



## SSCP8550GS7

### High Frequency High Gain PNP Power BJT

#### ➤ Features

| VCB  | VCE  | VEB | IC    |
|------|------|-----|-------|
| -40V | -25V | -5V | -1.5A |

#### ➤ Description

This device is produced with advanced high carrier density technology, which is especially used to minimize saturation voltage drop. This device particularly suits low voltage applications such as portable equipment, power management and other battery powered circuits, and low in-line power dissipation are needed in a very small outline surface mount package. Excellent thermal and electrical capabilities.

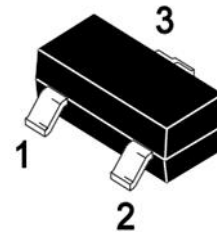
#### ➤ Applications

- Supply line switching circuits
- Battery management application
- DC/DC converter applications

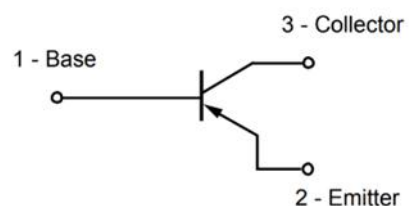
#### ➤ Ordering Information

| Device      | Package | Shipping  |
|-------------|---------|-----------|
| SSCP8550GS7 | SOT-323 | 3000/Reel |

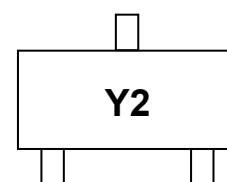
#### ➤ Pin configuration



**SOT-323**



**Circuit Diagram**



**Marking(Top View)**



➤ **Absolute Maximum Ratings**( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

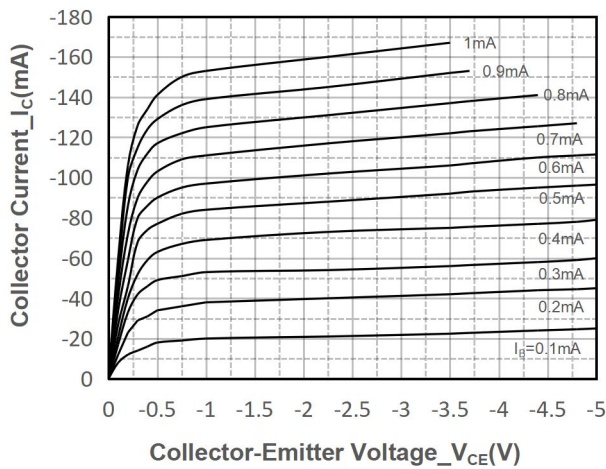
| Parameter                    | Symbol    | Value      | Unit               |
|------------------------------|-----------|------------|--------------------|
| Collector-Base Voltage       | $V_{CBO}$ | -40        | V                  |
| Collector- Emitter Voltage   | $V_{CEO}$ | -25        | V                  |
| Emitter-Base Voltage         | $V_{EBO}$ | -5         | V                  |
| Collector Current-Continuous | $I_C$     | -1500      | mA                 |
| Collector Power Dissipation  | $P_C$     | 1000       | mW                 |
| Junction Temperature         | $T_J$     | 150        | $^{\circ}\text{C}$ |
| Storage Temperature          | $T_{STG}$ | -55 to 150 | $^{\circ}\text{C}$ |

➤ **Electrical Characteristics** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

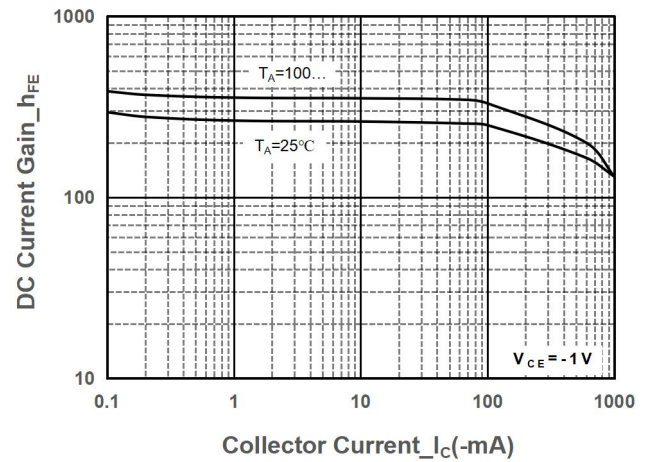
| Parameter                            | Symbol        | Test Conditions   | Min. | Typ. | Max. | Unit          |
|--------------------------------------|---------------|---|------|------|------|---------------|
| Collector-Base Breakdown Voltage     | $BV_{CBO}$    | $I_C=-0.1\text{mA}, I_E=0$                                | -40  |      |      | V             |
| Collector-emitter Breakdown Voltage  | $BV_{CEO}$    | $I_C=-1\text{mA}, I_B=0$                                  | -25  |      |      | V             |
| Emitter -Base Breakdown Voltage      | $BV_{EBO}$    | $I_E=-0.1\text{mA}, I_C=0$                                | -5   |      |      | V             |
| Collector Cutoff Current             | $I_{CBO}$     | $V_{CB}=-35\text{V}, I_E=0$                               |      |      | -0.1 | $\mu\text{A}$ |
| Emitter Cutoff Current               | $I_{EBO}$     | $V_{EB}=-4\text{V}, I_C=0$                                |      |      | -0.1 | $\mu\text{A}$ |
| DC Current Gain                      | $h_{FE}$      | $V_{CE}=-1\text{V}, I_C=-100\text{mA}$                    | 85   |      | 400  |               |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-800\text{mA}, I_B=-80\text{mA}$                     |      |      | -0.5 | V             |
| Base-Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C=-800\text{mA}, I_B=-80\text{mA}$                     |      |      | -1.2 | V             |
| Transition frequency                 | $f_T$         | $V_{CE}=-6\text{V}, I_C=-20\text{mA}$<br>$f=30\text{MHz}$ | 150  |      |      | MHz           |



