

## TO-220-3L Plastic-Encapsulate Transistors

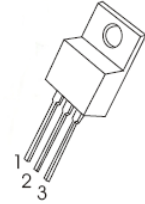
### 2SC2073 TRANSISTOR (NPN)

#### FEATURES

- Wide safe Operating Area.
- Complementary to 2SA940

#### TO-220-3L

1. BASE
2. COLLECTOR
3. EMITTER



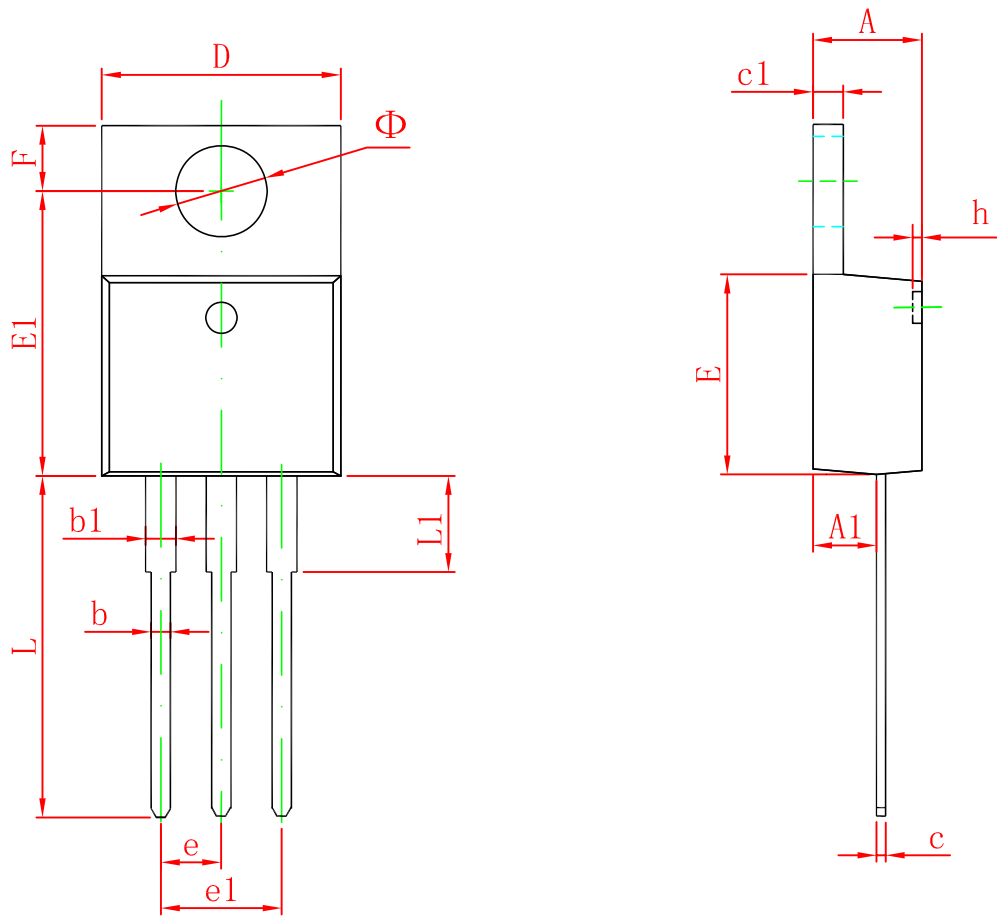
#### MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

| Symbol           | Parameter                     | Value   | Unit |
|------------------|-------------------------------|---------|------|
| V <sub>CB0</sub> | Collector-Base Voltage        | 150     | V    |
| V <sub>CEO</sub> | Collector-Emitter Voltage     | 150     | V    |
| V <sub>EBO</sub> | Emitter-Base Voltage          | 5       | V    |
| I <sub>C</sub>   | Collector Current -Continuous | 1.5     | A    |
| P <sub>C</sub>   | Collector Power Dissipation   | 1.5     | W    |
| T <sub>j</sub>   | Junction Temperature          | 150     | °C   |
| T <sub>stg</sub> | Storage Temperature           | -55-150 | °C   |

#### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)

| Parameter                            | Symbol               | Test conditions                                 | Min  | Typ | Max  | Unit |
|--------------------------------------|----------------------|---|------|-----|------|------|
| Collector-base breakdown voltage     | V <sub>(BR)CBO</sub> | I <sub>C</sub> =100μA, I <sub>E</sub> =0        | 150  |     |      | V    |
| Collector-emitter breakdown voltage  | V <sub>(BR)CEO</sub> | I <sub>C</sub> =1mA, I <sub>B</sub> =0          | 150  |     |      | V    |
| Emitter-base breakdown voltage       | V <sub>(BR)EBO</sub> | I <sub>E</sub> =100μA, I <sub>C</sub> =0        | 5    |     |      | V    |
| Collector cut-off current            | I <sub>CB0</sub>     | V <sub>CB</sub> =120V, I <sub>E</sub> =0        |      |     | 10   | μA   |
| Emitter cut-off current              | I <sub>EBO</sub>     | V <sub>EB</sub> =5V, I <sub>C</sub> =0          |      |     | 10   | μA   |
| DC current gain                      | h <sub>FE</sub>      | V <sub>CE</sub> =10V, I <sub>C</sub> =0.5A      | 40   |     | 140  |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> =0.5A, I <sub>B</sub> =50mA      |      |     | 1.5  | V    |
| Base-emitter voltage                 | V <sub>BE</sub>      | V <sub>CE</sub> =10V, I <sub>C</sub> =0.5A      | 0.65 |     | 0.85 | V    |
| Transition frequency                 | f <sub>T</sub>       | V <sub>CE</sub> =10V, I <sub>C</sub> =0.5A      |      | 4   |      | MHz  |
| Collector output capacitance         | C <sub>ob</sub>      | V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz |      | 35  |      | pF   |

# TO-220-3L Package Outline Dimensions



| Symbol | Dimensions In Millimeters |        | Dimensions In Inches |       |
|--------|---------------------------|--------|----------------------|-------|
|        | Min                       | Max    | Min                  | Max   |
| A      | 4.470                     | 4.670  | 0.176                | 0.184 |
| A1     | 2.520                     | 2.820  | 0.099                | 0.111 |
| b      | 0.710                     | 0.910  | 0.028                | 0.036 |
| b1     | 1.170                     | 1.370  | 0.046                | 0.054 |
| c      | 0.310                     | 0.530  | 0.012                | 0.021 |
| c1     | 1.170                     | 1.370  | 0.046                | 0.054 |
| D      | 10.010                    | 10.310 | 0.394                | 0.406 |
| E      | 8.500                     | 8.900  | 0.335                | 0.350 |
| E1     | 12.060                    | 12.460 | 0.475                | 0.491 |
| e      | 2.540 TYP                 |        | 0.100 TYP            |       |
| e1     | 4.980                     | 5.180  | 0.196                | 0.204 |
| F      | 2.590                     | 2.890  | 0.102                | 0.114 |
| h      | 0.000                     | 0.300  | 0.000                | 0.012 |
| L      | 13.400                    | 13.800 | 0.528                | 0.543 |
| L1     | 3.560                     | 3.960  | 0.140                | 0.156 |
| $\Phi$ | 3.735                     | 3.935  | 0.147                | 0.155 |