

## TO-92 Plastic-Encapsulate Transistors

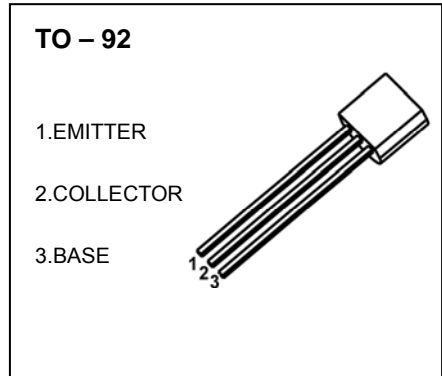
**KTC3194** TRANSISTOR (NPN)

**FEATURES**

- General Purpose Switching Application

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

| Symbo            | Parameter                                   | Value    | Unit |
|------------------|---------------------------------------------|----------|------|
| V <sub>CBO</sub> | Collector-Base Voltage                      | 40       | V    |
| V <sub>CEO</sub> | Collector-Emitter Voltage                   | 30       | V    |
| V <sub>EBO</sub> | Emitter-Base Voltage                        | 4        | V    |
| I <sub>C</sub>   | Collector Current                           | 0.02     | A    |
| P <sub>C</sub>   | Collector Power Dissipation                 | 0.625    | W    |
| R <sub>θJA</sub> | Thermal Resistance From Junction To Ambient | 200      | °C/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> = 0.1mA ,I <sub>E</sub> =0  | 40  |     |     | V    |
| Collector-emitter breakdown voltage  | V <sub>(BR)CEO</sub> | I <sub>C</sub> =1mA,I <sub>B</sub> =0      | 30  |     |     | V    |
| Emitter-base breakdown voltage       | V <sub>(BR)EBO</sub> | I <sub>E</sub> =0.1mA,I <sub>C</sub> =0    | 4   |     |     | V    |
| Collector cut-off current            | I <sub>CBO</sub>     | V <sub>CB</sub> =40V,I <sub>E</sub> =0     |     |     | 0.5 | μA   |
| Emitter cut-off current              | I <sub>EBO</sub>     | V <sub>EB</sub> =4V,I <sub>C</sub> =0      |     |     | 0.5 | μA   |
| DC current gain                      | h <sub>FE</sub>      | V <sub>CE</sub> =6V, I <sub>C</sub> =1mA   | 40  |     | 200 |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> =15mA,I <sub>B</sub> =1.5mA |     |     | 0.2 | V    |
| Transition frequency                 | f <sub>T</sub>       | V <sub>CE</sub> =6V,I <sub>C</sub> =1mA    |     | 550 |     | MHz  |

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

| RANK  | R     | O      | Y       |
|-------|-------|--------|---------|
| RANGE | 40-80 | 70-140 | 100-200 |