

**SSCP005GS3****High Frequency High Gain PNP Power BJT****➤ Features**

| VCE | VBE | VCESAT Typ. | IC |
|------|-----|-------------|-----|
| -40V | -6V | -150mV | -3A |

➤ Description

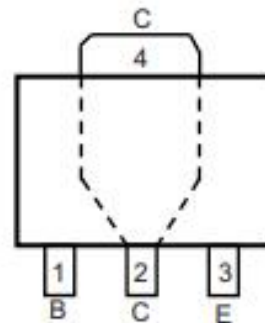
This device is produced with advanced high carrier density technology, which is especially used to minimize saturation voltage drop. This device particularly suits low voltage applications such as portable equipment, power management and other battery powered circuits, and low in-line power dissipation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

➤ Applications

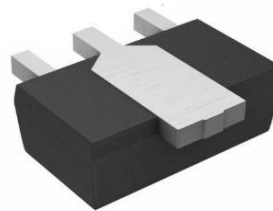
- Battery powered circuits
- Low in-line power dissipation circuits
- Power regulator

➤ Pin configuration

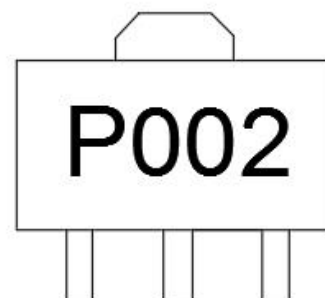
Top view



SOT89-3L



Bottom view



Marking

➤ Ordering Information

| Device | Package | Shipping |
|------------|---------|-----------|
| SSCP005GS3 | SOT89 | 1000/Reel |



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

| Symbol | Parameter | Ratings | Unit |
|----------------|---|------------|--------------------|
| V_{CBO} | Collector-Base Voltage | -40 | V |
| V_{CEO} | Collector-Emitter Voltage | -40 | V |
| V_{EBO} | Emitter-Base Voltage | -6 | V |
| I_C | Collector Current@Note1 | -3 | A |
| | Collector Current@Note2 | -2 | |
| I_{CM} | Pulsed Collector Current@Note3 | -6 | A |
| P_D | Power Dissipation@Note1 | 3.0 | W |
| | Power Dissipation@Note2 | 1.5 | |
| T_A | Operation Temperature Range | -40 to 85 | $^{\circ}\text{C}$ |
| T_L | Lead Temperature | 260 | $^{\circ}\text{C}$ |
| T_J, T_{STG} | Operation and Storage temperature range | -55 to 150 | $^{\circ}\text{C}$ |

➤ **Thermal Resistance Ratings**

| Symbol | Parameter | Maximum | Unit |
|-----------------|--|---------|-----------------------------|
| $R_{\theta JA}$ | Junction-to-Ambient Thermal Resistance@Note1 | 49 | $^{\circ}\text{C}/\text{W}$ |
| $R_{\theta JA}$ | Junction-to-Ambient Thermal Resistance@Note2 | 89 | |



