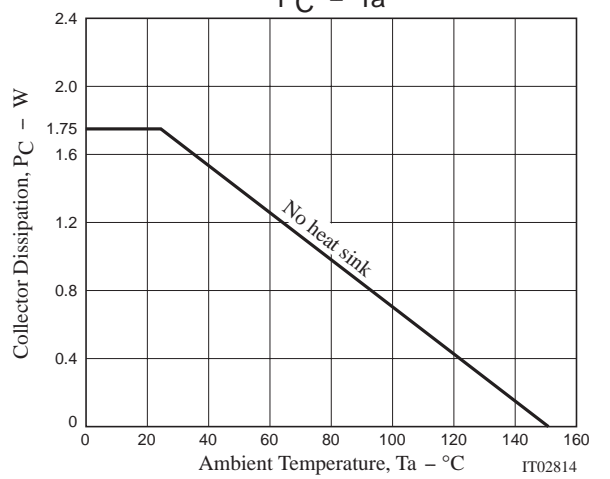
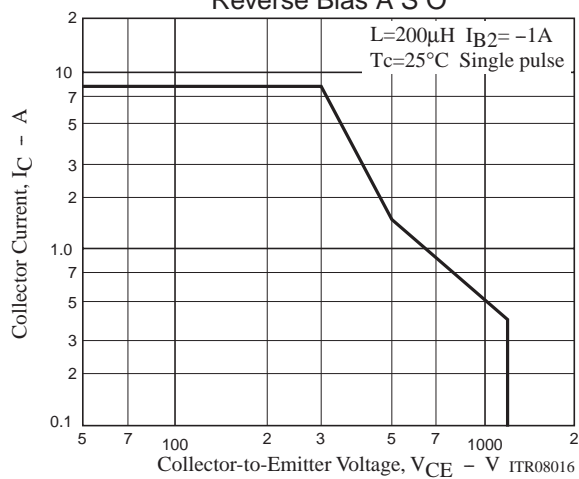
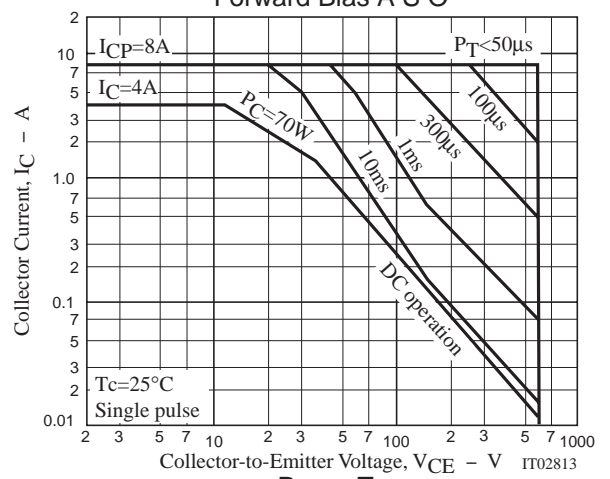
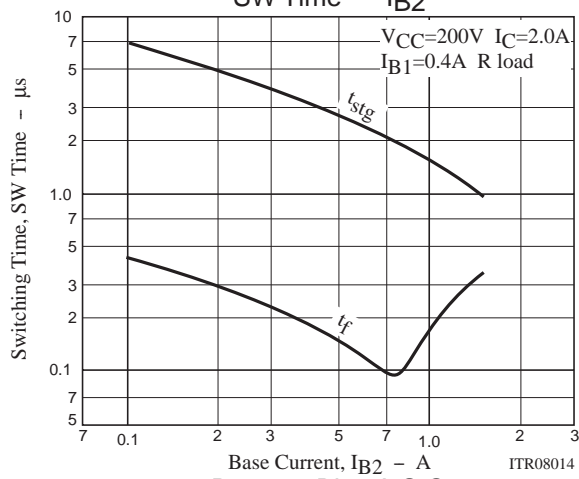
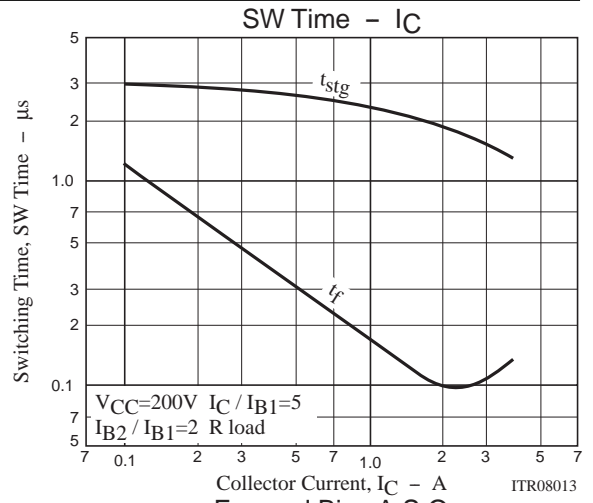
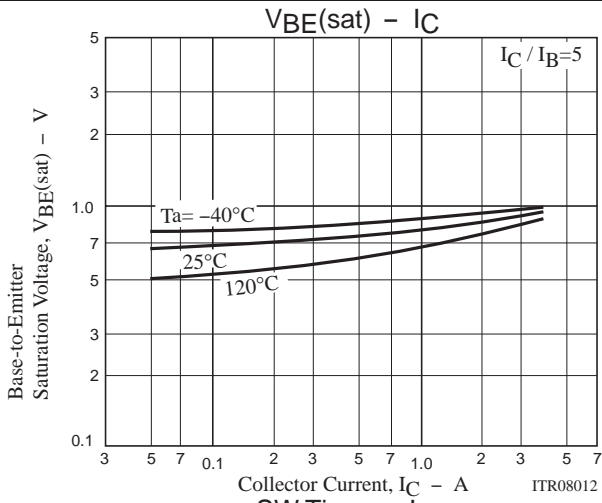
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	$h_{FE1}$	$V_{CE}=5V, I_C=0.3A$	30	40	50	
	$h_{FE2}$	$V_{CE}=5V, I_C=1.5A$	10			
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2.0A, I_B=0.4A$			1.0	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2.0A, I_B=0.4A$			1.5	V
Storage Time	$t_{stg}$	$I_C=2.0A, I_{B1}=0.4A, I_{B2}=-0.8A$			2.5	$\mu s$
Fall Time	$t_f$	$I_C=2.0A, I_{B1}=0.4A, I_{B2}=-0.8A$			0.15	$\mu s$

## Switching Time Test Circuit



# TS7920



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