

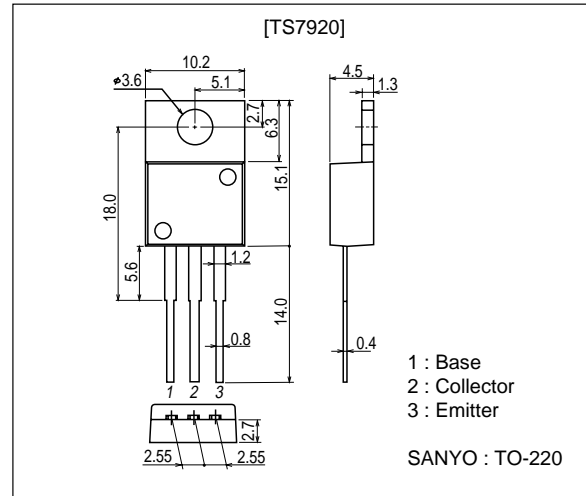
**TS7920****For Inverter Lighting Equipment****Features**

- Best suited for push-pull inverter circuit.
- High breakdown voltage ($V_{CB0}=1200V$).
- 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_{CB0} | | 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 | μA |
| 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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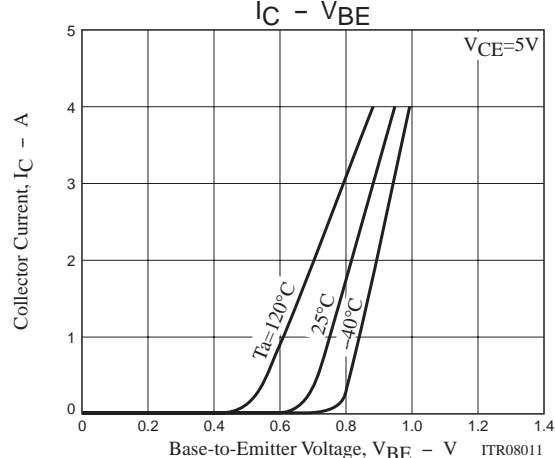
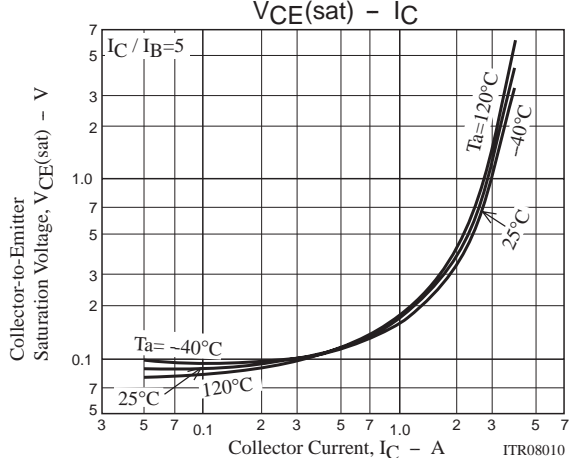
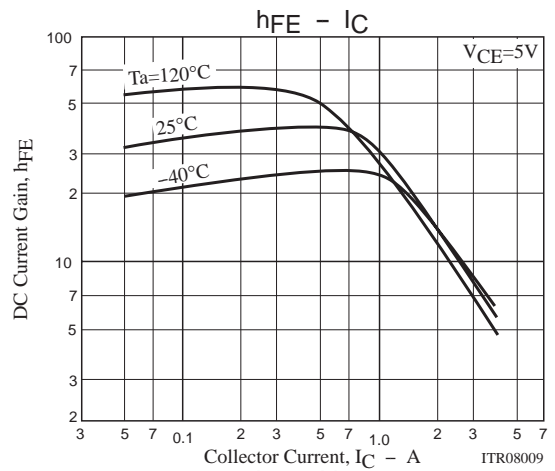
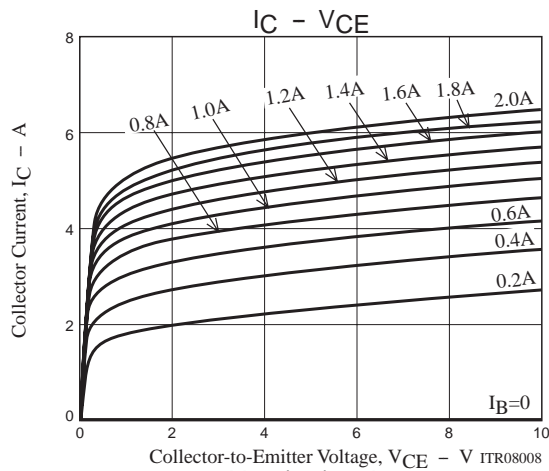
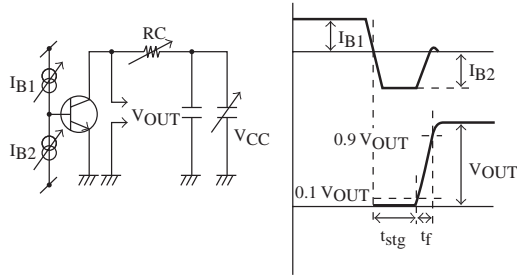
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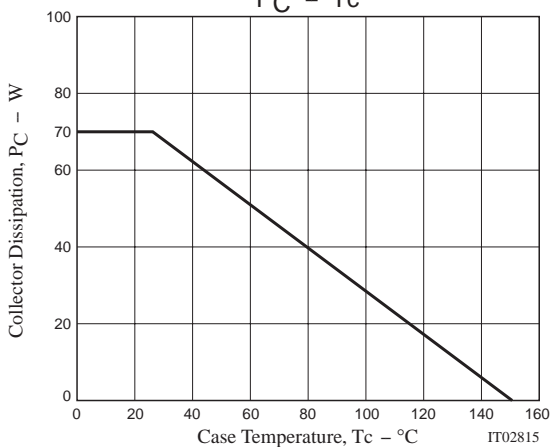