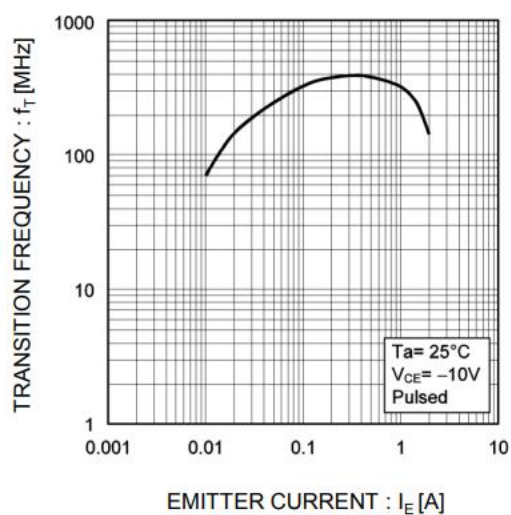
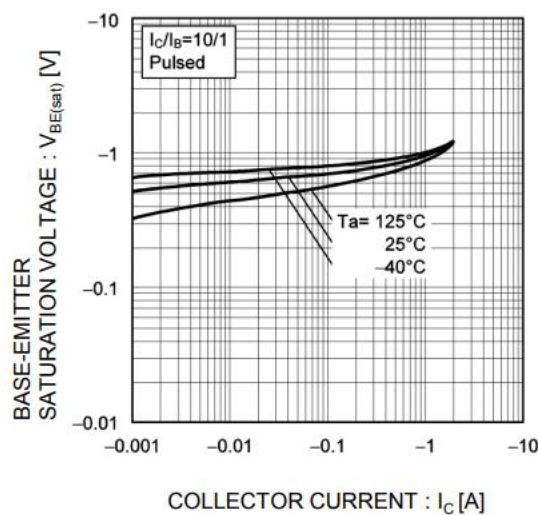
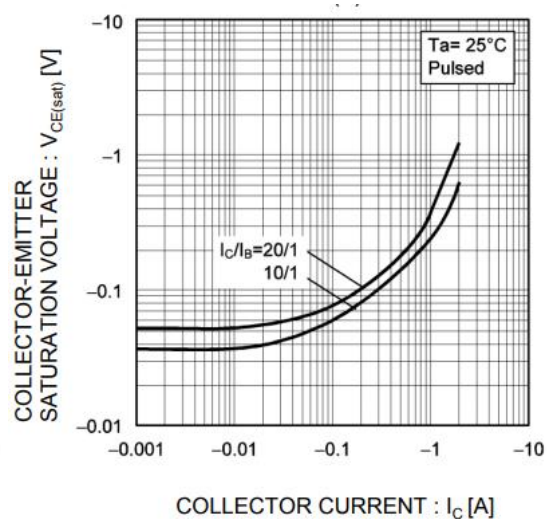
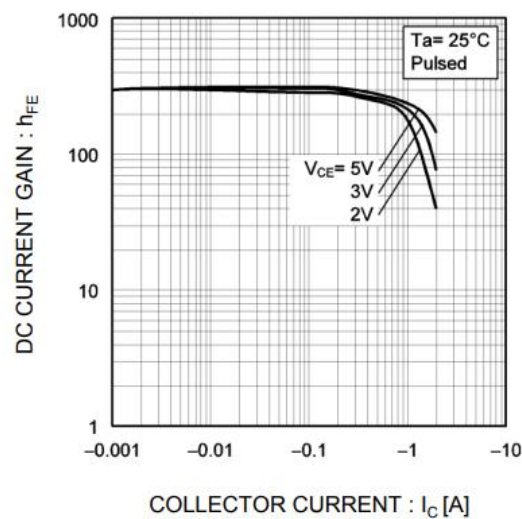
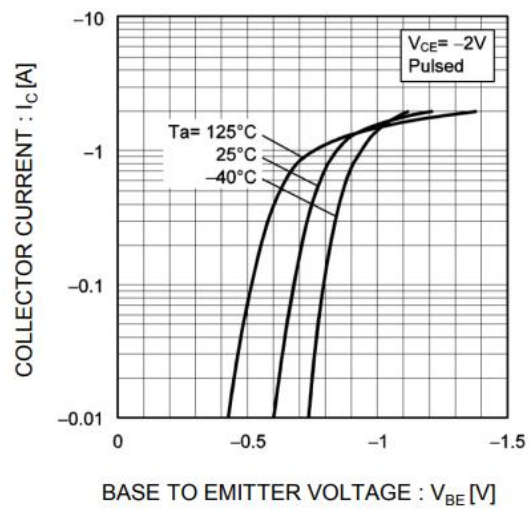
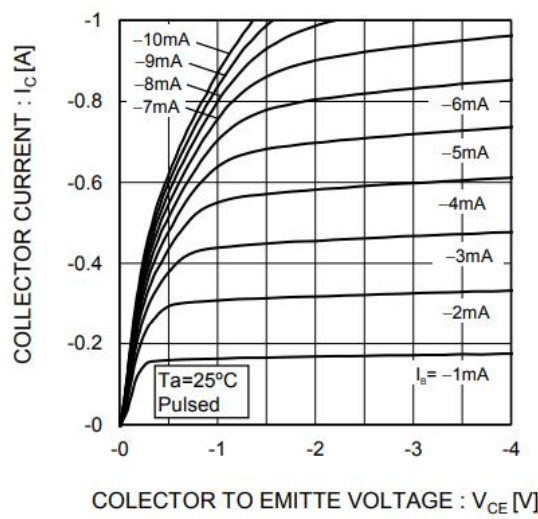
➤ **Electronics Characteristics**($T_A=25^{\circ}\text{C}$ unless otherwise specified)

| Symbol | Parameter | Test Conditions | Min | Typ. | Max | Unit |
|--------|---|--|-----|------|------|---------------|
| BVCBO | Collector-Base Breakdown Voltage | $I_C=-50\mu\text{A}$ $I_E=0$ | -40 | | | V |
| BVCEO | Collector-Emitter Breakdown Voltage | $I_C=-1\text{mA}$ $I_B=0$ | -40 | | | V |
| BVEBO | Emitter-Base Breakdown Voltage | $I_E=-1\mu\text{A}$ $I_C=0$ | -6 | | | V |
| ICBO | Collector cut off current | $V_{CB}=-20\text{V}$ $I_E=0$ | | | -0.1 | μA |
| IEBO | Emitter cut off current | $V_{EB}=-4\text{V}$ $I_C=0$ | | | -0.1 | μA |
| HFE | DC Current Gain@Note3 | $V_{CE}=-2\text{V}$ $I_C=-0.5\text{A}$ | 100 | 200 | 350 | |
| VCESAT | Collector-Emitter Saturation Voltage | $I_C=-1.5\text{A}$ $I_B=-80\text{mA}$ | | | -0.2 | V |
| VBESAT | Base-Emitter Saturation Voltage | $I_C=-1.5\text{A}$ $I_B=-80\text{mA}$ | | | -1.2 | V |
| f_T | Transition frequency | $V_{CE}=-5\text{V}$, $I_E=-0.1\text{A}$ $f=10\text{MHz}$ | 50 | 80 | | MHz |

