# SSCN9018GS6

## NPN Switching Transistor

### ➢ Features

| VCB | VCE | VEB | IC |
|---|---|---|---|
| 30V | 15V | 5V | 50mA |

### ➢ Description

The NPN Transistor is designed for use in linear and switching applications. The device is housed in the SOT-23 package, which is designed for telephony and professional communication equipment.

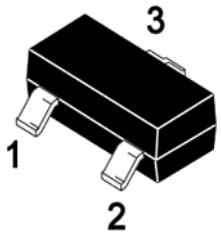
### ➢ Applications

- General purpose switching and amplification
- Telephony and professional communication equipment

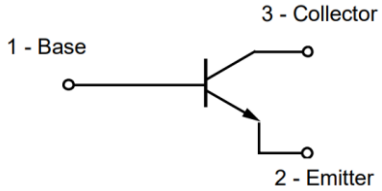
### ➢ Ordering Information

| Device | Package | Shipping |
|---|---|---|
| SSCN9018GS6 | SOT-23 | 3000/Reel |

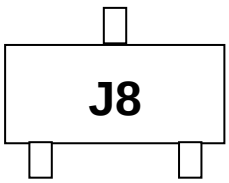
### ➢ Pin configuration




**SOT-23**




**Circuit Diagram**




**Marking (Top View)**

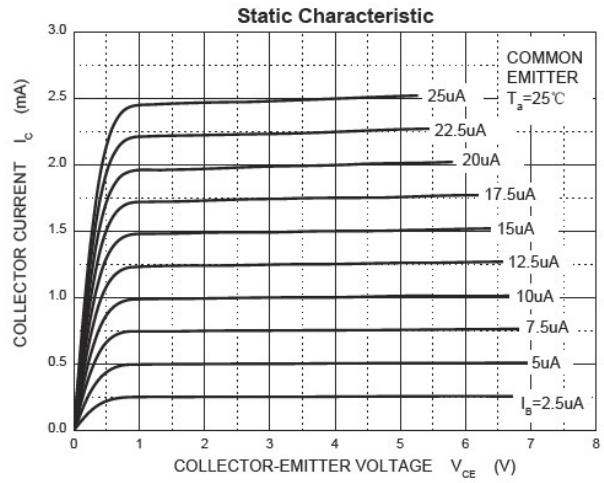
## ➢ Absolute Maximum Ratings ($T_A$=25℃ unless otherwise noted)

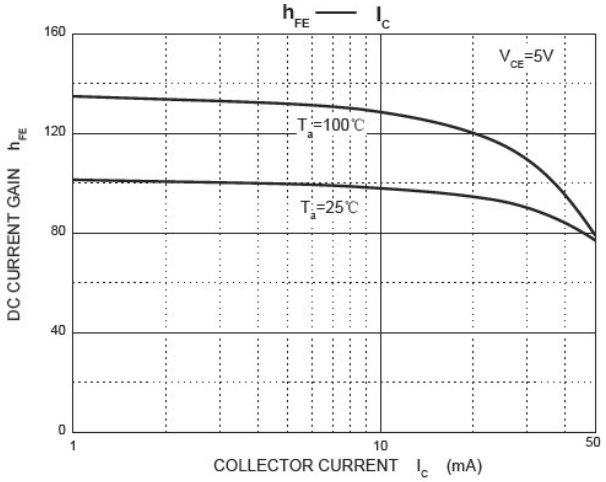
| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | 30 | V |
| Collector- Emitter Voltage | $V_{CEO}$ | 15 | V |
| Emitter-Base Voltage | $V_{EBO}$ | 5 | V |
| Collector Current-Continuous | $I_C$ | 50 | mA |
| Collector Power Dissipation | $P_C$ | 200 | mW |
| Junction Temperature | $T_J$ | -55 to 150 | ℃ |
| Storage Temperature | $T_{STG}$ | -55 to 150 | ℃ |

