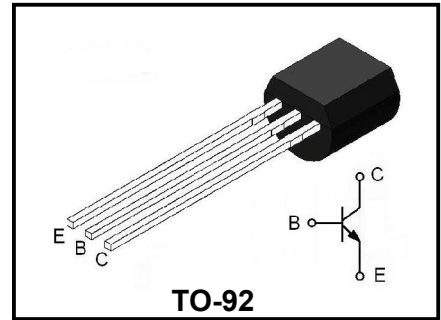


NPN Plastic-Encapsulate Transistors



Description

The S8050 is a low voltage high current small signal NPN transistor, designed for Class B push-pull audio amplifier and general purpose applications.

Features

- ◆ Collector current up to 500mA
- ◆ Collector-Emitter voltage up to 25 V
- ◆ Complementary to S8550

Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Value | Unit |
|-----------------------------|------------|------------|------|
| Collector-Base Voltage | BV_{CBO} | 40 | V |
| Collector-Emitter Voltage | BV_{CEO} | 25 | V |
| Emitter-Base Voltage | BV_{EBO} | 6 | V |
| Collector Current | I_C | 500 | mA |
| Collector Power Dissipation | P_C | 625 | mW |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature | T_{stg} | -55 ~ +150 | °C |

Electrical Characteristics (Ta=25°C)

| Parameter | Symbol | Conditions | Value | | | Unit |
|--------------------------------------|---------------|----------------------------|-------|-----|-----|---------|
| | | | Min | Typ | Max | |
| Collector-base breakdown voltage | BV_{CBO} | $I_C = 100\mu A, I_E = 0$ | 40 | | | V |
| Collector-emitter breakdown voltage | BV_{CEO} | $I_C = 1mA, I_B = 0$ | 25 | | | V |
| Emitter-base breakdown voltage | BV_{EBO} | $I_E = 100\mu A, I_C = 0$ | 6 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = 35V, I_E = 0$ | | | 0.1 | μA |
| Collector cut-off current | I_{CEO} | $V_{CE} = 20V, I_B = 0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = 6V, I_C = 0$ | | | 0.1 | μA |
| DC current gain | h_{FE} | $V_{CE} = 1V, I_C = 50mA$ | 85 | | 320 | |
| | | $V_{CE} = 1V, I_C = 500mA$ | 50 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 500mA, I_B = 50mA$ | | | 0.6 | V |
| Base -emitter saturation voltage | $V_{BE(sat)}$ | $I_C = 500mA, I_B = 50mA$ | | | 1.2 | V |
| Transition frequency | f_T | $V_{CE} = 6V, I_B = 20mA$ | 100 | | | MHz |

hFE Classification

| Classification | S8050-B | S8050-C | S8050-D |
|----------------|---------|---------|---------|
| Range | 85-160 | 120-200 | 160-320 |

