



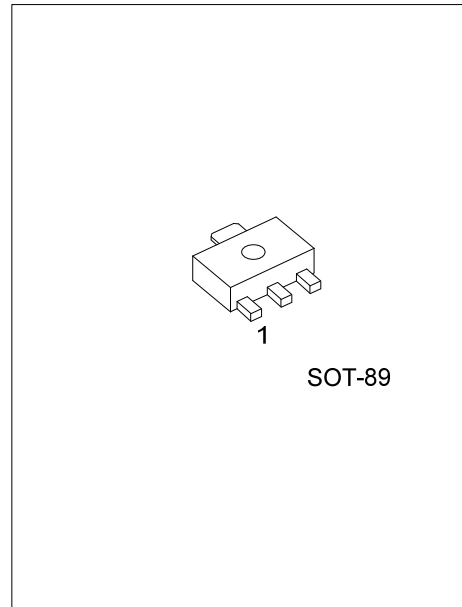
2SB766A

PNP SILICON TRANSISTOR

LOW FREQUENCY OUTPUT AMPLIFICATION

FEATURES

- * Large collector power dissipation P_c .
- * Mini Power type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.



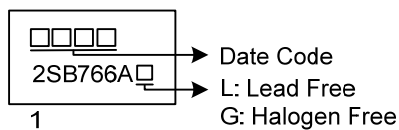
ORDERING INFORMATION

| Order Number | | Package | Pin Assignment | | | Packing |
|------------------|------------------|---------|----------------|---|---|-----------|
| Lead Free | Halogen Free | | 1 | 2 | 3 | |
| 2SB766AL-x-AB3-R | 2SB766AG-x-AB3-R | SOT-89 | B | C | E | Tape Reel |

Note: Pin Assignment: B: Base C: Collector E: Emitter

| | |
|-------------------------|--|
| <p>2SB766AG-x-AB3-R</p> | <p>(1) R: Tape Reel</p> <p>(2) AB3: SOT-89</p> <p>(3) x: refer to Classification of h_{FE}</p> <p>(4) G: Halogen Free and Lead Free, L: Lead Free</p> |
|-------------------------|--|

MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$, unless otherwise specified)

| PARAMETER | SYMBOL | RATING | UNIT |
|--------------------------------------|-----------|------------|------------------|
| Collector-Base Voltage | V_{CBO} | -60 | V |
| Collector-Emitter Voltage | V_{CEO} | -50 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Collector Current | I_C | -1 | A |
| Peak Collector Current | I_{CP} | -1.5 | A |
| Collector Power Dissipation (Note 2) | P_C | 1 | W |
| Junction Temperature | T_J | +150 | $^\circ\text{C}$ |
| Storage Temperature | T_{STG} | -55 ~ +150 | $^\circ\text{C}$ |

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. Printed circuit board: Copper foil area of 1cm² or more, and the board thickness of 1.7mm for the collector portion

■ THERMAL DATA

| PARAMETER | SYMBOL | RATING | UNIT |
|---------------------|---------------|--------|--------------------|
| Junction to Ambient | θ_{JA} | 125 | $^\circ\text{C/W}$ |

