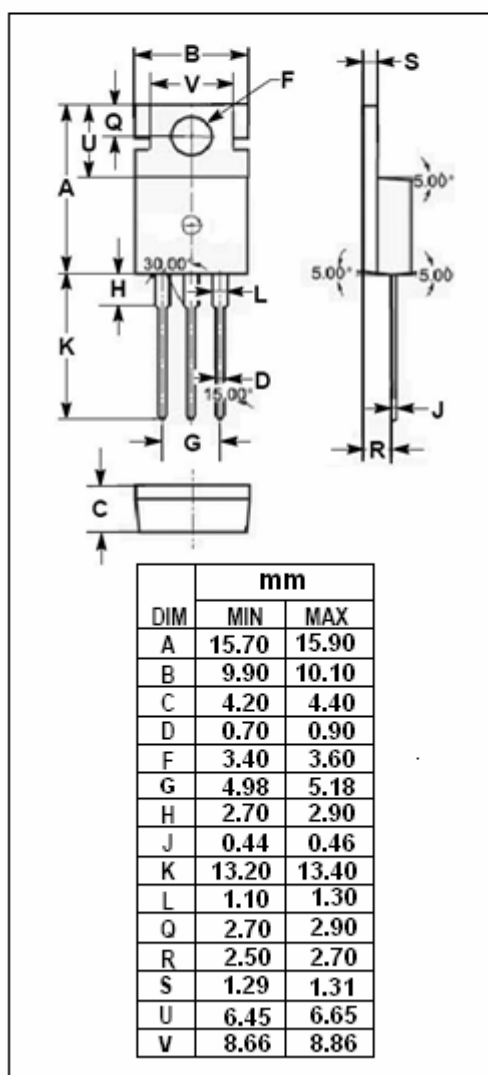
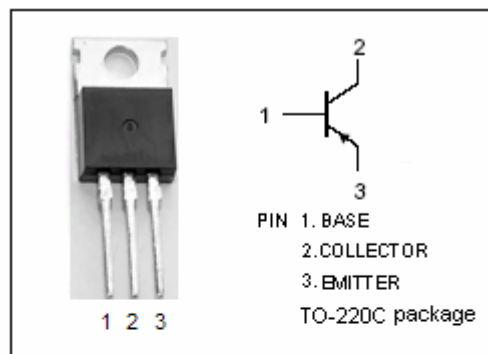


## TIP42/42A/42B/42C

- DC Current Gain  $-h_{FE} = 30(\text{Min}) @ I_C = -0.3\text{A}$
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(\text{SUS})} = -40\text{V}(\text{Min})$ - TIP42;  $-60\text{V}(\text{Min})$ - TIP42A  
 $-80\text{V}(\text{Min})$ - TIP42B;  $-100\text{V}(\text{Min})$ - TIP42C
- Complement to Type TIP41/41A/41B/41C

- Designed for use in general purpose amplifier and switching applications

| SYMBOL           | PARAMETER                                          |        | VALUE   | UNIT |
|------------------|----------------------------------------------------|--------|---------|------|
| V <sub>CBO</sub> | Collector-Base Voltage                             | TIP42  | -40     | V    |
|                  |                                                    | TIP42A | -60     |      |
|                  |                                                    | TIP42B | -80     |      |
|                  |                                                    | TIP42C | -100    |      |
| V <sub>CEO</sub> | Collector-Emitter Voltage                          | TIP42  | -40     | V    |
|                  |                                                    | TIP42A | -60     |      |
|                  |                                                    | TIP42B | -80     |      |
|                  |                                                    | TIP42C | -100    |      |
| V <sub>EBO</sub> | Emitter-Base Voltage                               |        | -5      | V    |
| I <sub>C</sub>   | Collector Current-Continuous                       |        | -6      | A    |
| I <sub>CM</sub>  | Collector Current-Peak                             |        | -10     | A    |
| I <sub>B</sub>   | Base Current                                       |        | -2      | A    |
| P <sub>C</sub>   | Collector Power Dissipation<br>T <sub>c</sub> =25℃ |        | 65      | W    |
|                  | Collector Power Dissipation<br>T <sub>a</sub> =25℃ |        | 2       |      |
| T <sub>j</sub>   | Junction Temperature                               |        | 150     | ℃    |
| T <sub>stg</sub> | Storage Temperature Range                          |        | -65~150 | ℃    |



## isc Silicon PNP Power Transistors

## TIP42/42A/42B/42C

## ELECTRICAL CHARACTERISTICS

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

| SYMBOL        | PARAMETER                            |            | CONDITIONS                                 | MIN  | MAX  | UNIT |
|---------------|--------------------------------------|------------|--------------------------------------------|------|------|------|
| $V_{CE(SUS)}$ | Collector-Emitter Sustaining Voltage | TIP42      | $I_C = -30\text{mA}; I_B = 0$              | -40  |      | V    |
|               |                                      | TIP42A     |                                            | -60  |      |      |
|               |                                      | TIP42B     |                                            | -80  |      |      |
|               |                                      | TIP42C     |                                            | -100 |      |      |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage |            | $I_C = -6\text{A}; I_B = -0.6\text{A}$     |      | -1.5 | V    |
| $V_{BE(on)}$  | Base-Emitter On Voltage              |            | $I_C = -6\text{A}; V_{CE} = -4\text{V}$    |      | -2.0 | V    |
| $I_{CES}$     | Collector Cutoff Current             | TIP42      | $V_{CE} = -40\text{V}; V_{EB} = 0$         |      | -0.4 | mA   |
|               |                                      | TIP42A     | $V_{CE} = -60\text{V}; V_{EB} = 0$         |      |      |      |
|               |                                      | TIP42B     | $V_{CE} = -80\text{V}; V_{EB} = 0$         |      |      |      |
|               |                                      | TIP42C     | $V_{CE} = -100\text{V}; V_{EB} = 0$        |      |      |      |
| $I_{CEO}$     | Collector Cutoff Current             | TIP42/42A  | $V_{CE} = -30\text{V}; I_B = 0$            |      | -0.7 | mA   |
|               |                                      | TIP42B/42C | $V_{CE} = -60\text{V}; I_B = 0$            |      |      |      |
| $I_{EBO}$     | Emitter Cutoff Current               |            | $V_{EB} = -5\text{V}; I_C = 0$             |      | -1.0 | mA   |
| $h_{FE-1}$    | DC Current Gain                      |            | $I_C = -0.3\text{A}; V_{CE} = -4\text{V}$  | 30   |      |      |
| $h_{FE-2}$    | DC Current Gain                      |            | $I_C = -3\text{A}; V_{CE} = -4\text{V}$    | 15   | 75   |      |
| $f_T$         | Current-Gain—Bandwidth Product       |            | $I_C = -0.5\text{A}; V_{CE} = -10\text{V}$ | 3    |      | MHz  |

isc Silicon PNP Power Transistors

TIP42/42A/42B/42C

