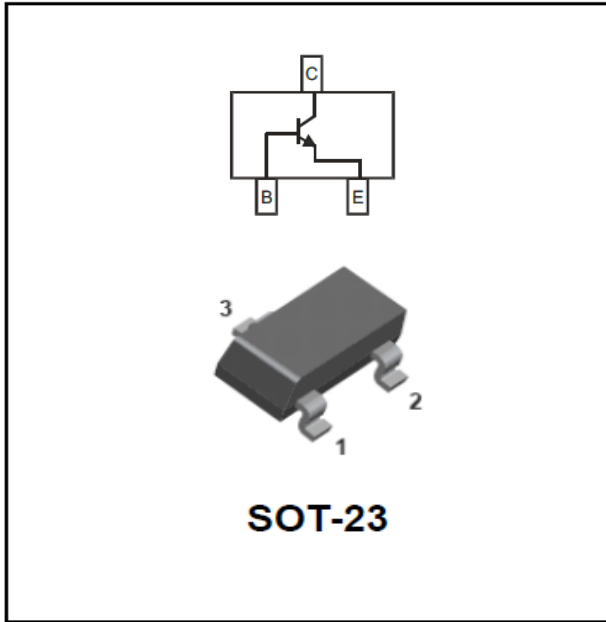


NPN General Purpose Amplifier



Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- High Conductance
- Surface Mount Package Ideally Suited for Automatic Insertion

Mechanical Data

- **Package:** SOT-23
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:**

| | |
|----------|------|
| SS8050-L | Y1·L |
| SS8050-H | Y1 |

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

| Item | Symbol | Unit | Conditions | Value |
|---|-----------|------|--------------------------------|-------------|
| Minimum Collector-Emitter Voltage | V_{CEO} | V | $I_C=100\mu\text{A}$, $I_B=0$ | 25 |
| Minimum Collector-Base Voltage | V_{CBO} | V | $I_C=100\mu\text{A}$, $I_E=0$ | 40 |
| Minimum Emitter-Base Voltage | V_{EBO} | V | $I_E=100\mu\text{A}$, $I_C=0$ | 5.0 |
| Collector Current | I_C | A | | 1.5 |
| Maximum Collector-Emitter cut-off current | I_{CEO} | nA | $V_{CE}=20\text{Vdc}$ | 100 |
| Maximum Collector-Base cut-off current | I_{CBO} | nA | $V_{CB}=40\text{Vdc}$ | 100 |
| Maximum Emitter-Base cut-off current | I_{EBO} | nA | $V_{EB}=5.0\text{Vdc}$ | 100 |
| Collector Power Dissipation | P_C | mW | | 300 |
| Operation Junction Temperature | T_j | °C | | -55 to +150 |
| Storage Temperature | T_{stg} | °C | | -55 to +150 |



SS8050-L THRU SS8050-H

■Electrical Characteristics (Ta=25°C unless otherwise noted)

| Item | Symbol | Unit | Conditions | Min | Max |
|--------------------------------------|---------------|------|--------------------------------|-----|-----|
| Collector-Emitter Voltage | V_{CE0} | V | $I_C=100\mu A_{dc}$, $I_B=0$ | 25 | |
| Collector-Base Voltage | V_{CBO} | V | $I_C=100\mu A_{dc}$, $I_E=0$ | 40 | |
| Emitter-Base Voltage | V_{EBO} | V | $I_E=100\mu A_{dc}$, $I_C=0$ | 5 | |
| Collector-Emitter cut-off current | I_{CEO} | nAdc | $V_{CE}=20V_{dc}$ | | 100 |
| Collector-Base cut-off current | I_{CBO} | nAdc | $V_{CB}=40V_{dc}$ | | 100 |
| Emitter-Base cut-off current | I_{EBO} | nAdc | $V_{EB}=5.0V_{dc}$ | | 100 |
| DC Current Gain | $h_{FE(1)}$ | | $I_C=100mA$ $V_{CE}=1.0V_{dc}$ | 120 | 350 |
| | $h_{FE(2)}$ | | $I_C=800mA$ $V_{CE}=1.0V_{dc}$ | 40 | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | Vdc | $I_C=800mA$ $I_B=80mA$ | | 0.5 |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | Vdc | $I_C=800mA$ $I_B=80mA$ | | 1.2 |

■Small-signal Characteristics

| Item | Symbol | Unit | Conditions | Min | Max |
|----------------------|--------|------|---|-----|-----|
| Transition frequency | f_T | MHz | $I_C=50mA_{dc}$, $V_{CE}=10V_{dc}$, $f=30MHz$ | 100 | |

