

**Type 2N2484**  
**Geometry 0220 / 0307**  
**Polarity NPN**  
**Qual Level: Pending**

**Generic Part Number:**  
**2N2484**

**REF: MIL-PRF-19500/376**

**Features:**

[Request Quotation](#)

- General-purpose high gain, low power transistor which operates over a wide temperature range.
- Housed in a [TO-18](#) case.
- Also available in chip form using the 0220 / [0307](#) chip geometry.
- The Min and Max limits shown are per [MIL-PRF-19500/376](#) which Semicoa meets in all cases.



**Maximum Ratings**

$T_C = 25^{\circ}\text{C}$  unless otherwise specified

| Rating                         | Symbol    | Rating      | Unit               |
|--------------------------------|-----------|-------------|--------------------|
| Collector-Emitter Voltage      | $V_{CEO}$ | 60          | V                  |
| Collector-Base Voltage         | $V_{CBO}$ | 60          | V                  |
| Emitter-Base Voltage           | $V_{EBO}$ | 6.0         | V                  |
| Collector Current, Continuous  | $I_C$     | 50          | mA                 |
| Operating Junction Temperature | $T_J$     | -65 to +200 | $^{\circ}\text{C}$ |
| Storage Temperature            | $T_{STG}$ | -65 to +200 | $^{\circ}\text{C}$ |

### Electrical Characteristics

$T_C = 25^\circ\text{C}$  unless otherwise specified

| OFF Characteristics   | Symbol        | Min | Max | Unit          |
|---|---------------|-----|-----|---------------|
| Collector-Base Breakdown Voltage<br>$I_C = 10 \mu\text{A}$  | $V_{(BR)CBO}$ | 60  | --- | V             |
| Collector-Emitter Breakdown Voltage<br>$I_C = 10 \text{mA}$ | $V_{(BR)CEO}$ | 60  | --- | V             |
| Emitter-Base Breakdown Voltage<br>$I_E = 10 \mu\text{A}$    | $V_{(BR)EBO}$ | 6.0 | --- | V             |
| Collector-Base Cutoff Current<br>$V_{CB} = 45 \text{V}$     | $I_{CBO1}$    | --- | 5   | nA            |
| $V_{CB} = 45 \text{V}, T_A = +150^\circ\text{C}$            | $I_{CBO2}$    | --- | 10  | $\mu\text{A}$ |
| Emitter-Base Cutoff Current<br>$V_{EB} = 5.0 \text{V}$      | $I_{EBO}$     | --- | 2   | nA            |
| Collector-Emitter Cutoff Current<br>$V_{CE} = 5 \text{V}$   | $I_{CEO}$     | --- | 2   | nA            |
| $V_{CE} = 45 \text{V}$                                      | $I_{CES}$     | --- | 5   | nA            |

| ON Characteristics  | Symbol        | Min | Max | Unit |
|---|---------------|-----|-----|------|
| <b>DC Current Gain</b>  |               |     |     |      |
| $I_C = 1 \mu\text{A}, V_{CE} = 5 \text{V}$  | $h_{FE1}$     | 45  | --- | ---  |
| $I_C = 10 \mu\text{A}, V_{CE} = 5 \text{V}$   | $h_{FE2}$     | 200 | 500 | ---  |
| $I_C = 100 \mu\text{A}, V_{CE} = 5 \text{V}$  | $h_{FE3}$     | 225 | 675 | ---  |
| $I_C = 500 \mu\text{A}, V_{CE} = 5 \text{V}$  | $h_{FE4}$     | 250 | 800 | ---  |
| $I_C = 1 \text{mA}, V_{CE} = 5 \text{V}$  | $h_{FE5}$     | 250 | 800 | ---  |
| $I_C = 10 \text{mA}, V_{CE} = 5 \text{V}$ (pulsed)  | $h_{FE6}$     | 225 | 800 | ---  |
| $I_C = 10 \mu\text{A}, V_{CE} = 5 \text{V}, T_A = -55^\circ\text{C}$                                  | $h_{FE7}$     | 35  | --- | ---  |
| <b>Collector-Emitter Saturation Voltage Saturated</b><br>$I_C = 150 \text{mA}, I_B = 100 \mu\text{A}$ | $V_{CE(sat)}$ | --- | 0.3 | V dc |
| <b>Base-Emitter Saturation Voltage Non Saturated</b><br>$V_{CE} = 5 \text{V}, I_C = 100 \mu\text{A}$  | $V_{BE}$      | 0.5 | 0.7 | V dc |

