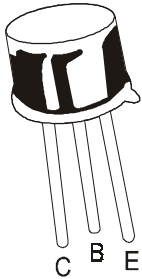


NPN SILICON PLANAR TRANSISTORS

**CL 100, A, B
CK 100, A, B**



**TO-39
Metal Can Package**

CL100 And CK 100 Are Medium Power Transistors Suitable For Awide Range Of Medium Voltage And Current Amplifier Applications.

Complementary CK100, A, B

ABSOLUTE MAXIMUM RATINGS (Ta=25°C unless specified otherwise)

| DESCRIPTION | SYMBOL | VALUE | UNITS |
|--|----------------|-------------|--------|
| Collector -Emitter Voltage | V_{CER} | 50 | V |
| Collector -Base Voltage | V_{CBO} | 60 | V |
| Emitter Base Voltage | V_{EBO} | 5 | V |
| Collector Current-Continuous | I_{CM} | 1 | A |
| Power Dissipation @ Ta=25°C | P_D | 800 | mW |
| Derate above 25°C | | 5.33 | mW /°C |
| Total device dissipation @ Tc=25°C | P_D | 3 | W |
| Derate above 25°C | | 20 | mW /°C |
| Operating And Storage Junction Temperature Range | T_j, T_{stg} | -55 to +175 | °C |

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

| DESCRIPTION | SYMBOL | TEST CONDITION | MIN | TYP | MAX | UNIT |
|-------------------------------------|-----------------|-----------------------------|-----|-----|-----|---------|
| Collector Emitter Breakdown Voltage | BV_{CER}^* | $I_C = 10mA, I_B = 0$ | 50 | | | V |
| Collector Base Breakdown Voltage | BV_{CBO} | $I_C = 100\mu A, I_E = 0$ | 60 | | | V |
| Emitter Base Breakdown Voltage | BV_{EBO} | $I_E = 100\mu A, I_C = 0$ | 5 | | | V |
| Collector Leakage Current | I_{CBO} | $V_{CB} = 40V, I_E = 0$ | | | 50 | nA |
| Emitter Leakage Current | I_{EBO} | $V_{EB} = 4V, I_E = 0$ | | | 1 | μA |
| DC Current Gain | h_{FE}^* | $I_C = 150mA, V_{CE} = 10V$ | 40 | | 300 | |
| Base Emitter On Voltage | $V_{BE(on)}^*$ | $V_{CE} = 1V, I_C = 150mA,$ | | | 0.9 | V |
| Collector Emitter (Sat) Voltage | $V_{CE(sat)}^*$ | $I_C = 150mA, I_B = 15mA$ | | | 0.6 | V |

**CLASSIFICATION
HFE**

**A
40-120**

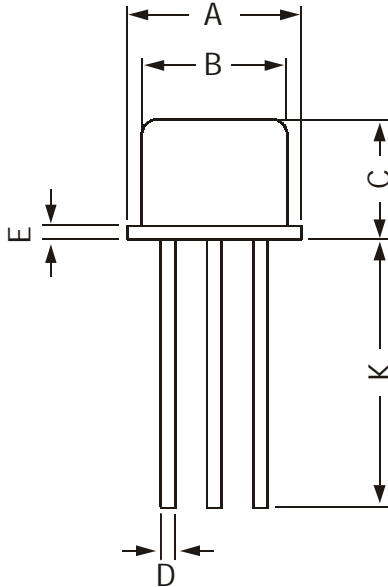
**B
100-300**

*Pulse Condition : PW \leq 300us, Duty Cycle \leq 2%

CL 100, A, B
CK 100, A, B

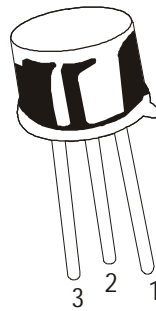
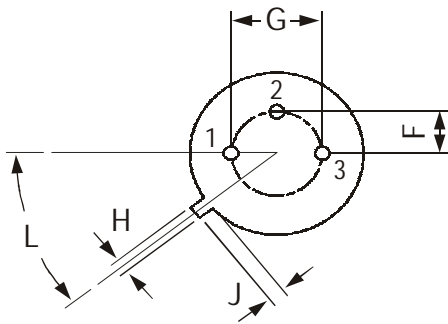
TO-39
Metal Can Package

TO-39 Metal Can Package



All dimensions are in mm

| DIM | MIN | MAX |
|-----|--------|--------|
| A | 8.50 | 9.39 |
| B | 7.74 | 8.50 |
| C | 6.09 | 6.60 |
| D | 0.40 | 0.53 |
| E | — | 0.88 |
| F | 2.41 | 2.66 |
| G | 4.82 | 5.33 |
| H | 0.71 | 0.86 |
| J | 0.73 | 1.02 |
| K | 12.70 | — |
| L | 42 DEG | 48 DEG |



PIN CONFIGURATION
1. EMITTER
2. BASE
3. COLLECTOR

Packing Detail

| PACKAGE | STANDARD PACK | | INNER CARTON BOX | | OUTER CARTON BOX | | |
|---------|-----------------|----------------|------------------|-----|-------------------|-----|--------|
| | Details | Net Weight/Qty | Size | Qty | Size | Qty | Gr Wt |
| TO-39 | 500 pcs/polybag | 540 gm/500 pcs | 3" x 7.5" x 7.5" | 20K | 17" x 15" x 13.5" | 32K | 40 kgs |

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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