

TO-220 Plastic Package

CSA940, CSC2073

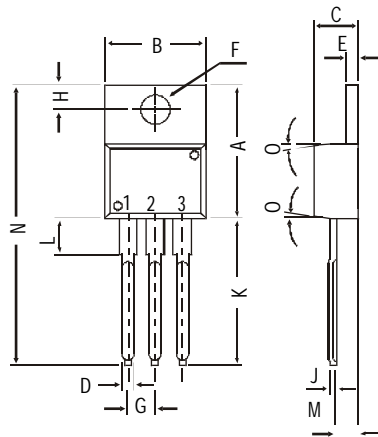
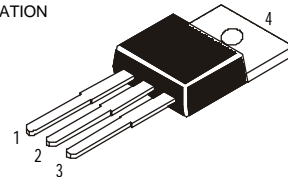
CSA940 PNP PLASTIC POWER TRANSISTOR

CSC2073 NPN PLASTIC POWER TRANSISTOR

Power Amplifier Applications and Vertical Output Applications

PIN CONFIGURATION

- 1. BASE
- 2. COLLECTOR
- 3. EMITTER
- 4. COLLECTOR



DIM	MIN.	MAX.
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D		0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J		0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N		31.24
O		DEG 7

All dimensions in mm.

ABSOLUTE MAXIMUM RATINGS

Collector-base voltage (open emitter)	V_{CB0}	max.	150 V
Collector-emitter voltage (open base)	V_{CE0}	max.	150 V
Collector current	I_C	max.	1.5 A
Total power dissipation up to $T_C = 25^\circ C$	P_{tot}	max.	25 W
Junction temperature	T_j	max.	150 °C
Collector-emitter saturation voltage $I_C = 500 \text{ mA}; I_B = 50 \text{ mA}$	V_{CEsat}	max.	1.5 V
D.C. current gain $I_C = 500 \text{ mA}; V_{CE} = 10 \text{ V}$	h_{FE}	min.	40
		max.	140

RATINGS (at $T_A=25^\circ C$ unless otherwise specified)

Limiting values			
Collector-base voltage (open emitter)	V_{CB0}	max.	150 V
Collector-emitter voltage (open base)	V_{CE0}	max.	150 V
Emitter-base voltage (open collector)	V_{EBO}	max.	5.0 V

Collector current	I_C	max.	1.5 A
Base current	I_B	max.	0.5 A
Total power dissipation up to $T_C = 25^\circ\text{C}$	P_{tot}	max.	25 W
Total power dissipation up to $T_A = 25^\circ\text{C}$	P_{tot}	max.	1.5 W
Junction temperature	T_j	max.	150 °C
Storage temperature	T_{stg}		-65 to +150 °C

CHARACTERISTICS

$T_{amb} = 25^\circ\text{C}$ unless otherwise specified

Collector cutoff current

$I_E = 0; V_{CB} = 120\text{ V}$

I_{CBO} max. 10 μA

Emitter cut-off current

$I_C = 0; V_{EB} = 5\text{ V}$

I_{EBO} max. 10 μA

Breakdown voltages

$I_C = 1\text{ mA}; I_B = 0$

V_{CEO} min. 150 V

$I_C = 1\text{ mA}; I_E = 0$

V_{CBO} min. 150 V

$I_E = 1\text{ mA}; I_C = 0$

V_{EBO} min. 5.0 V

Saturation voltages

$I_C = 500\text{ mA}; I_B = 50\text{ mA}$

V_{CEsat} max. 1.5 V

Base emitter on voltage

$I_C = 500\text{ mA}; V_{CE} = 10\text{ V}$

$V_{BE(on)}$ min. 0.65 V
max. 0.85 V

D.C. current gain

$I_C = 500\text{ mA}; V_{CE} = 10\text{ V}$

h_{FE} min. 40
max. 140

Output capacitance at $f = 1\text{ MHz}$

$I_E = 0; V_{CB} = 10\text{ V}$ **NPN**
PNP

C_o typ. 35 pF
typ. 55 pF

Transition frequency

$I_C = 500\text{ mA}; V_{CE} = 10\text{ V}$

f_T typ. 4 MHz

Customer Notes

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 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