



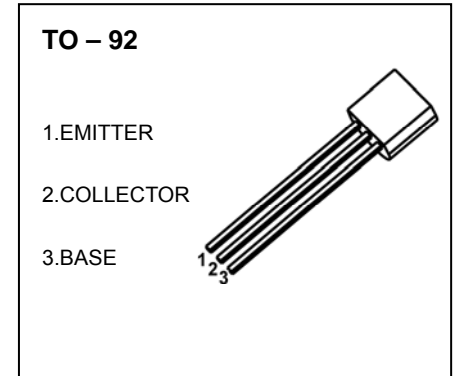
# TIGER ELECTRONIC CO.,LTD

## TO-92 Plastic-Encapsulate Transistors

**KTC3198** TRANSISTOR (NPN)

### FEATURES

- General Purpose Switching Application
- Complementary to KTA1266.



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

| Symbo           | Parameter                                   | Value    | Unit                        |
|-----------------|---|----------|-----------------------------|
| $V_{CB0}$       | Collector-Base Voltage                      | 60       | V                           |
| $V_{CEO}$       | Collector-Emitter Voltage                   | 50       | V                           |
| $V_{EBO}$       | Emitter-Base Voltage                        | 5        | V                           |
| $I_C$           | Collector Current                           | 0.15     | A                           |
| $P_C$           | Collector Power Dissipation                 | 0.625    | W                           |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient | 200      | $^{\circ}\text{C}/\text{W}$ |
| $T_j$           | Junction Temperature                        | 150      | $^{\circ}\text{C}$          |
| $T_{stg}$       | Storage Temperature                         | -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     | $V_{(BR)CBO}$ | $I_C=0.1\text{mA}, I_E=0$                 | 60  |     |      | V             |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C=5\text{mA}, I_B=0$                   | 50  |     |      | V             |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E=0.1\text{mA}, I_C=0$                 | 5   |     |      | V             |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=60\text{V}, I_E=0$                |     |     | 0.1  | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=5\text{V}, I_C=0$                 |     |     | 0.1  | $\mu\text{A}$ |
| DC current gain                      | $h_{FE(1)}$   | $V_{CE}=6\text{V}, I_C=2\text{mA}$        | 70  |     | 700  |               |
|                                      | $h_{FE(2)}$   | $V_{CE}=6\text{V}, I_C=150\text{mA}$      | 25  |     |      |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$       |     |     | 0.25 | V             |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$       |     |     | 1    | V             |
| Transition frequency                 | $f_T$         | $V_{CE}=10\text{V}, I_C=1\text{mA}$       | 80  |     |      | MHz           |
| Collector Output Capacitance         | $C_{ob}$      | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ |     |     | 3.5  | pF            |

### CLASSIFICATION OF $h_{FE(1)}$

| RANK  | O      | Y       | GR      | BL      |
|-------|--------|---------|---------|---------|
| RANGE | 70-140 | 120-240 | 200-400 | 300-700 |