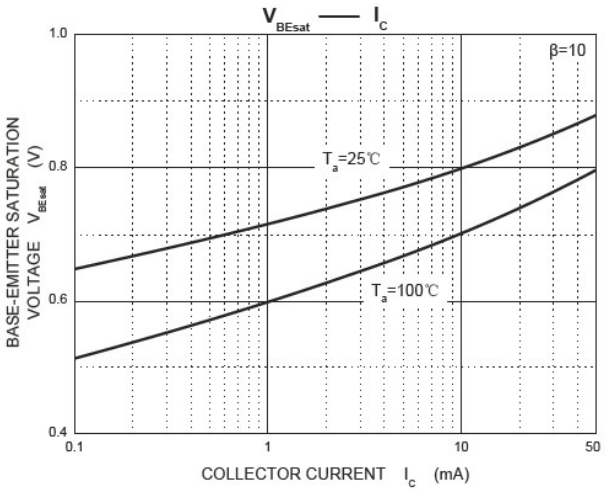
## ➢ Electrical Characteristics ($T_A$=25℃ unless otherwise noted)

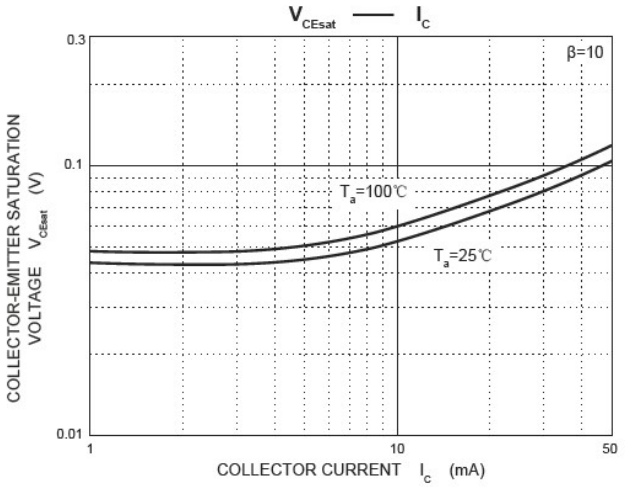
| Parameter | Symbol | Test Conditions | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Collector-Base Breakdown Voltage | $BV_{CBO}$ | $I_C$=100uA,$I_E$=0 | 30 | | | V |
| Collector-emitter Breakdown Voltage | $BV_{CEO}$ | $I_C$=1mA,$I_B$=0 | 15 | | | V |
| Emitter -Base Breakdown Voltage | $BV_{EBO}$ | $I_E$=100uA,$I_C$=0 | 6 | | | V |
| Collector Cutoff Current | $I_{CBO}$ | $V_{CB}$=12V, $I_E$=0 | | | 0.05 | μA |
| Collector Cutoff Current | $I_{CEO}$ | $V_{CE}$=12V,$I_B$=0 | | | 0.1 | μA |
| Emitter Cutoff Current | $I_{EBO}$ | $V_{EB}$=3V,$I_C$=0 | | | 0.1 | μA |
| DC Current Gain | $h_{FE}$ | $V_{CE}$=5V,$I_C$=1mA | 70 | | 200 | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$=10mA,$I_B$=1mA | | | 0.5 | V |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C$=10mA,$I_B$=1mA | | | 1.4 | V |
| Transition frequency | $f_T$ | $V_{CE}$=5V,$I_C$=5mA f=400MHz | | 800 | | MHz |

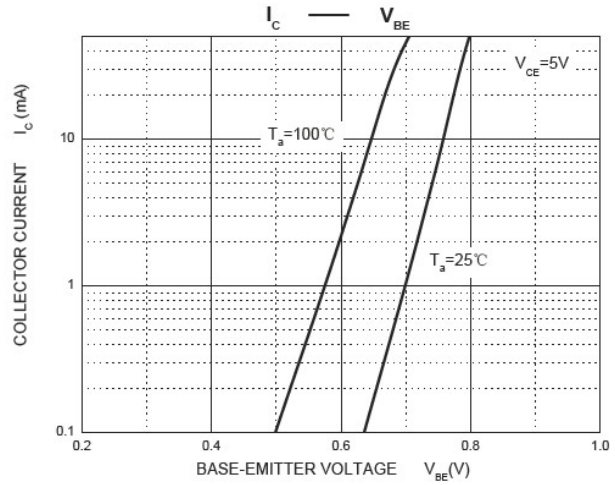
## ➢ Typical Performance Characteristics ($T_A$=25℃ unless otherwise noted)