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

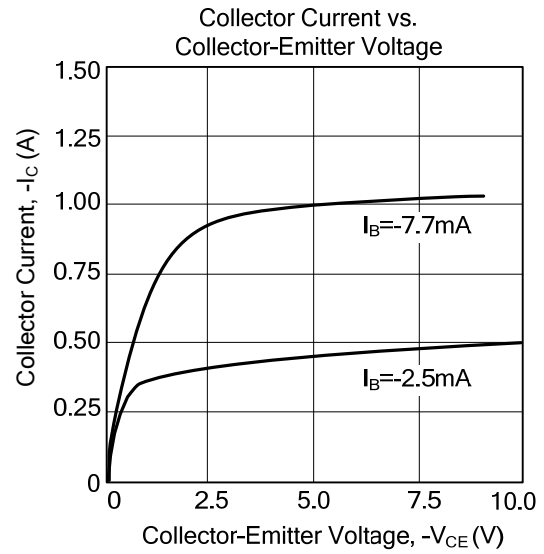
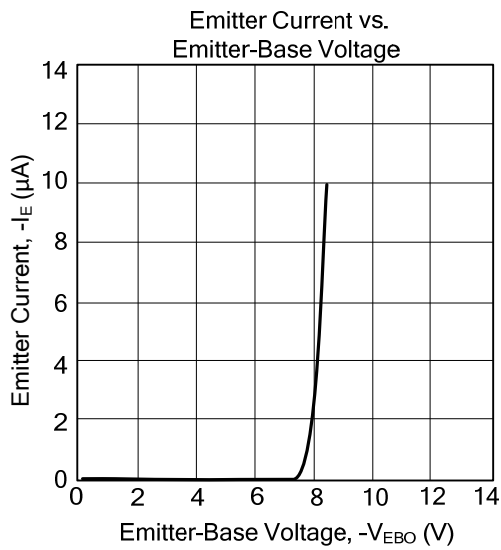
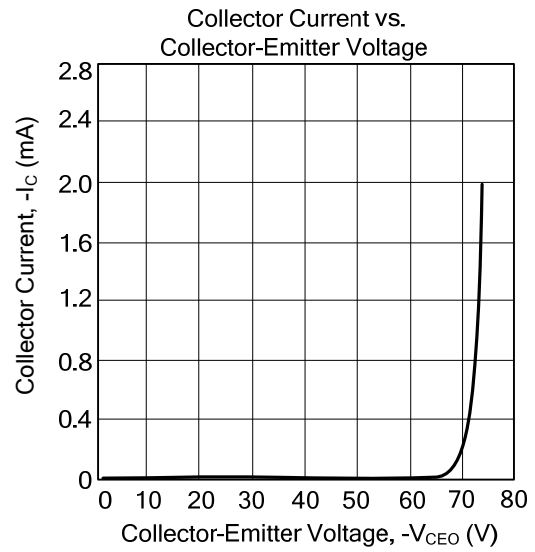
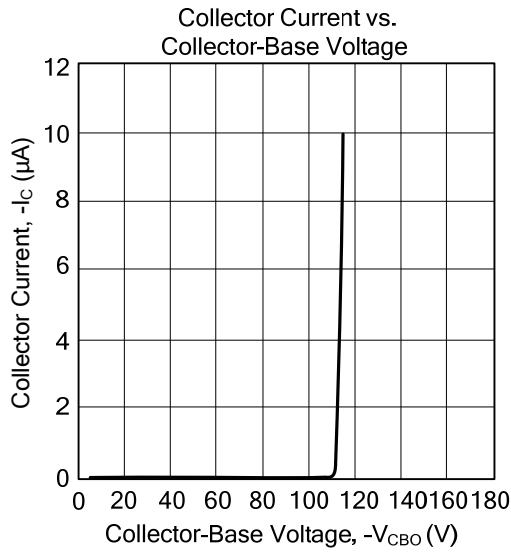
| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|--|-----|-------|------|---------------|
| Collector Base Voltage | V_{CBO} | $I_C = -10\mu\text{A}$, $I_E = 0$ | -60 | | | V |
| Collector Emitter Voltage | V_{CEO} | $I_C = -2\text{mA}$, $I_B = 0$ | -50 | | | V |
| Emitter Base Voltage | V_{EBO} | $I_E = -10\mu\text{A}$, $I_C = 0$ | -5 | | | V |
| Collector Cut-Off Current | I_{CBO} | $V_{CB} = -20\text{V}$, $I_E = 0$ | | | -0.1 | μA |
| DC Current Transfer Ratio | h_{FE1} | $V_{CE} = -10\text{V}$, $I_C = -500\text{mA}$ (Note) | 85 | | 340 | |
| | h_{FE2} | $V_{CE} = -5\text{V}$, $I_C = -1\text{A}$ (Note) | 50 | | | |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C = -500\text{mA}$, $I_B = -50\text{mA}$ (Note) | | -0.2 | -0.4 | V |
| Base-Emitter Saturation Voltage | $V_{BE(SAT)}$ | $I_C = -500\text{mA}$, $I_B = -50\text{mA}$ (Note) | | -0.85 | -1.2 | V |
| Transition Frequency | f_T | $V_{CB} = -10\text{V}$, $I_E = 50\text{mA}$, $f = 200\text{MHz}$ | | 200 | | MHz |
| Output Capacitance | C_{OB} | $V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$ | | 20 | 30 | pF |

Note: Pulse measurement.

■ CLASSIFICATION OF h_{FE1}

| RANK | Q | R | S |
|-------|--------|---------|---------|
| RANGE | 85-170 | 120-240 | 170-340 |

■ TYPICAL CHARACTERISTICS



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