



SSCN846-847-848GS6

NPN Switching Transistor

➤ Description

This product is general usage and suitable for many different applications. It can be used for medium power amplifiers and switches requiring collector currents up to 100 mA.

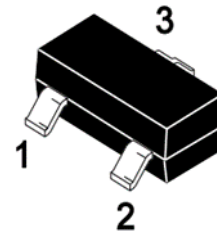
➤ Features

- Ideally suited for automatic insertion
- For Switching and AF Amplifier Applications

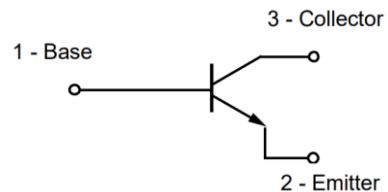
➤ Ordering Information

| Device | Marking | Package | Shipping |
|-------------|---------|---------|-----------|
| SSCN846AGS6 | 1A | SOT-23 | 3000/Reel |
| SSCN846BGS6 | 1B | | |
| SSCN847AGS6 | 1E | | |
| SSCN847BGS6 | 1F | | |
| SSCN847CGS6 | 1G | | |
| SSCN848AGS6 | 1J | | |
| SSCN848BGS6 | 1K | | |
| SSCN848CGS6 | 1L | | |

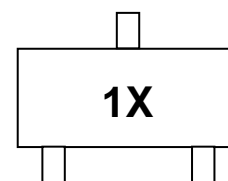
➤ Pin configuration



SOT-23



Circuit Diagram



Marking (Top View)



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

| Parameter | Symbol | Value | Unit |
|---|-----------------|------------|-----------------------------|
| Collector-Base Voltage | V_{CBO} | 846 | 80 |
| | | 847 | 50 |
| | | 848 | 30 |
| Collector- Emitter Voltage | V_{CEO} | 846 | 65 |
| | | 847 | 45 |
| | | 848 | 30 |
| Emitter-Base Voltage | V_{EBO} | 6 | V |
| Collector Current-Continuous | I_C | 100 | mA |
| Collector Power Dissipation | P_C | 200 | mW |
| Thermal Resistance From Junction To Ambient | $R_{\theta JA}$ | 625 | $^{\circ}\text{C}/\text{W}$ |
| Junction Temperature | T_J | 150 | $^{\circ}\text{C}$ |
| Storage Temperature | T_{STG} | -55 to 150 | $^{\circ}\text{C}$ |

