

**PNP Epitaxial Planar Transistor**

# BF421A3

**Description**

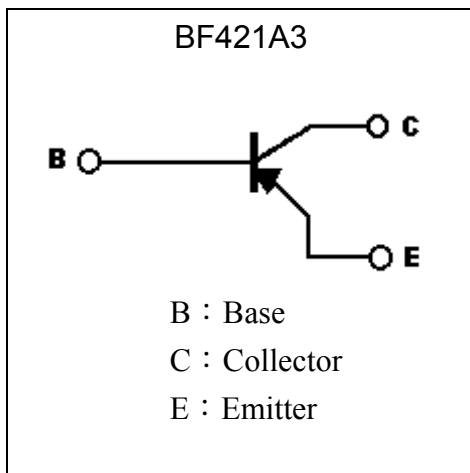
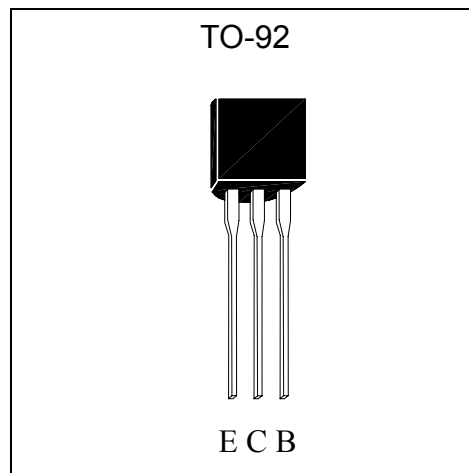
- PNP high voltage transistors in a TO-92 plastic package.
- Complementary to BF420A3.

**Features**

- Low feedback capacitance.

**Applications**

- Class-B video output stages in color television and professional monitor equipment.

**Symbol**

**Outline**

**Absolute Maximum Ratings** (Ta=25°C)

| Parameter                     | Symbol           | Conditions                    | Min | Max  | Unit |
|-------------------------------|------------------|-------------------------------|-----|------|------|
| Collector-Base Voltage        | V <sub>CB0</sub> | Open emitter                  | -   | -300 | V    |
| Collector-Emitter Voltage     | V <sub>CEO</sub> | Open base                     | -   | -300 | V    |
| Emitter-Base Voltage          | V <sub>EBO</sub> | Open collector                | -   | -5   | V    |
| Collector Current (DC)        | I <sub>C</sub>   |                               | -   | -50  | mA   |
| Peak Collector Current        | I <sub>CM</sub>  |                               | -   | -100 | mA   |
| Peak Base Current             | I <sub>BM</sub>  |                               | -   | -50  | mA   |
| Power Dissipation             | P <sub>d</sub>   | T <sub>amb</sub> ≤ 25°C, Note | -   | 830  | mW   |
| Junction Temperature          | T <sub>j</sub>   |                               | -   | 150  | °C   |
| Storage Temperature           | T <sub>stg</sub> |                               | -65 | +150 | °C   |
| Operating Ambient Temperature | T <sub>amb</sub> |                               | -65 | +150 | °C   |

Note : Transistor mounted on a printed-circuit board.

**Characteristics (Ta=25°C)**

| Symbol                | Min. | Typ. | Max. | Unit | Test Conditions  |
|-----------------------|------|------|------|------|--|
| BV <sub>CB0</sub>     | -300 | -    | -    | V    | I <sub>C</sub> =-100μA, I <sub>E</sub> =0                        |
| BV <sub>CEO</sub>     | -300 | -    | -    | V    | I <sub>C</sub> =-1mA, I <sub>B</sub> =0                          |
| BV <sub>EBO</sub>     | -5   | -    | -    | V    | I <sub>E</sub> =-10μA, I <sub>C</sub> =0                         |
| I <sub>CB0</sub>      | -    | -    | -10  | nA   | V <sub>CB</sub> =-200V, I <sub>E</sub> =0                        |
|                       | -    | -    | -10  | μA   | I <sub>E</sub> =0, V <sub>CB</sub> =-200V, T <sub>j</sub> =150°C |
| I <sub>EBO</sub>      | -    | -    | -50  | nA   | V <sub>EB</sub> =-5V, I <sub>C</sub> =0                          |
| *V <sub>CE(sat)</sub> | -    | -    | -0.6 | V    | I <sub>C</sub> =-30mA, I <sub>B</sub> =-5mA                      |
| *h <sub>FE</sub>      | 50   | -    | -    | -    | V <sub>CE</sub> =-20V, I <sub>C</sub> =-25mA                     |
| Cre                   | -    | -    | 1.6  | pF   | I <sub>C</sub> =i <sub>C</sub> =0, V <sub>CE</sub> =-30V, f=1MHz |
| f <sub>T</sub>        | 60   | -    | -    | MHz  | V <sub>CE</sub> =-10V, I <sub>C</sub> =-10mA, f=100MHz           |

