

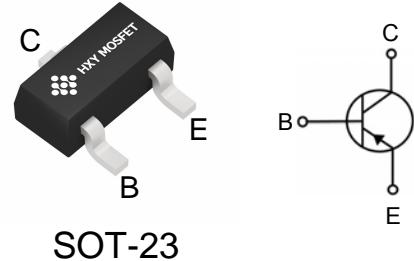


Features

- Collector Current: $I_C = -0.1A$
- Power Dissipation of 200mW

Package Marking and Ordering Information

| Product ID | Pack | Marking | Qty(PCS) |
|---------------|--------|---------|----------|
| NSVBC857BLT3G | SOT-23 | 3F | 3000 |



Maximum Ratings (Ta=25°C unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|------------------|------------------------------|---------|------|
| V _{CBO} | Collector-Base Voltage | -50 | V |
| V _{CEO} | Collector-Emitter Voltage | -45 | V |
| V _{EBO} | Emitter-Base Voltage | -5 | V |
| I _C | Collector Current-Continuous | -0.1 | A |
| P _C | Collector Power Dissipation | 200 | mW |
| T _j | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature | -55-150 | °C |

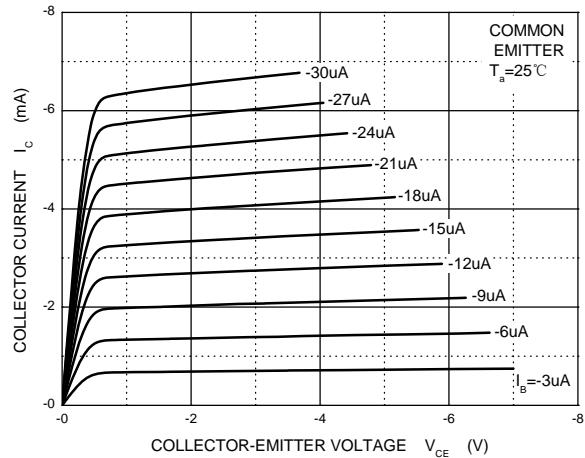
Electrical Characteristics (Ta=25°C unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Max | Unit |
|--------------------------------------|----------------------|---|-----|------|------|
| Collector-base breakdown voltage | V _{CBO} | I _C = -10μA, I _E =0 | -50 | | V |
| Collector-emitter breakdown voltage | V _{CEO} | I _C = -10mA, I _B =0 | -45 | | V |
| Emitter-base breakdown voltage | V _{EBO} | I _E = -1μA, I _C =0 | -5 | | V |
| Collector cut-off current | I _{CBO} | V _{CB} = -45 V , I _E =0 | | -0.5 | μA |
| Collector cut-off current | I _{CEO} | V _{CE} = -40 V , I _B =0 | | -0.5 | μA |
| Emitter cut-off current | I _{EBO} | V _{EB} = -5 V , I _C =0 | | -0.5 | μA |
| DC current gain | h _{FE} | V _{CE} = -5V, I _C = -2mA | 200 | 450 | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C =-100mA, I _B = -5 mA | | -0.5 | V |
| Base-emitter saturation voltage | V _{BE(sat)} | I _C = -100mA, I _B = -5mA | | -1.1 | V |
| Transition frequency | f _T | V _{CE} = -5 V, I _C =-10mA f=100MHz | 100 | | MHz |
| Collector capacitance | C _{ob} | V _{CB} =-10V, f=1MHz | | 4.5 | pF |

