

isc Silicon PNP Power Transistor

2SA780

DESCRIPTION

- Collector-Emitter Sustaining Voltage -
: $V_{CEO(SUS)} = -50V(\text{Min})$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

APPLICATIONS

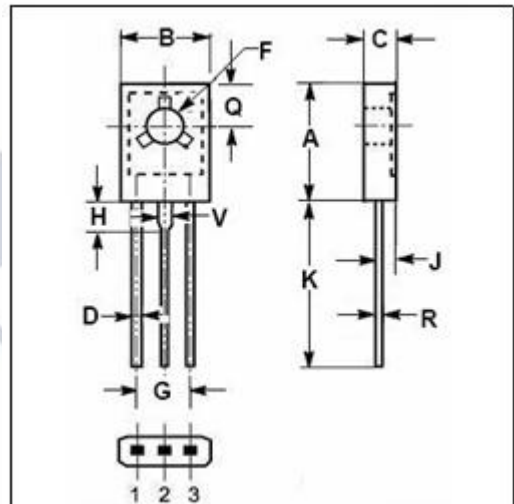
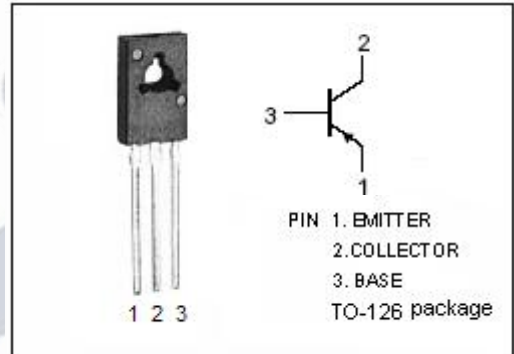
- Designed for use as audio amplifiers and drivers utilizing complementary or quasi complementary circuits.

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|---------|------------------|
| V_{CBO} | Collector-Base Voltage | -50 | V |
| V_{CEO} | Collector-Emitter Voltage | -50 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current-Continuous | -1.0 | A |
| I_B | Base Current-Continuous | -0.2 | A |
| P_C | Collector Power Dissipation @ $T_a=25^\circ\text{C}$ | 1.0 | W |
| | Collector Power Dissipation @ $T_c=25^\circ\text{C}$ | 10 | |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|--------------------------------------|------|--------------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 12.5 | $^\circ\text{C/W}$ |



| DIM | mm | |
|-----|-------|-------|
| | MIN | MAX |
| A | 10.70 | 10.95 |
| B | 7.70 | 7.90 |
| C | 2.60 | 2.80 |
| D | 0.66 | 0.86 |
| F | 3.10 | 3.30 |
| G | 4.48 | 4.68 |
| H | 2.00 | 2.20 |
| J | 1.35 | 1.55 |
| K | 15.30 | 16.30 |
| Q | 3.70 | 3.90 |
| R | 0.40 | 0.60 |
| V | 1.17 | 1.37 |

isc Silicon PNP Power Transistor**2SA780****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|---|-----|------|-------------|---------------|
| $V_{CE(SUS)}$ | Collector-Emitter Sustaining Voltage | $I_C = -10\text{mA}; I_B = 0$ | -50 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -0.5\text{A}; I_B = -50\text{mA}$ | | | -0.5 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C = -0.5\text{A}; V_{CE} = -2\text{V}$ | | | -1.0 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB} = -50\text{V}; I_E = 0$ $V_{CB} = -50\text{V}; I_E = 0, T_C = 125^\circ\text{C}$ | | | -0.1 -10 | μA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB} = -5\text{V}; I_C = 0$ | | | -10 | μA |
| h_{FE-1} | DC Current Gain | $I_C = -5\text{mA}; V_{CE} = -2\text{V}$ | 25 | | | |
| h_{FE-2} | DC Current Gain | $I_C = -0.5\text{A}; V_{CE} = -2\text{V}$ | 25 | | | |
| h_{FE-3} | DC Current Gain | $I_C = -0.15\text{A}; V_{CE} = -2\text{V}$ | 40 | | 250 | |