Notes:

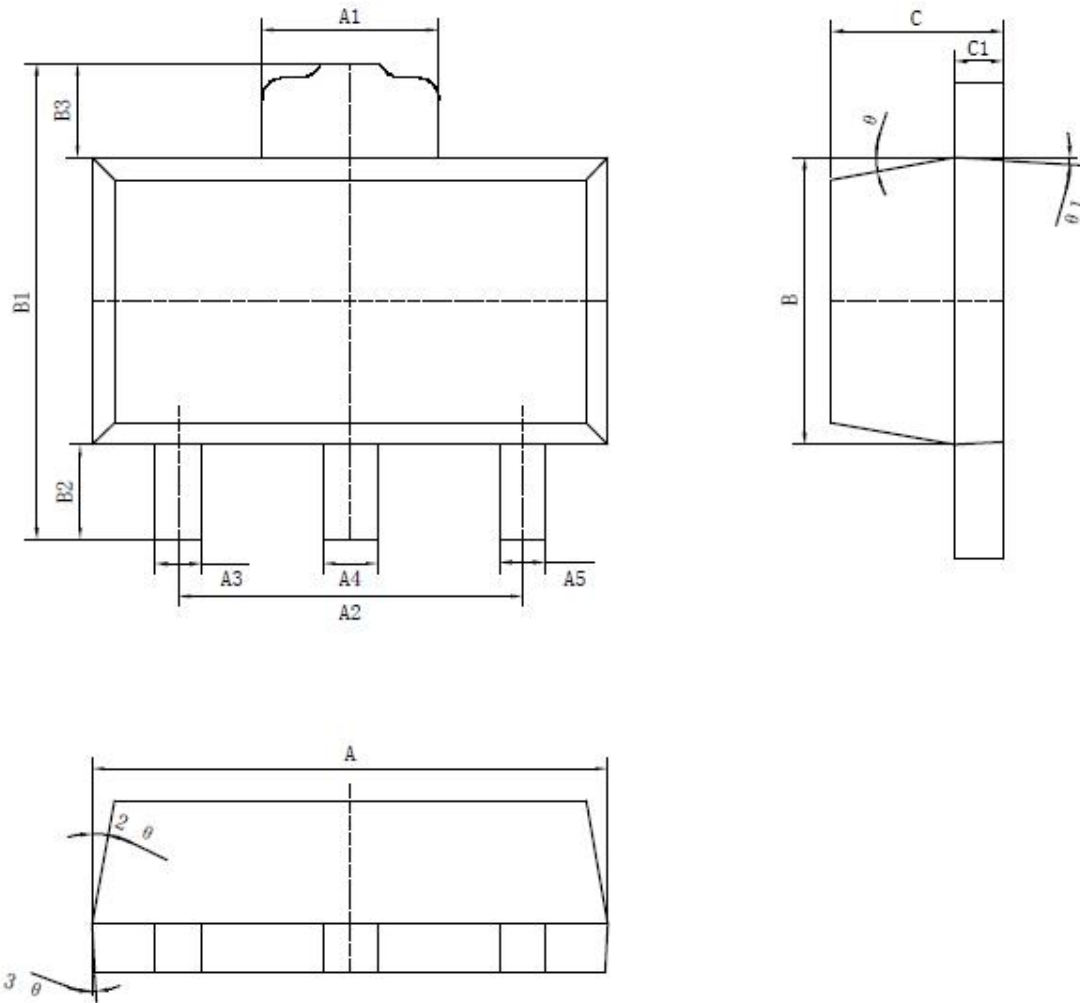
1. Surface mounted on FR-4 Board using 1 square inch pad size, 1oz copper.
2. Surface mounted on FR-4 Board using minimum pad size, 1oz copper.
3. Pulse width=300us, Duty Cycle<2%.

Typical Performance Characteristics





➤ Package Information



| 标注 | 尺寸 | 最小 (mm) | 最大 (mm) | 标注 | 尺寸 | 最小 (mm) | 最大 (mm) |
|----|----|---------|---------|----|----|---------|---------|
| A | | 4.40 | 4.60 | B3 | | 0.82 | 0.83 |
| A1 | | 1.65 | 1.75 | C | | 1.40 | 1.60 |
| A2 | | 2.95 | 3.05 | C1 | | 0.35 | 0.45 |
| A3 | | 0.35 | 0.45 | θ | | 6° TYP4 | |
| A4 | | 0.43 | 0.53 | θ1 | | 3° TYP4 | |
| A5 | | 0.35 | 0.45 | θ2 | | 6° TYP4 | |
| B | | 2.40 | 2.60 | θ3 | | 3° TYP4 | |
| B1 | | 4.05 | 4.25 | | | | |
| B2 | | 0.82 | 0.83 | | | | |



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