

2N6428/6428A

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Amplifier Transistor

- Collector-Emitter Voltage: $V_{CE0} = 50V$
- Collector Dissipation: $P_C (\text{max}) = 625mW$



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-----------|---------------------------|-----------|------------------|
| V_{CBO} | Collector-Base Voltage | 60 | V |
| V_{CEO} | Collector-Emitter Voltage | 50 | V |
| V_{EBO} | Emitter-Base Voltage | 6 | V |
| I_C | Collector Current | 200 | mA |
| P_C | Collector Dissipation | 625 | mW |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -55 ~ 150 | $^\circ\text{C}$ |

• Refer to 2N5088 for graphs

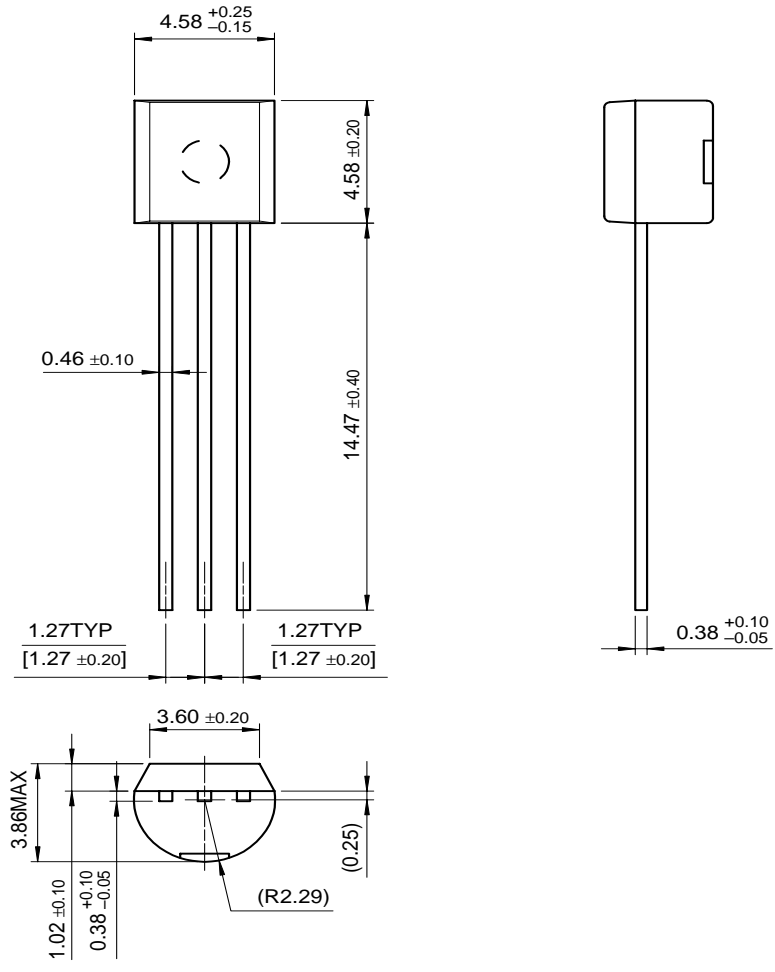
Electrical Characteristics $T_a = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|-----------------------|--|--|--------------------------|------|--|--|
| BV_{CBO} | Collector-Base Breakdown Voltage | $I_C = 100\mu\text{A}, I_E = 0$ | 60 | | | V |
| BV_{CEO} | * Collector-Emitter Breakdown Voltage | $I_C = 1\text{mA}, I_B = 0$ | 50 | | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CB} = 30V, I_E = 0$ | | | 10 | nA |
| I_{CEO} | Collector Cut-off Current | $V_{CE} = 30V, I_B = 0$ | | | 25 | nA |
| I_{EBO} | Emitter Cut-off Current | $V_{BE} = 5V, I_C = 0$ | | | 10 | nA |
| h_{FE} | * DC Current Gain | $V_{CE} = 5V, I_C = 10\mu\text{A}$ $V_{CE} = 5V, I_C = 100\mu\text{A}$ $V_{CE} = 5V, I_C = 1\text{mA}$ $V_{CE} = 5V, I_B = 10\text{mA}$ | 250 250 250 250 | | 650 | |
| $V_{CE} (\text{sat})$ | * Collector-Emitter Saturation Voltage | $I_C = 10\text{mA}, I_B = 0.5\text{mA}$ $I_C = 100\text{mA}, I_B = 5\text{mA}$ | | | 0.2 0.6 | V V |
| $V_{BE} (\text{on})$ | Base-Emitter On Voltage | $I_C = 1\text{mA}, V_{CE} = 5V$ | 0.56 | | 0.66 | V |
| C_{ob} | Output Capacitance | $V_{CB} = 10V, I_E = 0, f = 1\text{MHz}$ | | | 3 | pF |
| f_T | Current Gain Bandwidth Product | $V_{CE} = 5V, I_C = 1\text{mA}, f = 100\text{MHz}$ | 100 | | 700 | MHz |
| NF/NV | Noise Figure/Noise Voltage Level | $V_{CE} = 5V, I_C = 100\mu\text{A}$ (1) $R_S = 10K\Omega, B_W = 1\text{Hz}$ $f = 100\text{Hz}$ (2) $R_S = 50K\Omega, B_W = 15.7\text{Hz}$ $f = 10\text{Hz} - 10\text{KHz}$ (3) $R_S = 500\Omega, B_W = 1\text{Hz}$ $f = 10\text{Hz}$ | | | 3/18.1 2/16.2 6/5.7 4/4.6 3.5/4.3 3/4.1 | dB/nV dB/nV dB/nV dB/nV dB/nV dB/nV |

Package Dimensions

TO-92

2N6428/6428A



Dimensions in Millimeters

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|----------------------|---------------|-------------|
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