Typical Characteristics

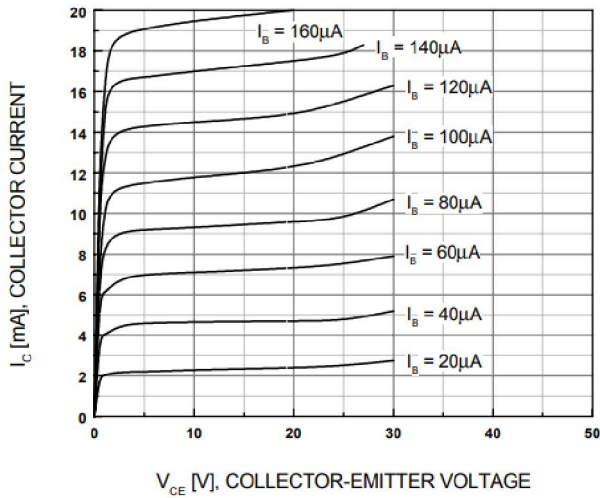


Figure 1. Static Characteristic

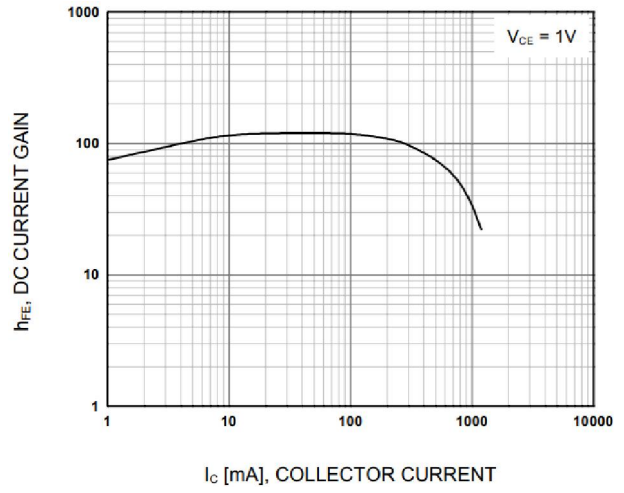


Figure 2. DC current Gain

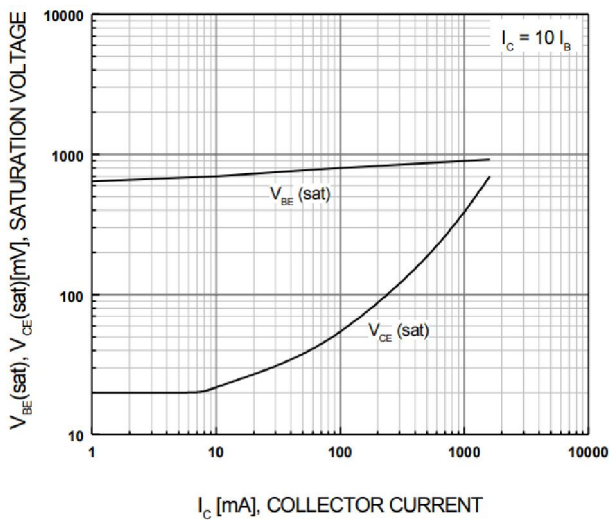


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

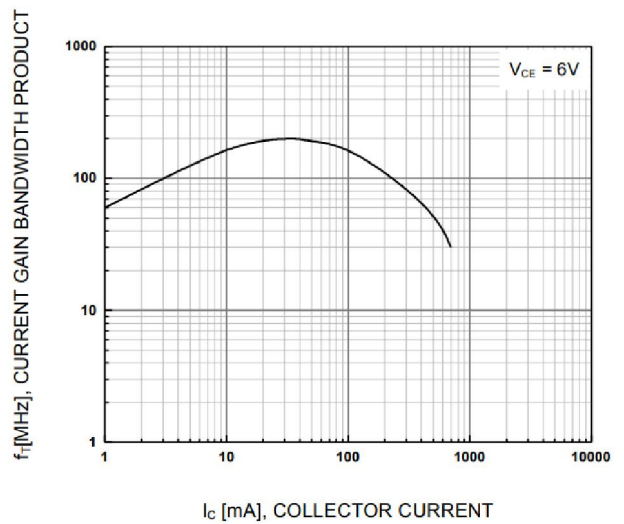


Figure 4. Current Gain Bandwidth Product

Package Dimensions

TO-92

| Symbol | Millimeter | | Inches | |
|--------|------------|-------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 3.30 | 3.70 | 0.130 | 0.146 |
| A1 | 2.30 | 2.70 | 0.091 | 0.106 |
| b | 0.40 | 0.50 | 0.016 | 0.020 |
| b1 | 0.50 | 0.70 | 0.020 | 0.028 |
| c | 0.35 | 0.45 | 0.014 | 0.018 |
| D | 4.45 | 4.70 | 0.175 | 0.185 |
| E | 4.40 | 4.65 | 0.173 | 0.183 |
| e | 1.17 | 1.37 | 0.046 | 0.054 |
| e1 | 2.34 | 2.64 | 0.092 | 0.104 |
| L | 13.50 | 14.50 | 0.531 | 0.571 |
| L1 | 1.80 | 2.20 | 0.071 | 0.087 |

| Package | Packing Method | Pack ountity |
|---------|----------------|--------------|
| TO-92 | Bulk | 1000pcs/Bag |
| TO-92 | Tape | 2000pcs/Box |

单击下面可查看定价，库存，交付和生命周期等信息

[>>YFW\(佑风微\)](#)