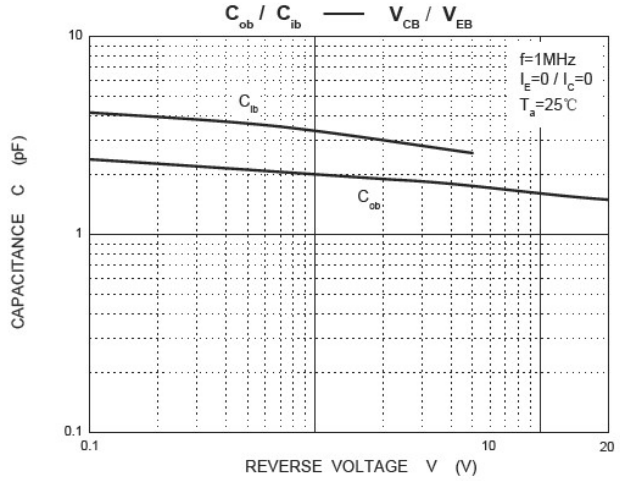


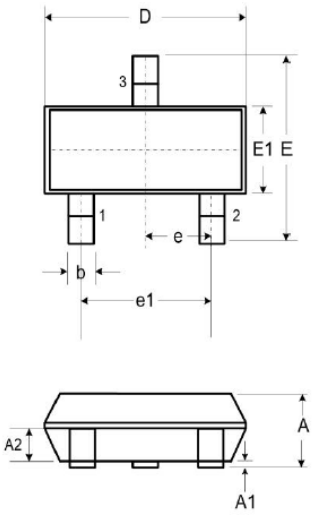



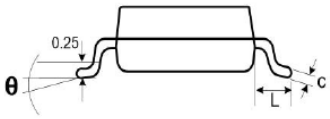



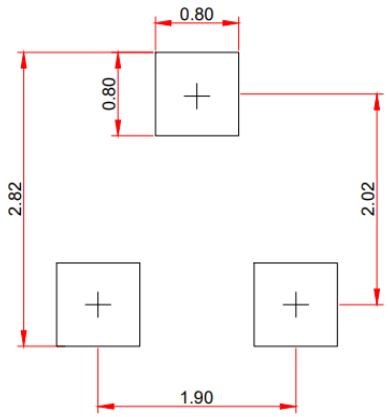
## ➢ Package Information




| DIM | Millimeters | | |
|---|---|---|---|
| | Min. | Typ. | Max. |
| A | 0.89 | - | 1.12 |
| A1 | 0.01 | - | 0.10 |
| A2 | 0.88 | 0.95 | 1.02 |
| b | 0.30 | - | 0.51 |
| c | 0.08 | - | 0.18 |
| D | 2.80 | 2.90 | 3.04 |
| E | 2.10 | 2.37 | 2.64 |
| E1 | 1.20 | 1.30 | 1.40 |
| e | 0.95 | | |
| e1 | 1.90 | | |
| L | 0.40 | 0.50 | 0.60 |
| L1 | 0.55 | | |
| N | 3 | | |
| θ | 0° | - | 8° |

**Recommended Pad outline (Unit: mm)**



## DISCLAIMER

**SSCSEMI RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. SSCSEMI DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICIENCE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.**

**THE GRAPHS PROVIDED IN THIS DOCUMENT ARE STATISTICAL SUMMARIES BASED ON A LIMITED NUMBER OF SAMPLES AND ARE PROVIDED FOR INFORMATIONAL PURPOSE ONLY. THE PERFORMANCE CHARACTERISTICS LISTED IN THEM ARE NOT TESTED OR GUARANTEED. IN SOME GRAPHS, THE DATA PRESENTED MAY BE OUTSIDE THE SPECIFIED OPERATING RANGE (E.G. OUTSIDE SPECIFIED POWER SUPPLY RANGE) AND THEREFORE OUTSIDE THE WARRANTED RANGE.**

**OUR PRODUCT SPECIFICATIONS ARE ONLY VALID IF OBTAINED THROUGH THE COMPANY'S OFFICIAL WEBSITE, CRM SYSTEM, OR OUR SALES PERSONNEL CHANNELS. IF CHANGES OR SPECIAL VERSIONS ARE INVOLVED, THEY MUST BE STAMPED WITH A QUALITY SEAL AND MARKED WITH A SPECIAL VERSION NUMBER TO BE VALID.**