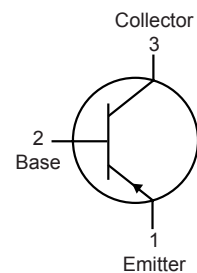


RoHS
Compliant



NPN



Description:

Silicon TO-126, PNP Power Transistor for use in power amplifier and switching excellent safe area limits

Maximum Ratings:

| Characteristic | Symbol | Rating | Unit |
|---|-----------|-------------|---------------------------|
| Collector-Base Voltage | V_{CBO} | 80 | V |
| Collector-Emitter Voltage | V_{CEO} | | |
| Emitter-Base Voltage | V_{EBO} | 5 | |
| Continuous Collector Current | I_C | 4 | A |
| Base Current | I_B | 1 | |
| Total Device Dissipation ($T_C = +25^\circ\text{C}$) Derate Above 25°C | P_D | 40 320 | W mW/ $^\circ\text{C}$ |
| Operating Junction Temperature Range | T_J | -65 to +150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | | |

Bipolar Transistor



Electrical Characteristics ($T_A = +25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min. | Max. | Unit |
|-----------|--------|-----------------|------|------|------|
|-----------|--------|-----------------|------|------|------|

OFF Characteristics

| | | | | | |
|-------------------------------------|---------------|---|----|-----|----|
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = 100\text{mA}, I_B = 0$ (Note 1) | 80 | - | V |
| Collector Cut-Off Current | I_{CEO} | $V_{CE} = 80\text{V}, I_E = 0$ | - | 1 | mA |
| | I_{CEX} | $V_{CE} = 80\text{V}, V_{EB(off)} = 1.5\text{V}, I_E = 1.5\text{V}$ | | 0.1 | |
| | I_{CBO} | $V_{CB} = 80\text{V}, I_E = 0$ | | | |
| Emitter Cut-Off Current | I_{EBO} | $V_{EB} = 5\text{V}, I_C = 0$ | | 1 | |

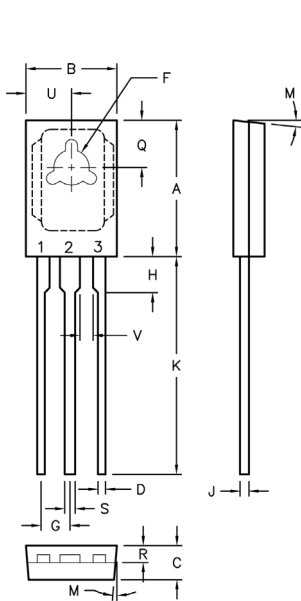
ON Characteristics

| | | | | | |
|---|---------------|---|----|-----|---|
| DC Current Gain (Note 1) | h_{FE} | $V_{CE} = 2\text{V}, I_C = 1.5\text{A}$ | 20 | 80 | - |
| | | $V_{CE} = 2\text{V}, I_C = 4\text{A}$ | 7 | - | |
| Collector - Emitter Saturation Voltage (Note 1) | $V_{CE(sat)}$ | $I_C = 1.5\text{A}, I_B = .15\text{mA}$ | - | 0.6 | V |
| | | $I_C = 4\text{A}, I_B = 1\text{A}$ | | 1.4 | |
| Base - Emitter on Voltage (Note 1) | $V_{BE(on)}$ | $I_C = 1.5\text{A}, V_{CE} = 2\text{V}$ | | 1.2 | |

Small Signal Characteristics

| | | | | | |
|--------------------------------|-------|---|---|---|-----|
| Current Gain-Bandwidth Product | f_T | $V_{CE} = 10\text{V}, I_C = 1\text{A}, f = 1\text{MHz}$ | 2 | - | MHz |
|--------------------------------|-------|---|---|---|-----|

Note 1 : Pulse Test : Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$



| Dimensions | Min. | Max. |
|------------|--------|-------|
| A | 10.8 | 11.05 |
| B | 7.49 | 7.75 |
| C | 2.41 | 2.67 |
| D | 0.51 | 0.66 |
| F | 2.92 | 3.18 |
| G | 2.31 | 2.46 |
| H | 1.27 | 2.41 |
| J | 0.38 | 0.64 |
| K | 15.11 | 16.64 |
| M | 3° TYP | |
| Q | 3.76 | 4.01 |
| R | 1.14 | 1.4 |
| S | 0.64 | 0.89 |
| U | 3.68 | 3.94 |
| V | 1.02 | - |

Dimensions : Millimetres

Part Number Table

| Description | Part Number |
|----------------------------------|-------------|
| Transistor, PNP, 4A, 80V, TO-126 | 2N5195 |

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