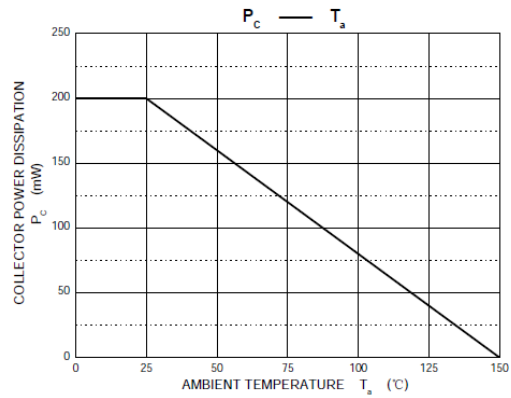
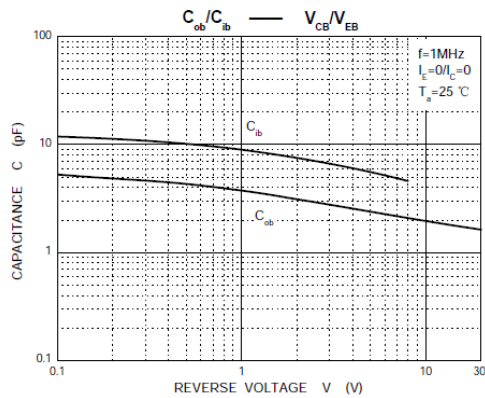
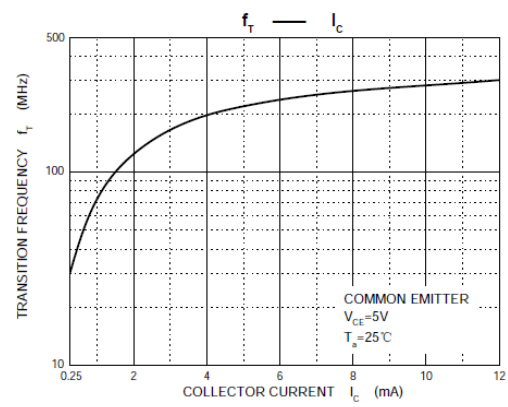
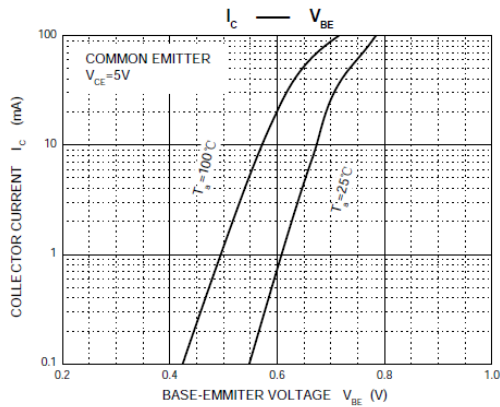
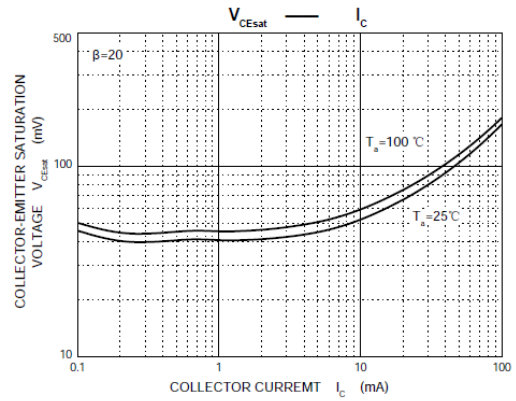
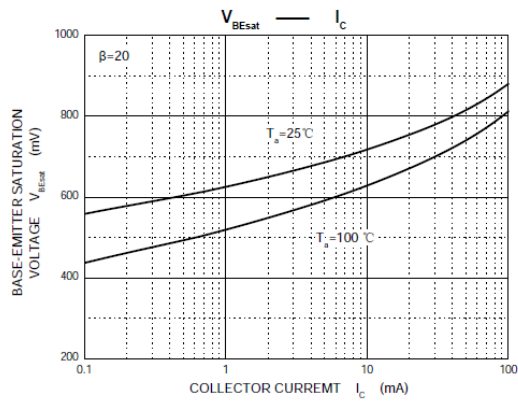
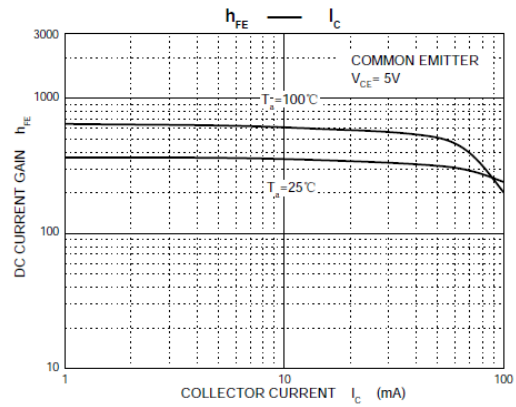
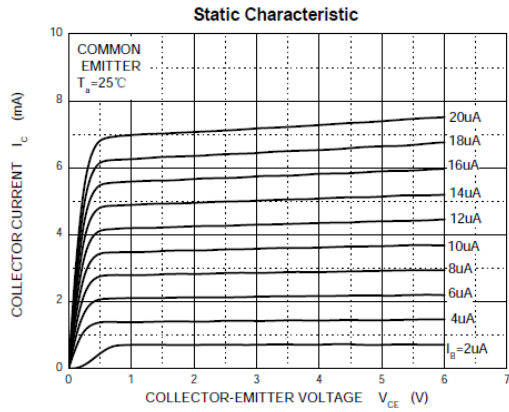
➤ Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Parameter | Symbol | Test Conditions | Min. | Typ. | Max. | Unit |
|--------------------------------------|---------------|--|------------------|------|------|---------------|
| Collector-Base Breakdown Voltage | BV_{CBO} | $I_C=10\mu\text{A}, I_E=0$ | 846 | 80 | | V |
| | | | 847 | 50 | | |
| | | | 848 | 30 | | |
| Collector-emitter Breakdown Voltage | BV_{CEO} | $I_C=10\text{mA}, I_B=0$ | 846 | 65 | | V |
| | | | 847 | 45 | | |
| | | | 848 | 30 | | |
| Emitter -Base Breakdown Voltage | BV_{EBO} | $I_E=10\mu\text{A}, I_C=0$ | 6 | | | V |
| Collector Cutoff Current | I_{CBO} | $V_{CB}=70\text{V}, I_E=0$ $V_{CB}=50\text{V}, I_E=0$ $V_{CB}=30\text{V}, I_E=0$ | 846 | | 0.1 | μA |
| | | | 847 | | | |
| | | | 848 | | | |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=5\text{V}, I_C=0$ | | | 100 | nA |
| DC Current Gain | h_{FE} | $V_{CE}=5\text{V}, I_C=2\text{mA}$ | 846A, 847A, 848A | 110 | 220 | |
| | | | 846B, 847B, 848B | 200 | 450 | |
| | | | 847C, 848C | 420 | 800 | |
| | | | | | | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=100\text{mA}, I_B=5\text{mA}$ | | | 0.5 | V |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=100\text{mA}, I_B=5\text{mA}$ | | | 1.1 | V |
| Collector Capacitance | C_{ob} | $V_{CB}=10\text{V}, f=1\text{MHz}$ | | | 4.5 | pF |
| Transition frequency | f_T | $V_{CE}=5\text{V}, I_C=10\text{mA}$ $f=100\text{MHz}$ | 100 | | | MHz |



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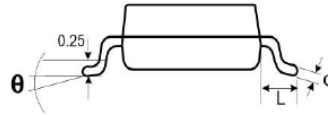
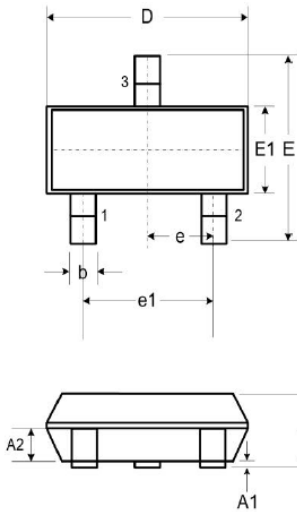
➤ Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)





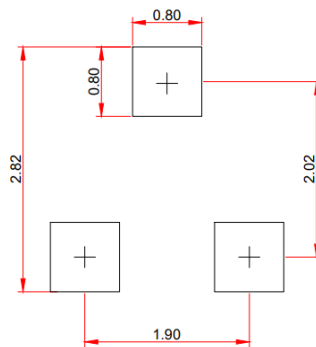
➤ Package Information

SOT-23



| 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)





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