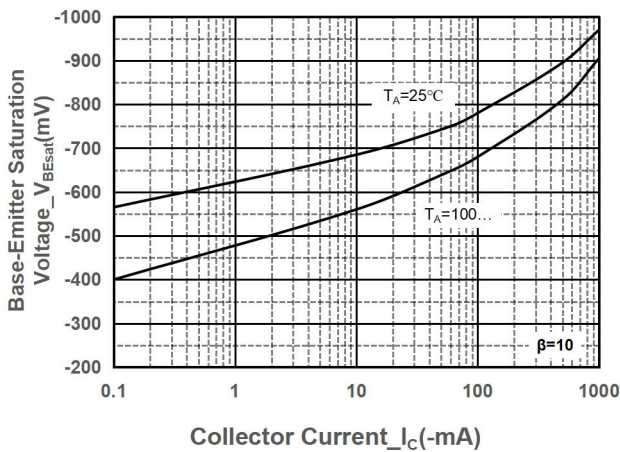
## ➤ Typical Performance Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise noted)



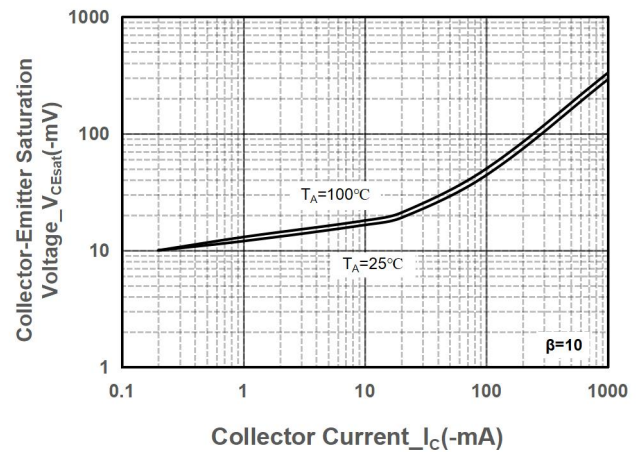
Collector Current vs. Collector-Emitter Voltage



