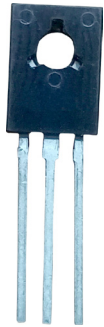


# Single Bipolar Transistor multicomp<sup>PRO</sup>



RoHS  
Compliant

## Absolute Maximum Ratings

| Description                                    | Symbol                            | BF469        | BF471 | Unit |
|------------------------------------------------|-----------------------------------|--------------|-------|------|
| Collector Base Voltage                         | V <sub>CBO</sub>                  | 250          | 300   | V    |
| Collector Emitter Voltage                      | V <sub>CEO</sub>                  |              |       |      |
| Collector -Emitter Voltage(RBE<2.7kW)          | V <sub>CER</sub>                  |              |       |      |
| Emitter Base Voltage                           | I <sub>c</sub>                    | 5            |       | MA   |
| Collector Current                              | I <sub>c</sub>                    | 30           |       |      |
| Collector Peak Current                         | I <sub>CM</sub>                   | 100          |       |      |
| Collector Peak Current                         | P <sub>tot</sub>                  | 2            |       | W    |
| Operating & Storage Junction Temperature Range | T <sub>j</sub> , T <sub>stg</sub> | - 65 to +150 |       | °C   |

## Thermal Resistance

| Description                                                              | Symbol        | Value | Unit |
|--------------------------------------------------------------------------|---------------|-------|------|
| Junction to Ambient/<4mm copper cooling area<10x10mm with 35mm thickness | $R_{th(j-a)}$ | 100   | K/W  |
| Junction to Case                                                         | $R_{th(j-c)}$ | 20    |      |

## Electrical Characteristics ( $T_a = 25^{\circ}C$ Unless otherwise specified)

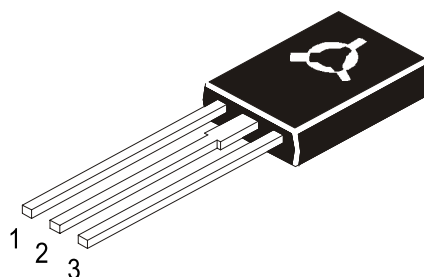
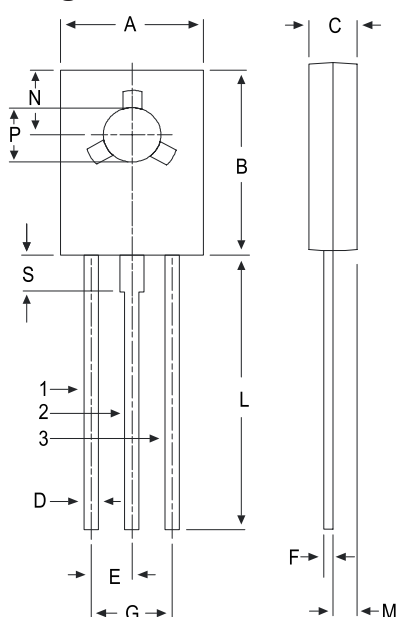
| Description               | Symbol    | Test Condition                                                                         | Min.    | Max.     | Unit          |
|---------------------------|-----------|----------------------------------------------------------------------------------------|---------|----------|---------------|
| Collector Cut-off Current | $I_{CBO}$ | $V_{CB}=200V, I_E=0$ BF469                                                             |         | 100      | nA            |
| Collector Cut-off Current | $I_{CER}$ | $V_{CE}=250V, R_{BE}=2.7kW$ BF471<br>$V_{CE}=200V, R_{BE}=2.7kW$<br>$T_j=150^{\circ}C$ |         | 50<br>10 | nA<br>$\mu A$ |
| Emitter Cut-off Current   | $I_{EBO}$ | $V_{EB}=5V, I_c=0$                                                                     |         | 10       | $\mu A$       |
| Collector -Base Voltage   | $V_{CBO}$ | $I_c = 10\mu A, I_E = 0$ BF469/ BF471                                                  | 250/300 |          | V             |
| Collector Emitter Voltage | $V_{CEO}$ | $I_c=1mA, I_B=0$ BF469                                                                 | 250     | 1.2      |               |
| Collector Emitter Voltage | $V_{CER}$ | $I_c=1\mu A, R_{BE}=2.7k\Omega$ BF471                                                  | 300     |          |               |
| Emitter Base Voltage      | $V_{EBO}$ | $I_E=10\mu A, I_c=0$                                                                   | 5       |          |               |
| DC Current Gain           | $h_{FE}$  | $I_c=25mA, V_{CE}=20V$                                                                 | 50      |          |               |

# Single Bipolar Transistor multicomp<sup>PRO</sup>

## Electrical Characteristics (Tc=25°C Unless Specified Otherwise)

| Dynamic Characteristics |                                                            |      |      |      |
|-------------------------|------------------------------------------------------------|------|------|------|
| Description             | Symbol Test Condition                                      | Min. | Max. | Unit |
| Gain Bandwidth Product  | $f_T$ $I_C=10\text{mA}$ , $V_{CE}=10\text{V}$              | 60   | --   | MHz  |
| Feedback Capacitance    | $C_{re}$ $I_C=0$ , $V_{CE}=30\text{V}$ , $f=0.5\text{MHz}$ | --   | 1.8  | pF   |

## Diagram



### Pin Configuration

1. Emitter
2. Collector
3. Base

| DIM | MIN       | MAX  |
|-----|-----------|------|
| A   | 7.4       | 7.8  |
| B   | 10.5      | 10.8 |
| C   | 2.4       | 2.7  |
| D   | 0.7       | 0.9  |
| E   | 2.25 TYP. |      |
| F   | 0.49      | 0.75 |
| G   | 4.5 TYP.  |      |
| L   | 15.7 TYP. |      |
| M   | 1.27 TYP. |      |
| N   | 3.75 TYP. |      |
| P   | 3         | 3.2  |
| S   | 2.5 TYP.  |      |

## Part Number Table

| Description                                            | Part Number |
|--------------------------------------------------------|-------------|
| Single Bipolar Transistor, NPN, 250V, 30mA, 2W, TO-126 | BF469       |
| Single Bipolar Transistor, NPN, 300V, 30mA, 2W, TO-126 | BF471       |

Dimensions : Millimetres

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