



## TO-18 Plastic-Encapsulate Transistors

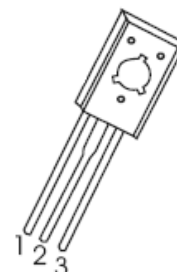
### 2SC1162 TRANSISTOR (NPN)

#### FEATURES

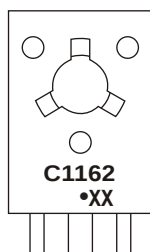
- Low Frequency Power Amplifier

#### TO-18

1. EMITTER
2. COLLECTOR
3. BASE

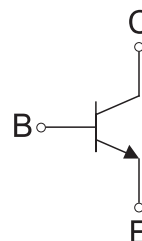


#### MARKING



C1162=Device code  
Solid dot= Green molding compound device, if none, the normal device  
XX=Code

#### Equivalent Circuit



#### ORDERING INFORMATION

| Part Number | Package | Packing Method | Pack Quantity |
|-------------|---------|----------------|---------------|
| 2SC1162     | TO-18   | Bulk           | 200pcs/Bag    |
| 2SC1162-TU  | TO-18   | Tube           | 60pcs/Tube    |

#### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol         | Parameter                                        | Value   | Unit               |
|----------------|--------------------------------------------------|---------|--------------------|
| $V_{CE0}$      | Collector-Emitter Voltage                        | 35      | V                  |
| $V_{CEO}$      | Collector-Emitter Voltage                        | 35      | V                  |
| $V_{EBO}$      | Emitter-Base Voltage                             | 5       | V                  |
| $I_C$          | Collector Current -Continuous                    | 2.5     | A                  |
| $P_C$          | Collector Power Dissipation                      | 1       | W                  |
| $T_J, T_{stg}$ | Operation Junction and Storage Temperature Range | -55-150 | $^{\circ}\text{C}$ |

## ELECTRICAL CHARACTERISTICS

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

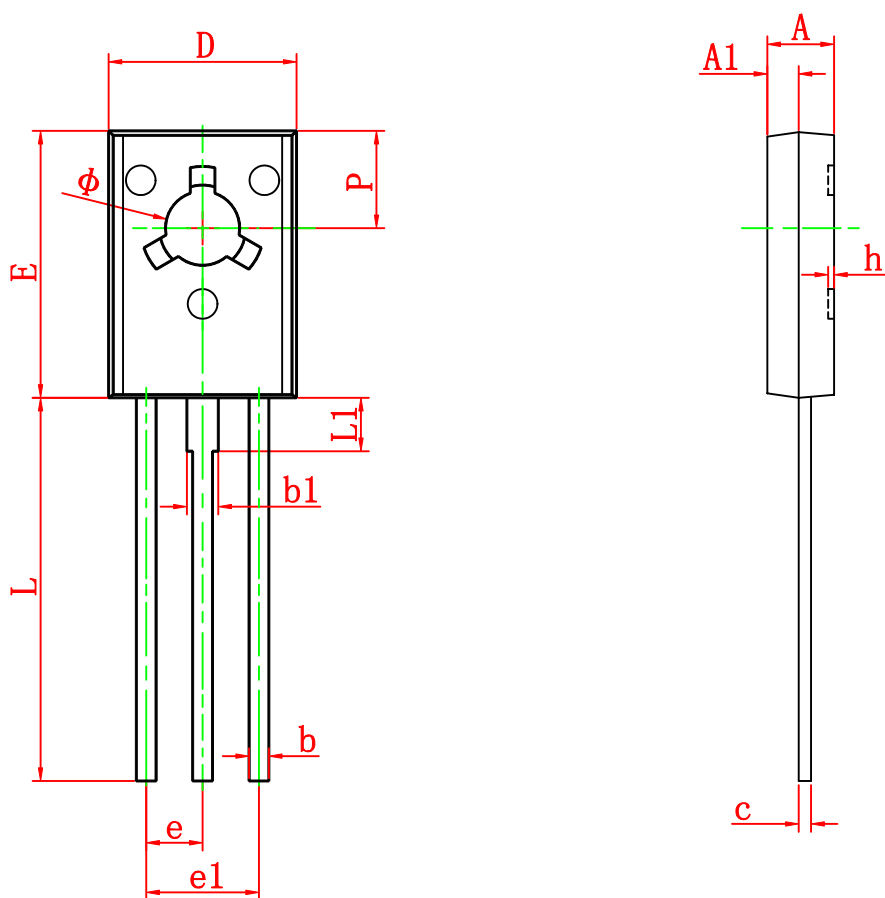
| Parameter                            | Symbol        | Test conditions                      | Min | Typ | Max | Unit          |
|--------------------------------------|---------------|--------------------------------------|-----|-----|-----|---------------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C=1\text{mA}, I_E=0$              | 35  |     |     | V             |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C=10\text{mA}, I_B=0$             | 35  |     |     | V             |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E=1\text{mA}, I_C=0$              | 5   |     |     | V             |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=35\text{V}, I_E=0$           |     |     | 20  | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=5\text{V}, I_C=0$            |     |     | 20  | $\mu\text{A}$ |
| DC current gain                      | $h_{FE1}^*$   | $V_{CE}=2\text{V}, I_C=0.5\text{A}$  | 60  |     | 320 |               |
|                                      | $h_{FE2}^*$   | $V_{CE}=2\text{V}, I_C=1.5\text{A}$  | 20  |     |     |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=2\text{A}, I_B=200\text{mA}$    |     |     | 1   | V             |
| Base-collector voltage               | $V_{BE}$      | $V_{CE}=2\text{V}, I_C=1.5\text{A}$  |     |     | 1.5 | V             |
| Transition frequency                 | $f_T$         | $V_{CE}=2\text{V}, I_C=200\text{mA}$ |     | 180 |     | MHz           |

\*pulse test

### CLASSIFICATION OF $h_{FE1}$

| Rank  | B      | C       | D       |
|-------|--------|---------|---------|
| Range | 60-120 | 100-200 | 160-320 |

## TO-126 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |        | Dimensions In Inches |       |
|--------|---------------------------|--------|----------------------|-------|
|        | Min                       | Max    | Min                  | Max   |
| A      | 2.500                     | 2.900  | 0.098                | 0.114 |
| A1     | 1.100                     | 1.500  | 0.043                | 0.059 |
| b      | 0.660                     | 0.860  | 0.026                | 0.034 |
| b1     | 1.170                     | 1.370  | 0.046                | 0.054 |
| c      | 0.450                     | 0.600  | 0.018                | 0.024 |
| D      | 7.400                     | 7.800  | 0.291                | 0.307 |
| E      | 10.600                    | 11.000 | 0.417                | 0.433 |
| e      | 2.290 TYP                 |        | 0.090 TYP            |       |
| e1     | 4.480                     | 4.680  | 0.176                | 0.184 |
| h      | 0.000                     | 0.300  | 0.000                | 0.012 |
| L      | 15.300                    | 15.700 | 0.602                | 0.618 |
| L1     | 2.100                     | 2.300  | 0.083                | 0.091 |
| P      | 3.900                     | 4.100  | 0.154                | 0.161 |
| Φ      | 3.000                     | 3.200  | 0.118                | 0.126 |