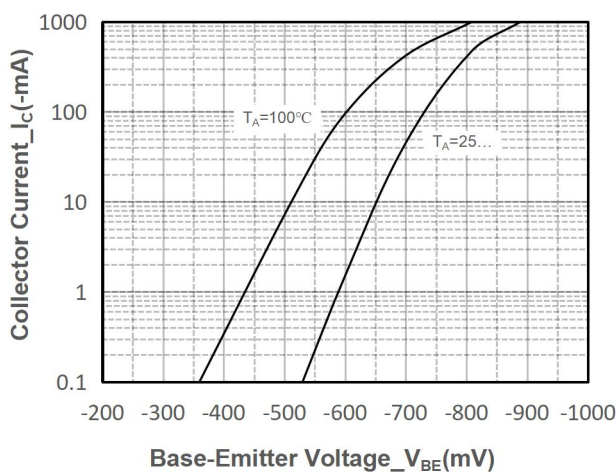
DC Current Gain vs. Collector Current



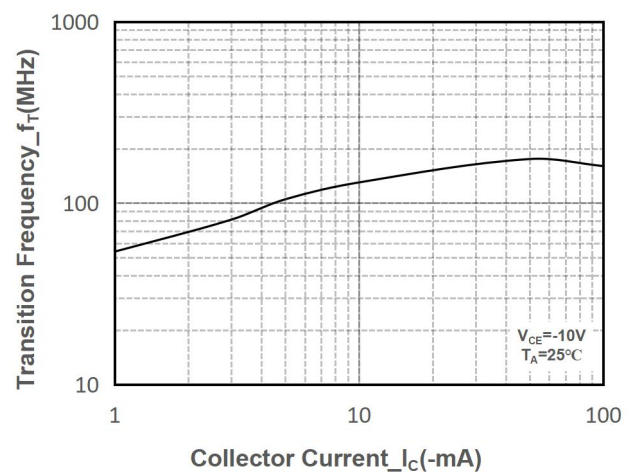
$V_{BE(sat)}$  vs. Collector Current



$V_{CE(sat)}$  vs. Collector Current

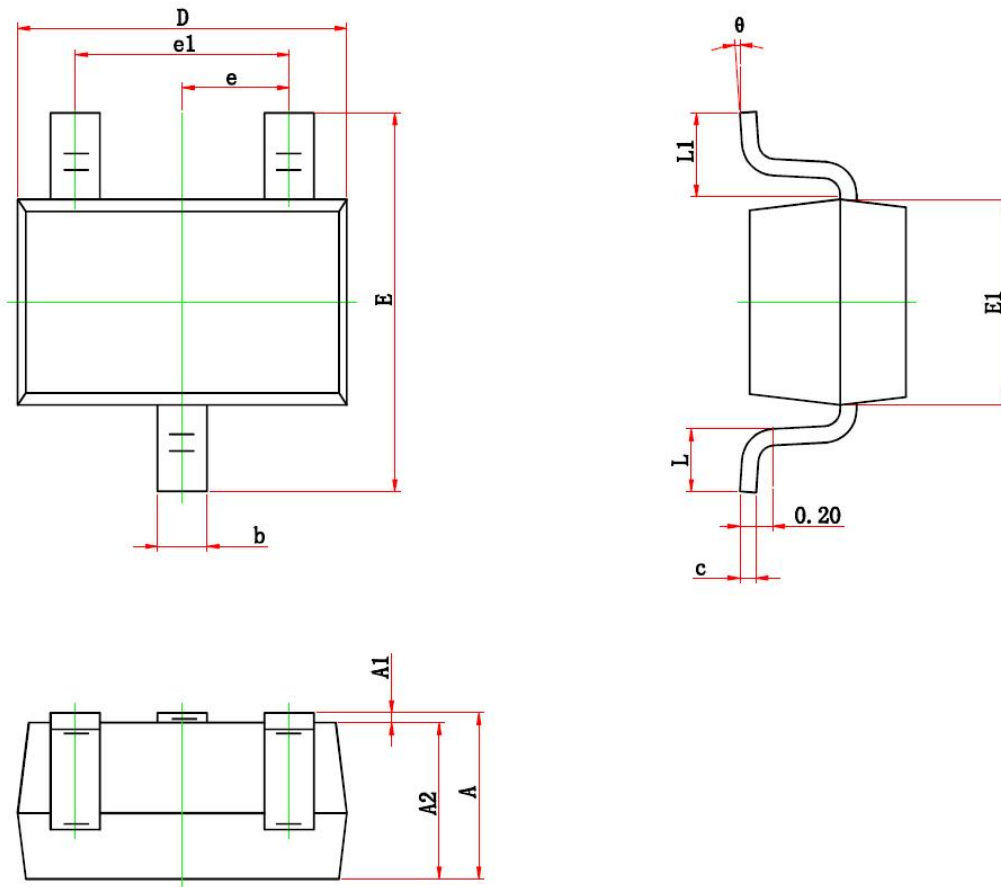


Collector Current vs. Base-Emitter Voltage



Transition Frequency vs. Collector Current

## ● Package Information



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min.                      | Max.  | Min.                 | Max.  |
| A      | 0.900                     | 1.100 | 0.035                | 0.043 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                     | 1.000 | 0.035                | 0.039 |
| b      | 0.200                     | 0.400 | 0.008                | 0.016 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 2.000                     | 2.200 | 0.079                | 0.087 |
| E      | 2.150                     | 2.450 | 0.085                | 0.096 |
| E1     | 1.150                     | 1.350 | 0.045                | 0.053 |
| e      | 0.650 TYP.                |       | 0.026 TYP.           |       |
| e1     | 1.200                     | 1.400 | 0.047                | 0.055 |
| L      | 0.260                     | 0.460 | 0.010                | 0.018 |
| L1     | 0.525 REF.                |       | 0.021 REF.           |       |
| θ      | 0°                        | 8°    | 0°                   | 8°    |



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