■CLASSIFICATION OF HFE (1)

| Rank | L | H |
|-------|---------|---------|
| Range | 120-200 | 200-350 |

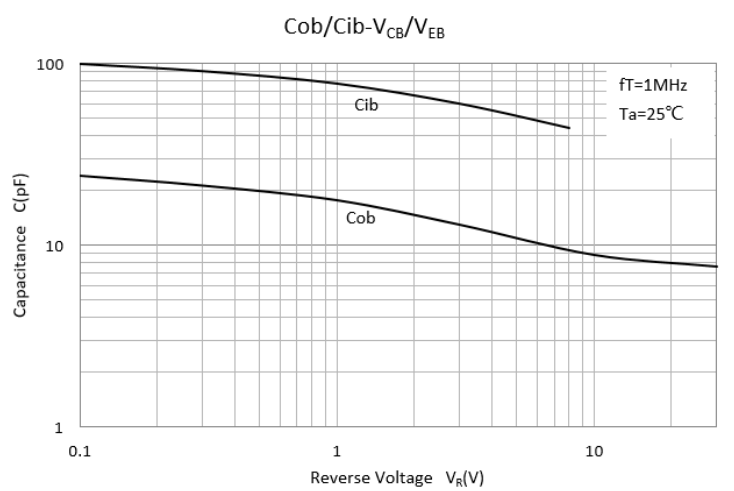
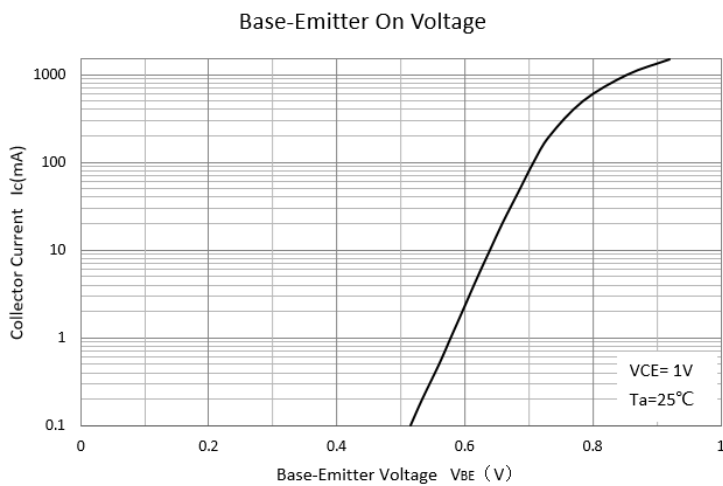
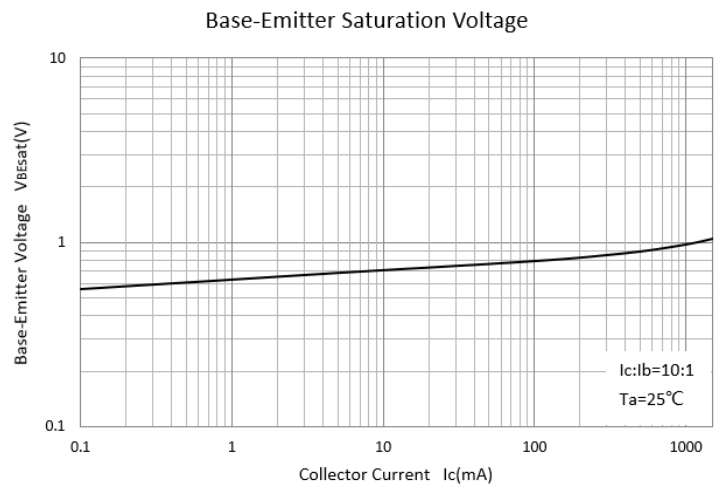
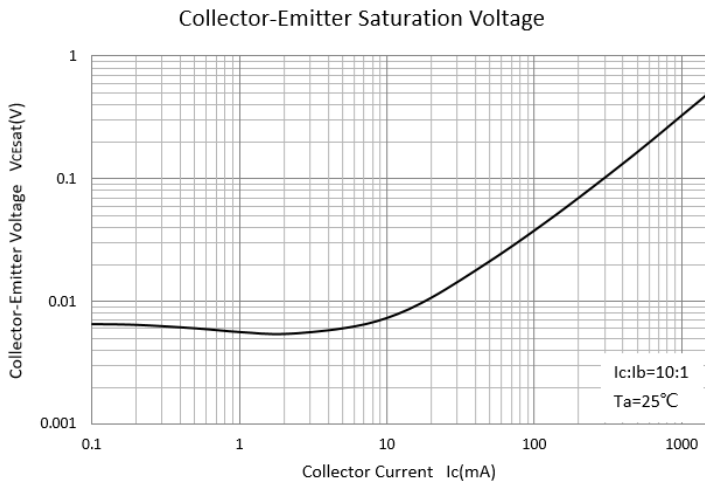
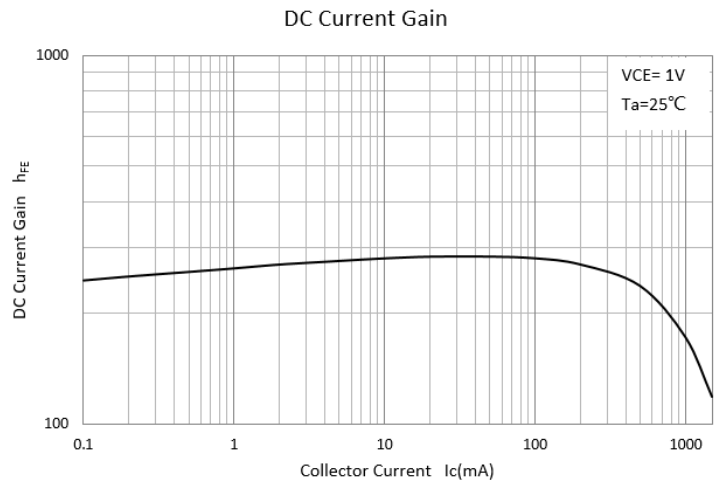
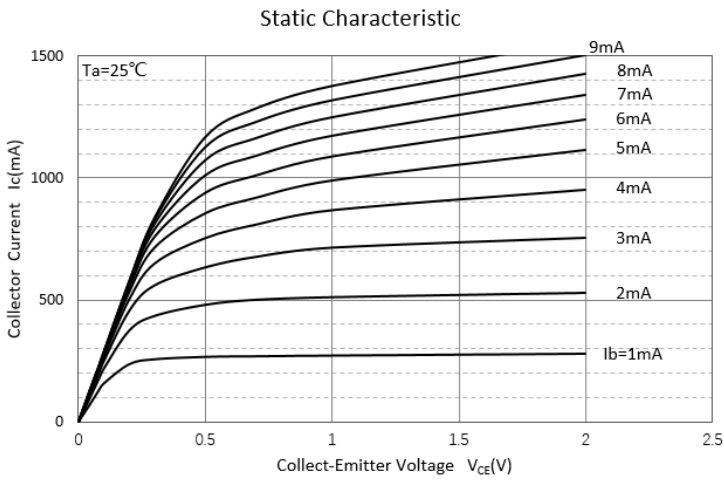
■Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| SS8050 | F2 | Approximate 0.008 | 3000 | 30000 | 120000 | 7" reel |