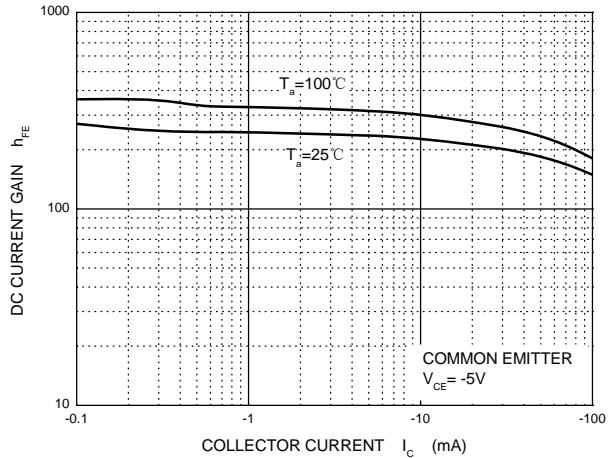


Typical Characteristics

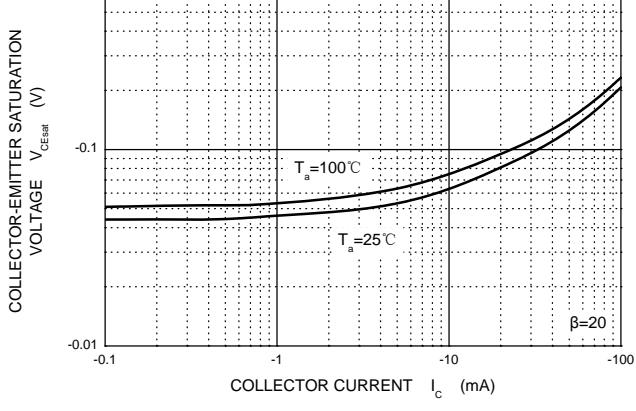
Static Characteristic



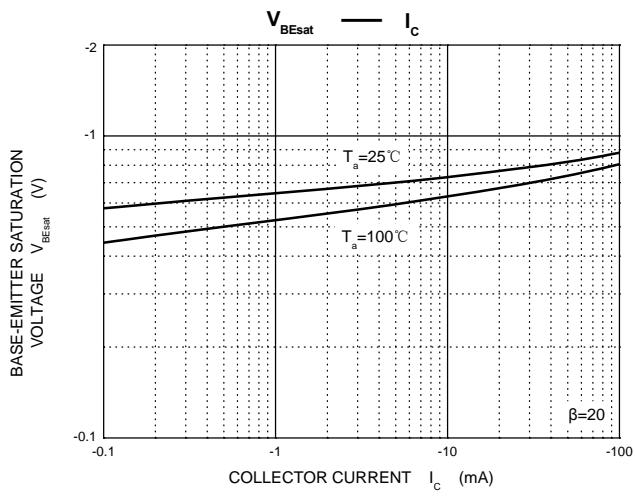
h_{FE} — I_c



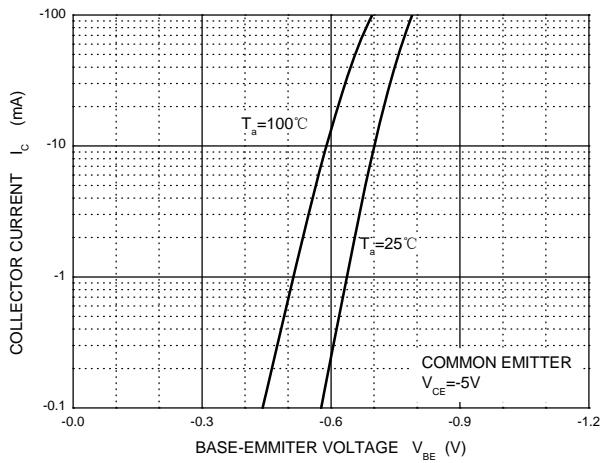
V_{CEsat} — I_c



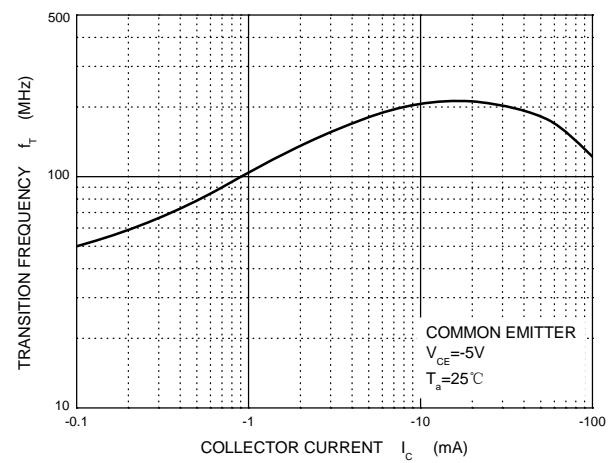
V_{BEsat} — I_c

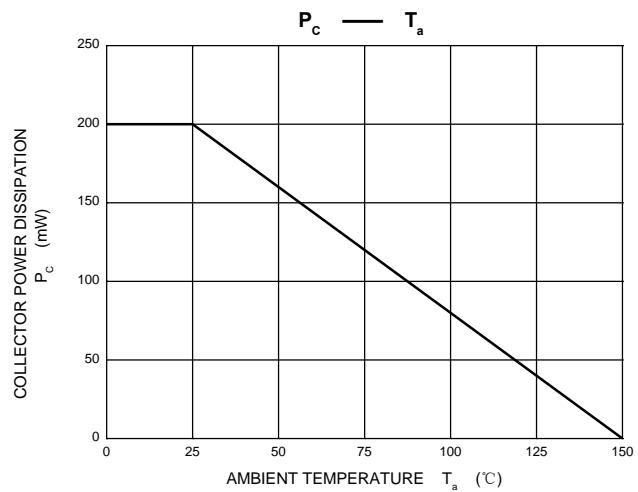
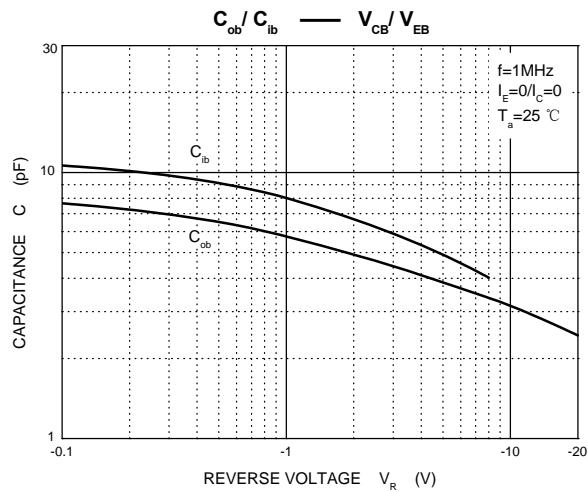


I_c — V_{BE}



f_T — I_c

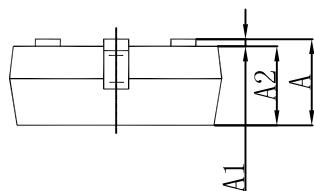
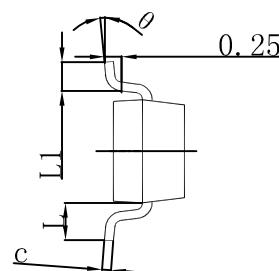
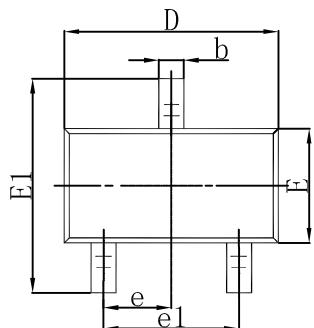






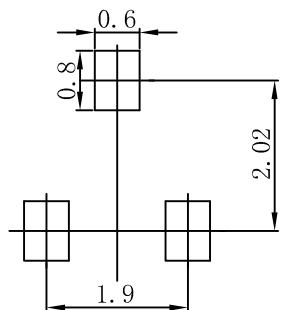
Package Dimensions

SOT-23



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|----------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950 TYP | | 0.037 TYP | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550 REF | | 0.022 REF | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |

Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.



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