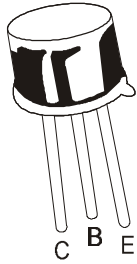


SILICON PLANAR POWER TRANSISTORS

CL100, A, B NPN
CK100, A, B PNP



TO-39
Metal Can Package

Medium Power Transistors Suitable for a wide Range of Medium Voltage and Current Amplifier Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Emitter Voltage	V_{CER}	50	V
Collector Base Voltage	V_{CBO}	60	V
Emitter Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	1.0	A
Power Dissipation@ $T_a=25^\circ\text{C}$	P_D	0.8	W
Derate Above 25°C		4.57	mW/ $^\circ\text{C}$
Power Dissipation@ $T_c=25^\circ\text{C}$	P_D	4.0	W
Derate Above 25°C		22.73	mW/ $^\circ\text{C}$
Operating And Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Junction to Ambient in free air	$R_{th(j-a)}$	219	$^\circ\text{C/W}$
Junction to Case	$R_{th(j-c)}$	44	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter Voltage	$*V_{CER}$	$I_C=10\text{mA}, I_B=0$	50			V
Collector Base Voltage	V_{CBO}	$I_C=100\mu\text{A}, I_E=0$	60			V
Emitter Base Voltage	V_{EBO}	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector Cut Off Current	I_{CBO}	$V_{CB}=40\text{V}, I_E=0,$			50	nA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=4\text{V}, I_E=0$			1.0	μA
DC Current Gain	$*h_{FE}$	$I_C=150\text{mA}, V_{CE}=10\text{V}$	40		300	
Collector Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$			0.6	V
Base Emitter On Voltage	$*V_{BE(on)}$	$I_C=150\text{mA}, V_{CE}=1\text{V}$			0.9	V

hFE Classification :

A : 40 -120

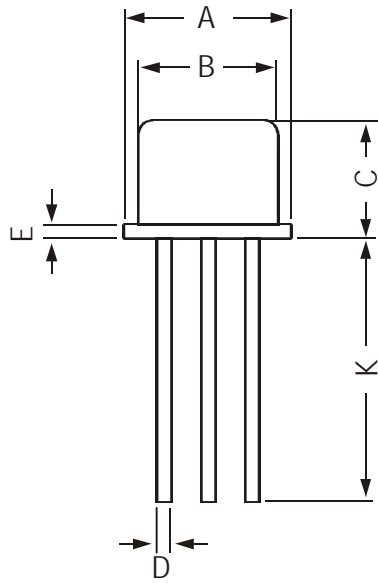
B: 100 - 300

*Pulsed: Pulse width $\leq 300\text{ms}$, duty cycle $\leq 2\%$

CL100, A, B NPN
 CK100, A, B PNP

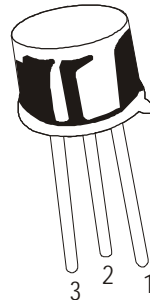
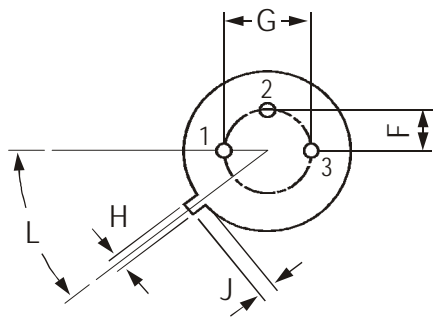
TO-39
Metal Can Package

TO-39 Metal Can Package



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

All dimensions are in mm



PIN CONFIGURATION
 1. EMITTER
 2. BASE
 3. COLLECTOR

Packing Details

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 are 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.



CDIL is a registered Trademark of
Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.

Telephone + 91-11-2579 6150, 5141 1112 Fax + 91-11-2579 5290, 5141 1119

email@cdil.com www.cdilsemi.com