



2SB927/2SD1247

Large-Current Driving Applications

Applications

- Power supplies, relay drivers, lamp drivers, electrical equipment.

Features

- Adoption of FBET, MBIT processes.
- Low saturation voltage.
- Large current capacity and wide ASO.

() : 2SB927

Specifications

Absolute Maximum Ratings at Ta = 25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|-----------|------------|-------------|------|
| Collector-to-Base Voltage | V_{CBO} | | (-30) | V |
| Collector-to-Emitter Voltage | V_{CEO} | | (-25) | V |
| Emitter-to-Base Voltage | V_{EBO} | | (-6) | V |
| Collector Current | I_C | | (-2.5) | A |
| Collector Current (Pulse) | I_{CP} | | (-5) | A |
| Collector Dissipation | P_C | | 1.0 | W |
| Junction Temperature | T_J | | 150 | °C |
| Storage Temperature | T_{stg} | | -55 to +150 | °C |

Electrical Characteristics at Ta = 25°C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--------------------------------|-----------|------------------------------|---------|--------|--------|------|
| | | | min | typ | max | |
| Collector Cutoff Current | I_{CBO} | $V_{CB}=(-)20V, I_E=0$ | | | (-)0.1 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=(-)4V, I_C=0$ | | | (-)0.1 | μA |
| DC Current Gain | h_{FE1} | $V_{CE}=(-)2V, I_C=(-)0.1A$ | 100* | | 560* | |
| | h_{FE2} | $V_{CE}=(-)2V, I_C=(-)1.5A$ | 65 | 130 | | |
| Gain-Bandwidth Product | f_T | $V_{CE}=(-)10V, I_C=(-)50mA$ | | 150 | | MHz |
| Common Base Output Capacitance | C_{ob} | $V_{CB}=(-)10V, f=1MHz$ | | 19(32) | | pF |

* : The 2SB927/2SD1247 are classified by 0.1A h_{FE} as follows :

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| Rank | R | S | T | U |
|----------|------------|------------|------------|------------|
| h_{FE} | 100 to 200 | 140 to 280 | 200 to 400 | 280 to 560 |

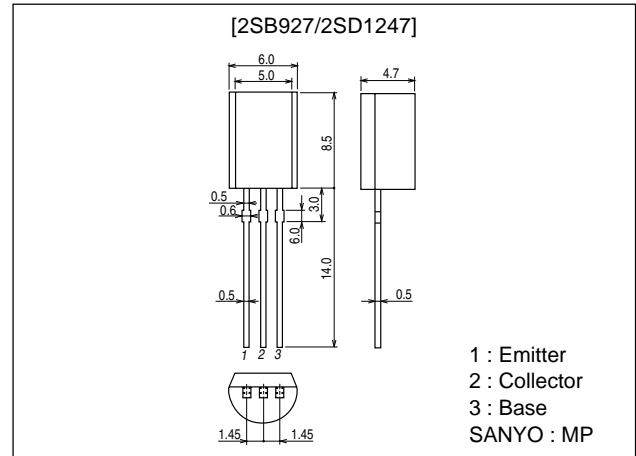
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Package Dimensions

