



## TO-92L Plastic-Encapsulate Transistors

**2SC2236** TRANSISTOR (NPN)

### FEATURE

- Complementary to 2SA966 and 3 Watts Output Applications.

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

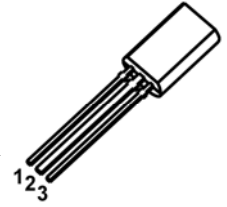
| Symbol           | Parameter                     | Value    | Unit |
|------------------|-------------------------------|----------|------|
| V <sub>CBO</sub> | Collector-Base Voltage        | 30       | V    |
| V <sub>CEO</sub> | Collector-Emitter Voltage     | 30       | V    |
| V <sub>EBO</sub> | Emitter-Base Voltage          | 5        | V    |
| I <sub>C</sub>   | Collector Current -Continuous | 1.5      | A    |
| P <sub>C</sub>   | Collector Power Dissipation   | 0.9      | W    |
| T <sub>J</sub>   | Junction Temperature          | 150      | °C   |
| T <sub>stg</sub> | Storage Temperature           | -55~+150 | °C   |

### TO-92L

1. EMITTER

2. COLLECTOR

3. BASE



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

| Parameter                            | Symbol               | Test conditions                                   | Min | Typ | Max | Unit |
|--------------------------------------|----------------------|---|-----|-----|-----|------|
| Collector-base breakdown voltage     | V(BR) <sub>CBO</sub> | I <sub>C</sub> = 1mA , I <sub>E</sub> =0          | 30  |     |     | V    |
| Collector-emitter breakdown voltage  | V(BR) <sub>CEO</sub> | I <sub>C</sub> = 10mA , I <sub>B</sub> =0         | 30  |     |     | V    |
| Emitter-base breakdown voltage       | V(BR) <sub>EBO</sub> | I <sub>E</sub> = 1mA, I <sub>C</sub> =0           | 5   |     |     | V    |
| Collector cut-off current            | I <sub>CBO</sub>     | V <sub>CB</sub> =30V , I <sub>E</sub> =0          |     |     | 0.1 | μA   |
| Emitter cut-off current              | I <sub>EBO</sub>     | V <sub>EB</sub> =5V , I <sub>C</sub> =0           |     |     | 0.1 | μA   |
| DC current gain                      | h <sub>FE</sub>      | V <sub>CE</sub> =2 V, I <sub>C</sub> = 500mA      | 100 |     | 320 |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> = 1.5 A, I <sub>B</sub> = 0.03A    |     |     | 2   | V    |
| Base-emitter voltage                 | V <sub>BE</sub>      | I <sub>C</sub> = 500 mA, V <sub>CE</sub> = 2V     |     |     | 1   | V    |
| Transition frequency                 | f <sub>T</sub>       | V <sub>CE</sub> = 2V, I <sub>C</sub> = 500mA      |     | 120 |     | MHz  |
| Collector output Capacitance         | C <sub>ob</sub>      | V <sub>CB</sub> = 10V, I <sub>E</sub> = 0, f=1MHz |     |     | 30  | pF   |

### CLASSIFICATION OF h<sub>FE</sub>

| Rank  | O       | Y       |
|-------|---------|---------|
| Range | 100-200 | 160-320 |