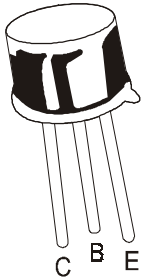


**NPN SILICON PLANAR TRANSISTORS**

**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	$\mu A$
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**

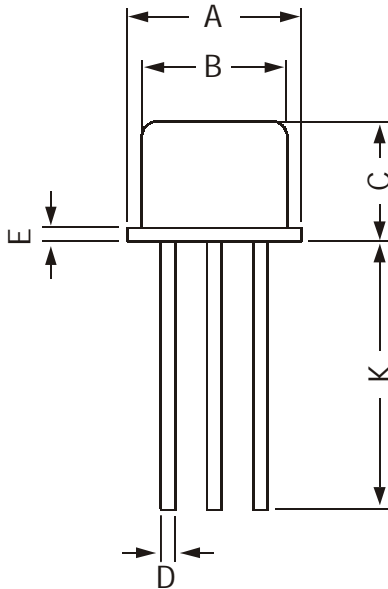
**B  
100-300**

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

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

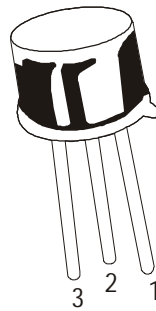
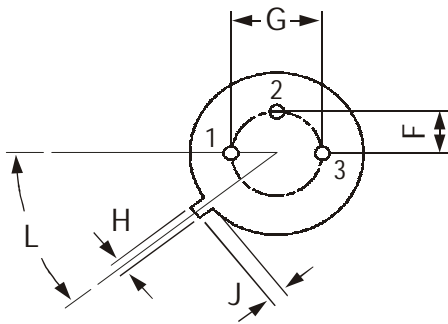
TO-39  
Metal Can Package

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).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



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