



2SD882

NPN SILICON TRANSISTOR

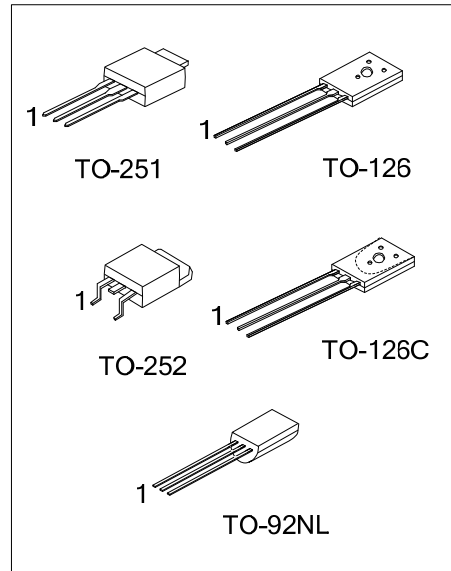
MEDIUM POWER LOW VOLTAGE TRANSISTOR

■ **FEATURES**

- * High current output up to 3A
- * Low saturation voltage
- * Complement to 2SB772

■ **APPLICATIONS**

- * Audio power amplifier
- * DC-DC convertor
- * Voltage regulator



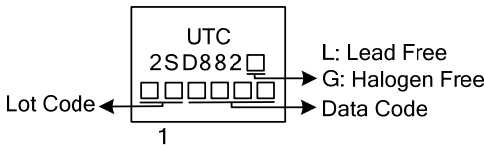
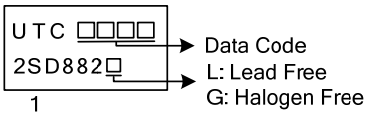
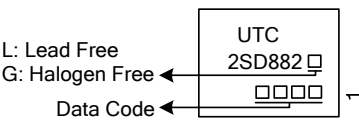
■ **ORDERING INFORMATION**

| Ordering Number | | Package | Pin Assignment | | | Packing |
|-----------------|-----------------|---------|----------------|---|---|-----------|
| Lead Free | Halogen Free | | 1 | 2 | 3 | |
| 2SD882L-x-TM3-T | 2SD882G-x-TM3-T | TO-251 | B | C | E | Tube |
| 2SD882L-x-TN3-R | 2SD882G-x-TN3-R | TO-252 | B | C | E | Tape Reel |
| 2SD882L-x-T60-K | 2SD882G-x-T60-K | TO-126 | E | C | B | Bulk |
| 2SD882L-x-T6C-K | 2SD882G-x-T6C-K | TO-126C | E | C | B | Bulk |
| 2SD882L-x-T6S-K | 2SD882G-x-T6S-K | TO-126S | E | C | B | Bulk |
| 2SD882L-x-T9N-B | 2SD882G-x-T9N-B | TO-92NL | E | C | B | Tape Box |
| 2SD882L-x-T9N-K | 2SD882G-x-T9N-K | TO-92NL | E | C | B | Bulk |

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

| | |
|--|--|
| <p>2SD882L-x-T60-R</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Green Package</p> | <p>(1) B: Tape Box, K: Bulk, T: Tube, R: Tape Reel (2) T60: TO-126, T6C: TO-126C, T6S: TO-126S TM3: TO-251, TN3: TO-252, T9N: TO-92NL (3) x: refer to Classification of h_{FE2} (4) L: Lead Free, G: Halogen Free and Lead Free</p> |
|--|--|

MARKING

| PACKAGE | MARKING |
|------------------------------|--|
| TO-251 TO-252 |  |
| TO-126 TO-126C TO-126S |  |
| TO-92NL |  |

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

| PARAMETER | | SYMBOL | RATINGS | UNIT |
|--|--|-----------|------------|------------------|
| Collector-Base Voltage | | V_{CBO} | 40 | V |
| Collector-Emitter Voltage | | V_{CEO} | 30 | V |
| Emitter-Base Voltage | | V_{EBO} | 7 | V |
| Collector Current | DC | I_C | 3 | A |
| | Pulse | I_{CP} | 7 | A |
| Base Current | | I_B | 0.6 | A |
| Collector Dissipation ($T_A=25^\circ\text{C}$) | TO-251/TO-252 TO-126/TO-126C TO-126S | P_C | 1 | W |
| | TO-92NL | | 0.8 | W |
| Junction Temperature | | T_J | +150 | $^\circ\text{C}$ |
| Storage Temperature | | T_{STG} | -55 ~ +150 | $^\circ\text{C}$ |

Note 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.

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

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|---|-----|-----|------|------|
| Collector-Base Breakdown Voltage | BV_{CBO} | $I_C=100\mu\text{A}$, $I_E=0$ | 40 | | | V |
| Collector-Emitter Breakdown Voltage | BV_{CEO} | $I_C=1\text{mA}$, $I_B=0$ | 30 | | | V |
| Emitter-Base Breakdown Voltage | BV_{EBO} | $I_E=100\mu\text{A}$, $I_C=0$ | 7 | | | V |
| Collector Cut-off Current | I_{CBO} | $V_{CB}=30\text{V}$, $I_E=0$ | | | 1000 | nA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB}=3\text{V}$, $I_C=0$ | | | 1000 | nA |
| DC Current Gain (Note) | h_{FE1} | $V_{CE}=2\text{V}$, $I_C=20\text{mA}$ | 30 | 200 | | |
| | h_{FE2} | $V_{CE}=2\text{V}$, $I_C=1\text{A}$ | 100 | 150 | 400 | |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C=2\text{A}$, $I_B=0.2\text{A}$ | | 0.3 | 0.5 | V |
| Base-Emitter Saturation Voltage | $V_{BE(SAT)}$ | $I_C=2\text{A}$, $I_B=0.2\text{A}$ | | 1.0 | 2.0 | V |
| Current Gain Bandwidth Product | f_T | $V_{CE}=5\text{V}$, $I_C=0.1\text{A}$ | | 80 | | MHz |
| Output Capacitance | C_{ob} | $V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$ | | 45 | | pF |