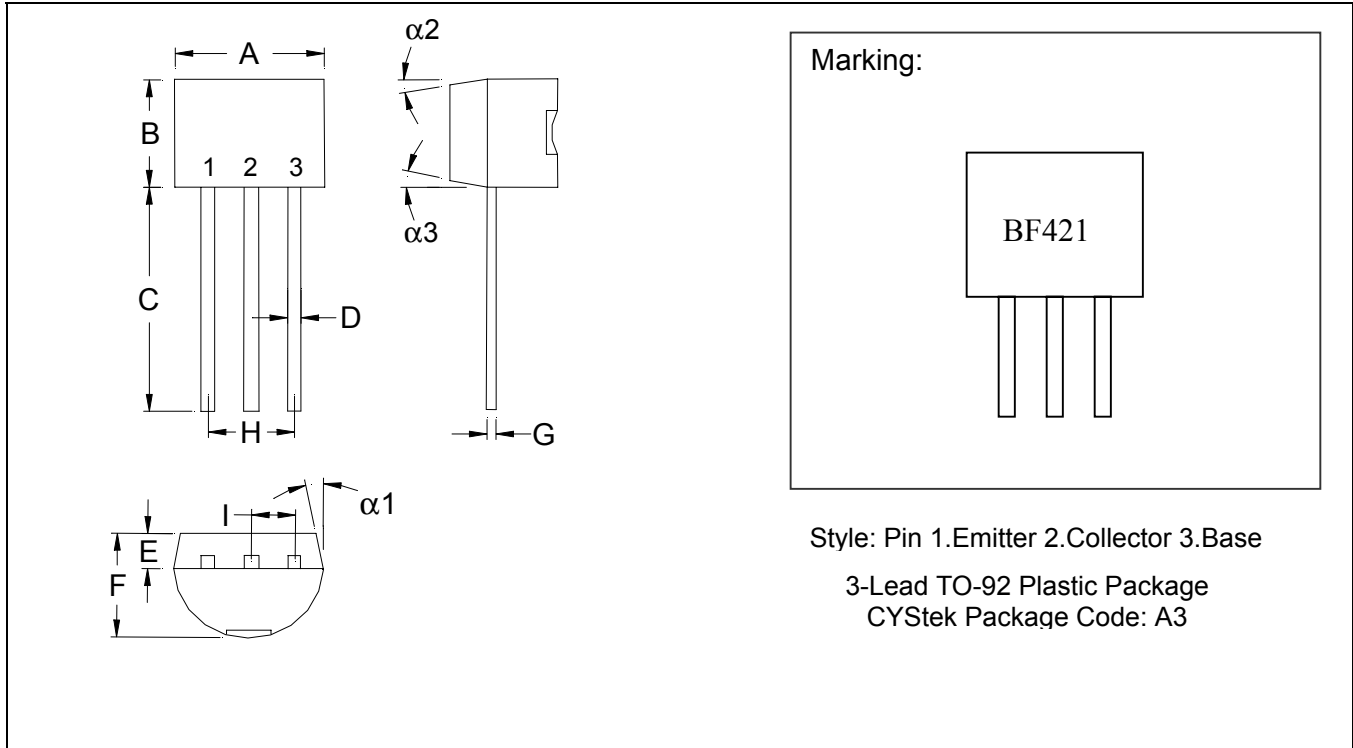
\*Pulse Test: Pulse Width ≤380μs, Duty Cycle≤2%

**Thermal Characteristics**

| Symbol            | Parameter                                   | Conditions | Value | Unit |
|-------------------|---|------------|-------|------|
| R <sub>thJA</sub> | Thermal resistance from junction to ambient | Note       | 150   | K/W  |

Note : Transistor mounted on a printed-circuit board.

**TO-92 Dimension**



\*: Typical

| DIM | Inches |         | Millimeters |       | DIM        | Inches |         | Millimeters |       |
|-----|--------|---------|-------------|-------|------------|--------|---------|-------------|-------|
|     | Min.   | Max.    | Min.        | Max.  |            | Min.   | Max.    | Min.        | Max.  |
| A   | 0.1704 | 0.1902  | 4.33        | 4.83  | G          | 0.0142 | 0.0220  | 0.36        | 0.56  |
| B   | 0.1704 | 0.1902  | 4.33        | 4.83  | H          | -      | *0.1000 | -           | *2.54 |
| C   | 0.5000 | -       | 12.70       | -     | I          | -      | *0.0500 | -           | *1.27 |
| D   | 0.0142 | 0.0220  | 0.36        | 0.56  | $\alpha 1$ | -      | *5°     | -           | *5°   |
| E   | -      | *0.0500 | -           | *1.27 | $\alpha 2$ | -      | *2°     | -           | *2°   |
| F   | 0.1323 | 0.1480  | 3.36        | 3.76  | $\alpha 3$ | -      | *2°     | -           | *2°   |

Notes: 1. Controlling dimension: millimeters.  
 2. Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 3. If there is any question with packing specification or packing method, please contact your local CYStek sales office.

**Material:**

- Lead: 42 Alloy ; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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