

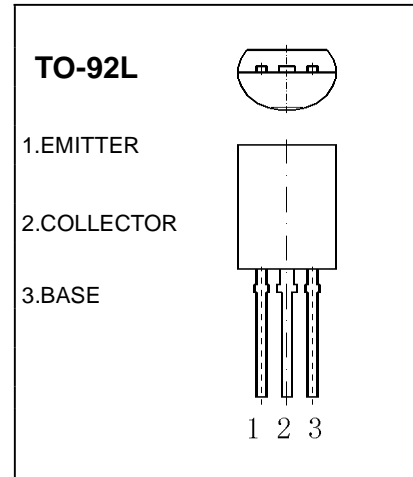


TO-92L Plastic-Encapsulate Transistors

KSC2331 TRANSISTOR (NPN)

FEATURE

- Power dissipation
 $P_{CM} : 1 \quad W \quad (T_{amb}=25^{\circ}C)$
- Collector current
 $I_{CM} : 0.7 \quad A$
- Collector-base voltage
 $V_{(BR)CBO} : 80 \quad V$
- Operating and storage junction temperature range
 $T_J, T_{stg} : -55^{\circ}C \text{ to } +150^{\circ}C$



ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|-------------------------------------|-----|-----|-----|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C = 100 \mu A, I_E = 0$ | 80 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = 10 mA, I_B = 0$ | 60 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E = 10 \mu A, I_C = 0$ | 8 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = 60V, I_E = 0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = 5V, I_C = 0$ | | | 0.1 | μA |
| DC current gain | h_{FE} | $V_{CE} = 2V, I_C = 50mA$ | 40 | | 240 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 500mA, I_B = 50mA$ | | | 0.7 | V |
| Base-emitter voltage | $V_{BE(sat)}$ | $I_C = 500mA, I_B = 50mA$ | | | 1.2 | V |
| Collector output capacitance | C_{ob} | $(V_{CB} = 10V, I_E = 0, f = 1MHz)$ | | 8 | | pF |
| Transition frequency | f_T | $V_{CE} = 10V, I_C = 50mA$ | 30 | | | MHz |

CLASSIFICATION OF $h_{FE(1)}$

| Rank | R | O | Y |
|-------|-------|--------|---------|
| Range | 40-80 | 70-140 | 120-240 |