SS8050-L THRU SS8050-H

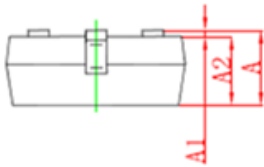
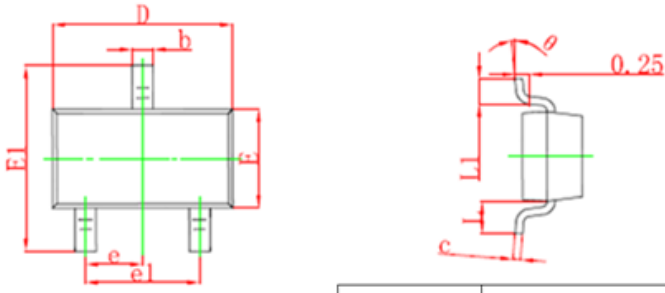
■ Characteristics (Typical)





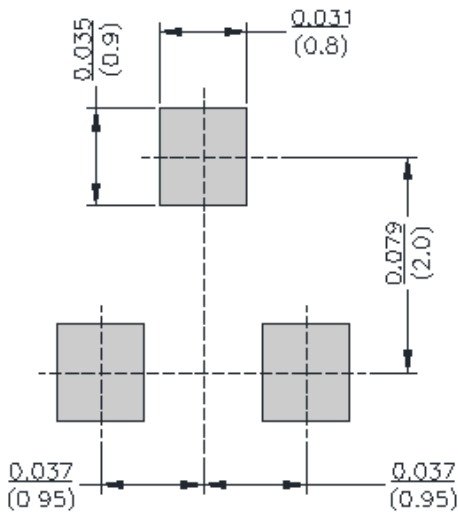
SS8050-L THRU SS8050-H

■SOT-23 Package Outline Dimensions



| 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 | 0.100 | 0.200 | 0.004 | 0.008 |
| 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 | 0.950TYP | | 0.037TYP | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550REF | | 0.022REF | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |

■SOT-23 Soldering Footprint





SS8050-L THRU SS8050-H

Disclaimer

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