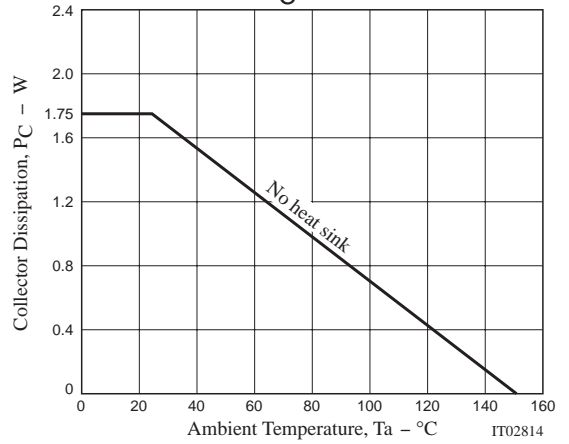
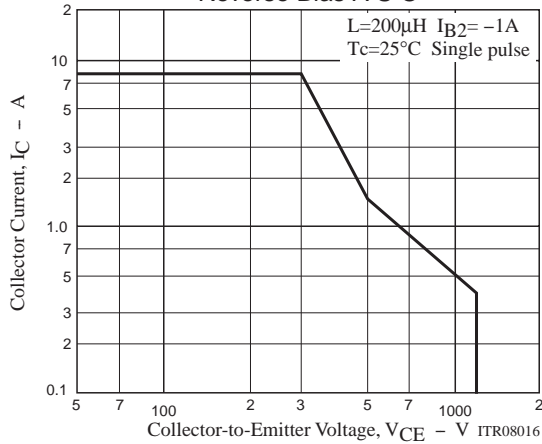
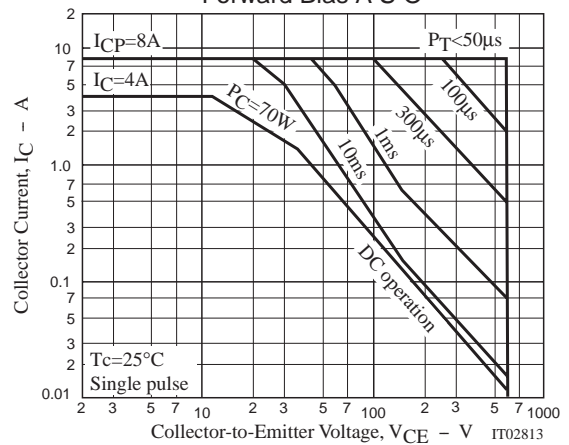
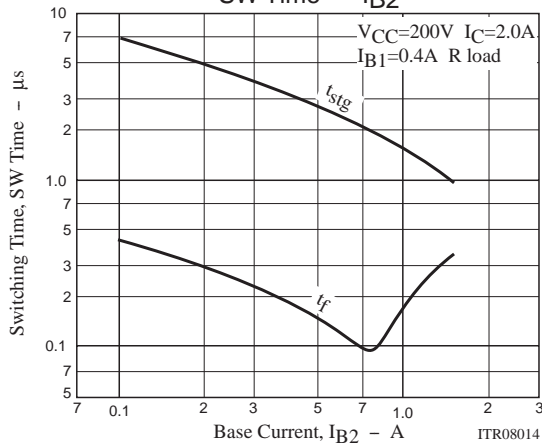
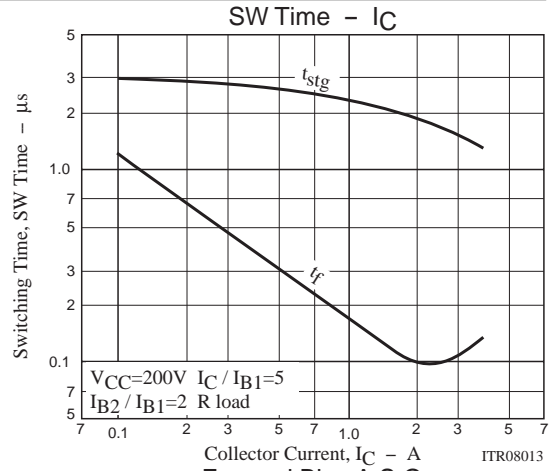
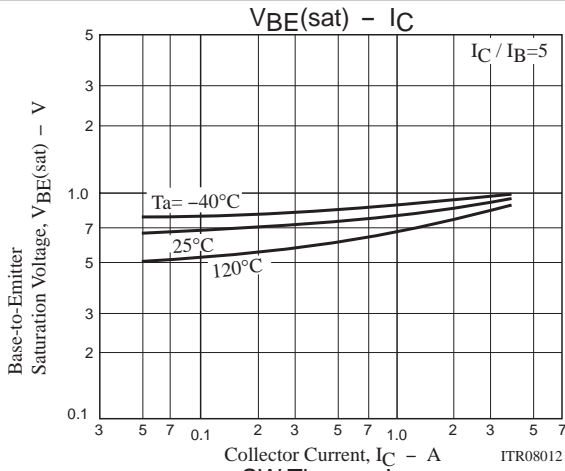
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| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|---------------------------------------|---------|-----|------|---------|
| | | | min | typ | max | |
| DC Current Gain | h_{FE1} | $V_{CE}=5V, I_C=0.3A$ | 30 | 40 | 50 | |
| | 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 | μs |
| Fall Time | t_f | $I_C=2.0A, I_B=0.4A, I_{B2}=-0.8A$ | | | 0.15 | μs |

Switching Time Test Circuit





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