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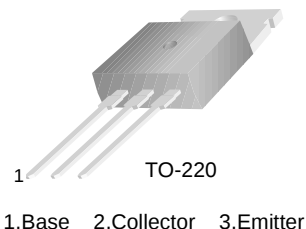
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# BD240/A/B/C

## Medium Power Linear and Switching Applications

- Complement to BD239/A/B/C respectively



## PNP Epitaxial Silicon Transistor

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

| Symbol    | Parameter                                        | Value      | Units            |
|-----------|--------------------------------------------------|------------|------------------|
| $V_{CEO}$ | Collector-Base Voltage                           |            |                  |
|           | : BD240                                          | - 45       | V                |
|           | : BD240A                                         | - 60       | V                |
|           | : BD240B                                         | - 80       | V                |
|           | : BD240C                                         | - 100      | V                |
| $V_{CER}$ | Collector-Emitter Voltage                        |            |                  |
|           | : BD240                                          | - 55       | V                |
|           | : BD240A                                         | - 70       | V                |
|           | : BD240B                                         | - 90       | V                |
|           | : BD240C                                         | - 115      | V                |
| $V_{EBO}$ | Emitter-Base Voltage                             | - 5        | V                |
| $I_C$     | Collector Current (DC)                           | - 2        | A                |
| $I_{CP}$  | *Collector Current (Pulse)                       | - 4        | A                |
| $I_B$     | Base Current                                     | - 0.6      | A                |
| $P_C$     | Collector Dissipation ( $T_C=25^\circ\text{C}$ ) | 30         | W                |
| $T_J$     | Junction Temperature                             | 150        | $^\circ\text{C}$ |
| $T_{STG}$ | Storage Temperature                              | - 65 ~ 150 | $^\circ\text{C}$ |

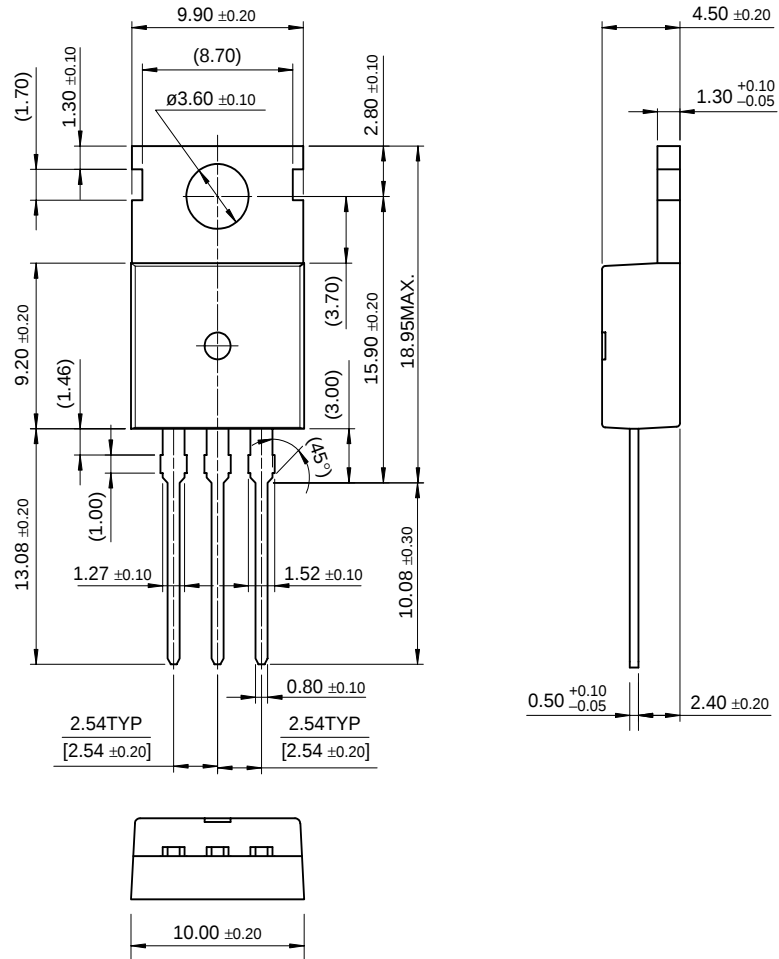
### Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

| Symbol         | Parameter                              | Test Condition                              | Min.  | Typ. | Max.  | Units |
|----------------|----------------------------------------|---------------------------------------------|-------|------|-------|-------|
| $V_{CEO(sus)}$ | * Collector-Emitter Sustaining Voltage |                                             |       |      |       |       |
|                | : BD240                                | $I_C = - 30\text{mA}, I_B = 0$              | - 45  |      |       | V     |
|                | : BD240A                               |                                             | - 60  |      |       | V     |
|                | : BD240B                               |                                             | - 80  |      |       | V     |
|                | : BD240C                               |                                             | - 100 |      |       | V     |
| $I_{CEO}$      | Collector Cut-off Current : BD240/A    | $V_{CE} = - 30\text{V}, I_B = 0$            |       |      | - 0.3 | mA    |
|                | : BD240B/C                             | $V_{CE} = - 60\text{V}, I_B = 0$            |       |      | - 0.3 | mA    |
| $I_{CES}$      | Collector Cut-off Current : BD240      | $V_{CE} = - 45\text{V}, V_{BE} = 0$         |       |      | - 0.2 | mA    |
|                | : BD240A                               | $V_{CE} = - 60\text{V}, V_{BE} = 0$         |       |      | - 0.2 | mA    |
|                | : BD240B                               | $V_{CE} = - 80\text{V}, V_{BE} = 0$         |       |      | - 0.2 | mA    |
|                | : BD240C                               | $V_{CE} = - 100\text{V}, V_{BE} = 0$        |       |      | - 0.2 | mA    |
| $I_{EBO}$      | Emitter Cut-off Current                | $V_{EB} = - 5\text{V}, I_C = 0$             |       |      | - 1   | mA    |
| $h_{FE}$       | * DC Current Gain                      | $V_{CE} = - 4\text{V}, I_C = - 0.2\text{A}$ | 40    |      |       |       |
|                |                                        | $V_{CE} = - 4\text{V}, I_C = - 1\text{A}$   | 15    |      |       |       |
| $V_{CE(sat)}$  | * Collector-Emitter Saturation Voltage | $I_C = - 1\text{A}, I_B = - 0.2\text{A}$    |       |      | - 0.7 | V     |
| $V_{BE(on)}$   | * Base-Emitter ON Voltage              | $V_{CE} = - 4\text{V}, I_C = - 1\text{A}$   |       |      | - 1.3 | V     |

\* Pulse Test: PW=350μs, duty Cycle≤2.0% Pulsed

# Package Dimensions

## TO-220



Dimensions in Millimeters

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Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А