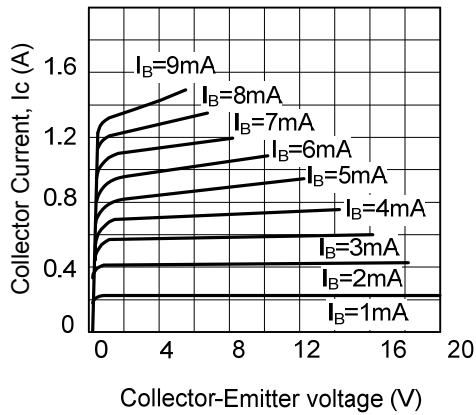
Note: Pulse test: $PW < 300\mu\text{s}$, Duty Cycle $< 2\%$

■ CLASSIFICATION OF h_{FE2}

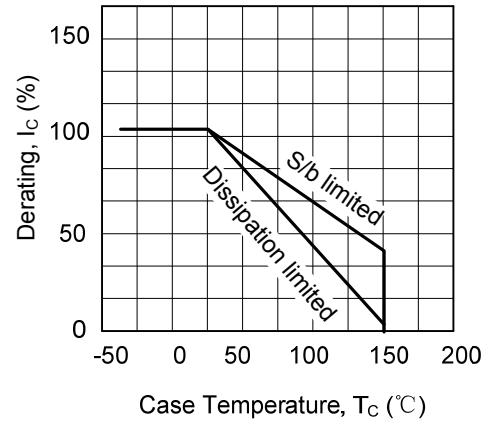
| RANK | Q | P | E |
|-------|---------|---------|---------|
| RANGE | 100-200 | 160-320 | 200-400 |

TYPICAL CHARACTERISTICS

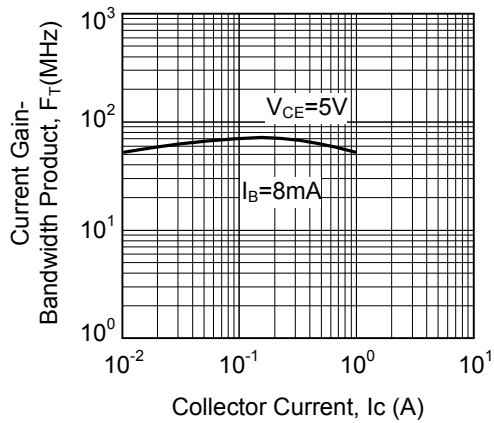
Static Characteristics



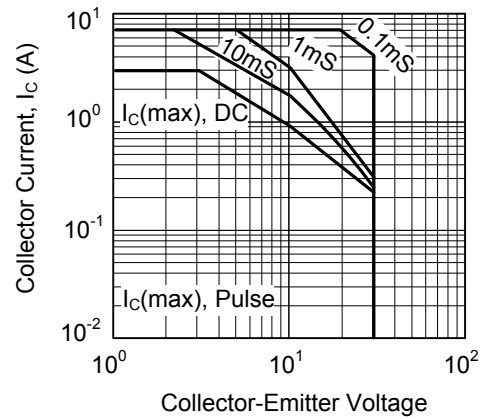
Derating Curve of Safe Operating Areas



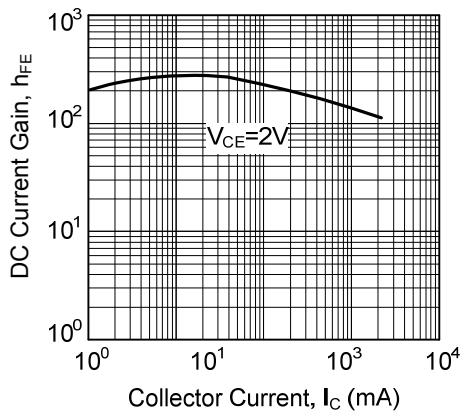
Current Gain-Bandwidth Product



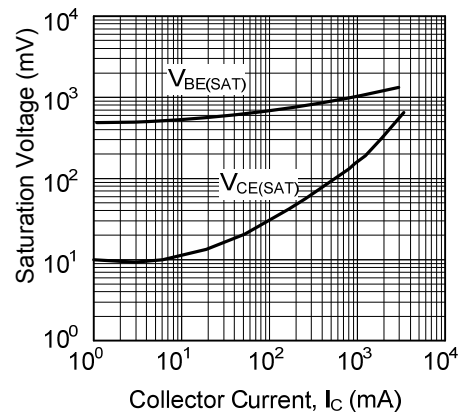
Safe Operating Area



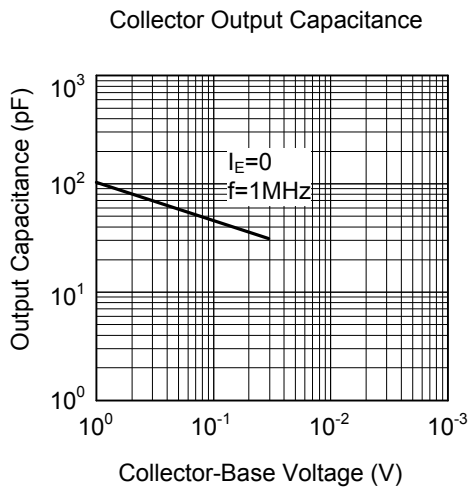
DC Current Gain



Saturation Voltage



■ TYPICAL CHARACTERISTICS(Cont.)



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