| Small Signal Characteristics  | Symbol      | Min | Max                | Unit             |
|---|-------------|-----|--------------------|------------------|
| <i>Magnitude of Short-Circuit</i>   |             |     |                    |                  |
| <i>Forward Current Transfer Ratio</i>   |             |     |                    |                  |
| $V_{CE} = 5\text{ V}, I_C = 50\ \mu\text{A}, f = 5\text{ MHz}$  | $ h_{FE} 1$ | 3.0 | ---                | ---              |
| $V_{CE} = 5\text{ V}, I_C = 500\ \mu\text{A}, f = 30\text{ MHz}$  | $ h_{FE} 2$ | 2.0 | 7.0                | ---              |
| <i>Open Circuit Output Admittance</i>   |             |     |                    |                  |
| $V_{CE} = 5\text{ V}, I_C = 1\text{ mA}, f = 1\text{ kHz}$  | hoe         | --- | 40                 | $\mu\text{ohms}$ |
| <i>Open-Circuit, Reverse Voltage Transfer Ratio</i>   |             |     |                    |                  |
| $V_{CE} = 5\text{ V}, I_C = 1\text{ mA}, f = 1\text{ kHz}$  | $h_{RE}$    | --- | $8 \times 10^{-4}$ | ---              |
| <i>Short-Circuit Input Impedance</i>  |             |     |                    |                  |
| $V_{CE} = 5\text{ V}, I_C = 1\text{ mA}, f = 1\text{ kHz}$  | $h_{IE}$    | 3.5 | 24                 | ohms             |
| <i>Short Circuit Forward Current Transfer Ratio</i>   |             |     |                    |                  |
| $V_{CE} = 5\text{ V}, I_C = 1\text{ mA}, f = 1\text{ kHz}$  | $h_{FE}$    | 250 | 900                | ---              |
| <i>Open Circuit Output Capacitance</i>  |             |     |                    |                  |
| $V_{CB} = 5\text{ V}, I_E = 0, 100\text{ kHz} < f < 1\text{ MHz}$   | $C_{OBO}$   | --- | 5.0                | pF               |
| <i>Input Capacitance, Output Open Circuited</i>   |             |     |                    |                  |
| $V_{EB} = 0.5\text{ V}, I_C = 0, 100\text{ kHz} < f < 1\text{ MHz}$   | $C_{IBO}$   | --- | 6.0                | pF               |
| <i>Noise Figure</i>   |             |     |                    |                  |
| $f = 100\text{ Hz}, V_{CE} = 5\text{ V}, I_C = 10\ \mu\text{A}, R_g = 10\text{ kohm}$                                     | F1          | --- | 7.5                | dB               |
| $f = 1\text{ kHz}, V_{CE} = 5\text{ V}, I_C = 10\ \mu\text{A}, R_g = 10\text{ kohm}$                                      | F2          | --- | 3                  | dB               |
| $f = 10\text{ kHz}, V_{CE} = 5\text{ V}, I_C = 10\ \mu\text{A}, R_g = 10\text{ kohm}$                                     | F3          | --- | 2                  | dB               |
| $f = 10\text{ Hz to } 15.7\text{ kHz}, V_{CE} = 5\text{ V}, I_C = 10\ \mu\text{A}, R_g = 10\text{ kohm (wideband noise)}$ | F4          | --- | 3                  | dB               |