unit:mm

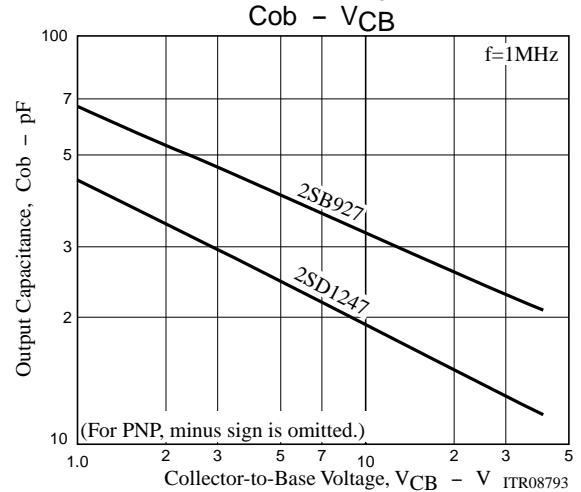
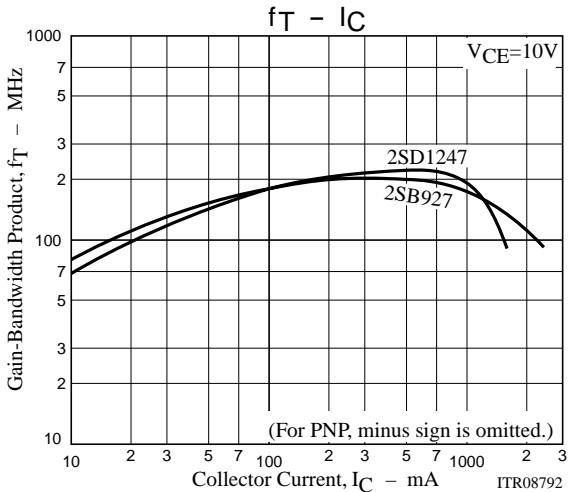
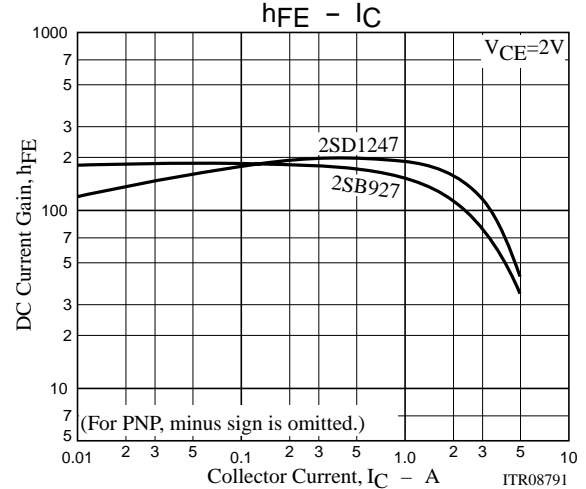
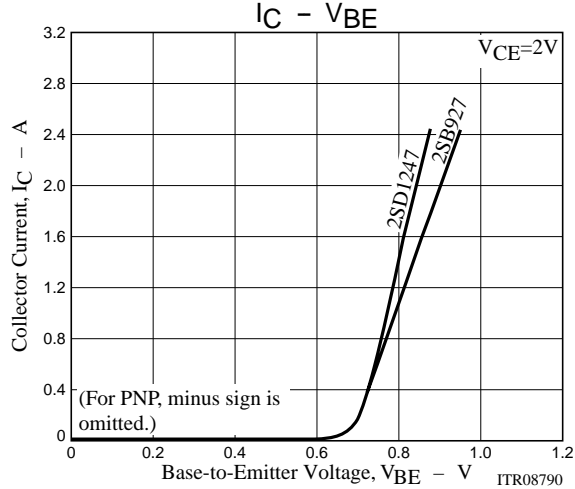
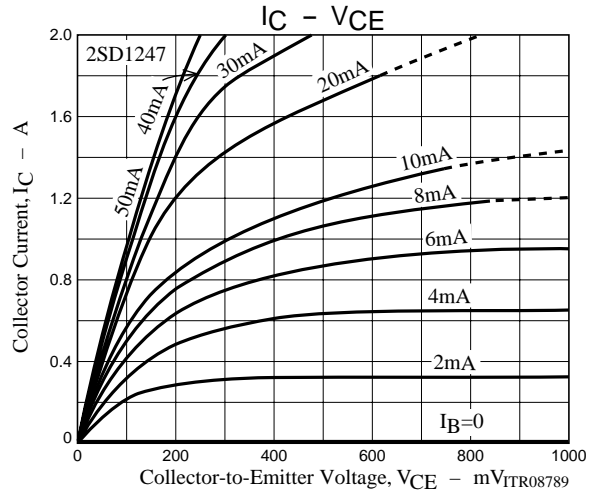
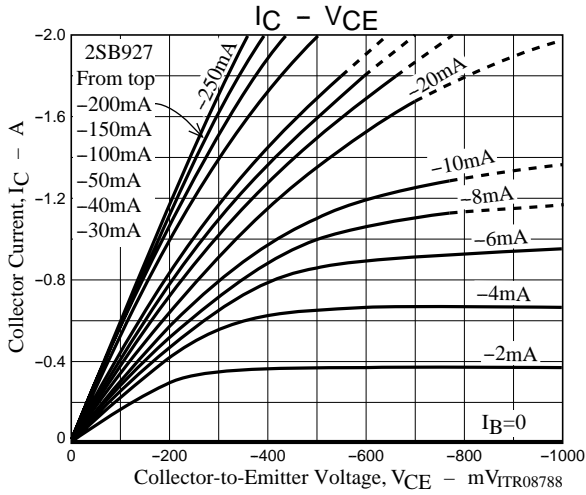
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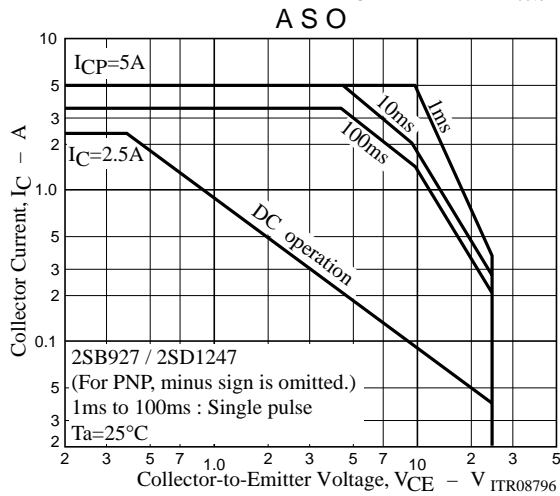
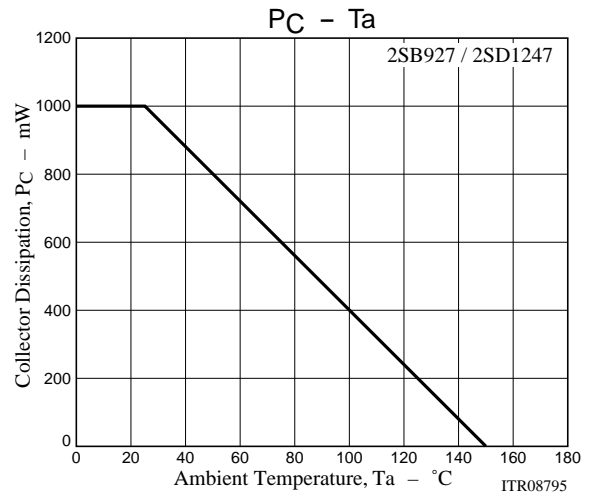
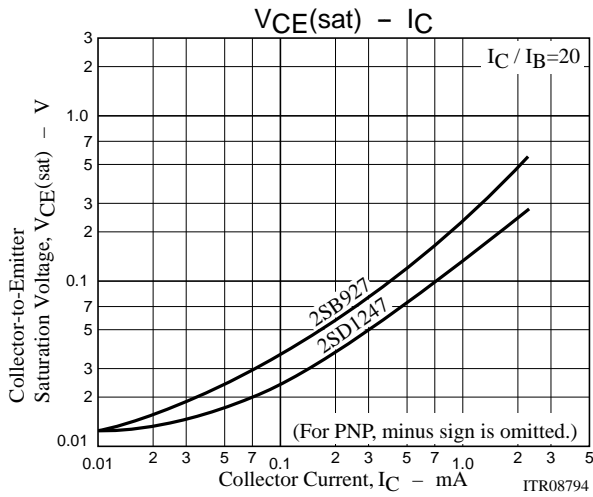
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| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|----------------------------|---------|---------|--------|------|
| | | | min | typ | max | |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=(-)1.5A, I_B=(-)75mA$ | | 0.18 | 0.4 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=(-)1.5A, I_B=(-)75mA$ | | (-0.35) | (-0.6) | V |
| | | | | 0.85 | 1.2 | V |



2SB927/2SD1247



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