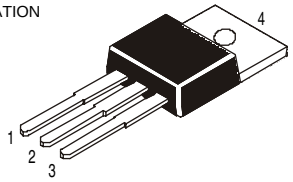
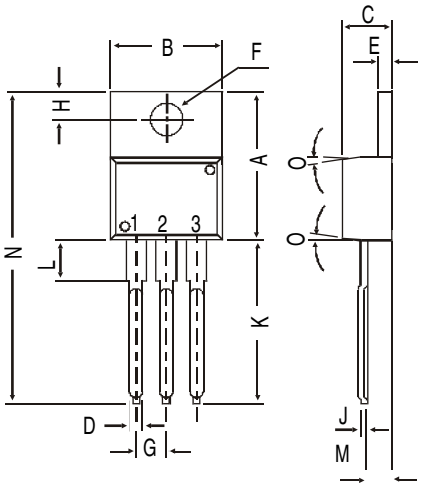
TO-220 Plastic Package **CD909**

CD909 NPN PLASTIC POWER TRANSISTOR

Power Linear and Switching Applications

PIN CONFIGURATION
1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR





All diminsions in mm.

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	

ABSOLUTE MAXIMUM RATINGS

Collector-base voltage (open emitter)	V_{CBO}	*max.*	*100 V*
Collector-emitter voltage (open base)	V_{CEO}	*max.*	*90 V*
Collector current	I_C	*max.*	*12.0 A*
Total power dissipation up to T_C = 25°C	P_{tot}	*max.*	*75 W*
Junction temperature	T_j	*max.*	*150 °C*
Collector-emitter saturation voltage			
I_C = 4 A; I_B = 0.5 A	V_{CEsat}	*max.*	*1.0 V*
D.C. current gain			
I_C = 1 A; V_{CE} = 4 V	h_{FE}	*min*	*80*
		max.	*400*

RATINGS *(at T_A=25°C unless otherwise specified)*

Limiting values			
Collector-base voltage (open emitter)	V_{CBO}	*max.*	*100 V*
Collector-emitter voltage (open base)	V_{CEO}	*max.*	*90 V*
Emitter-base voltage (open collector)	V_{EBO}	*max.*	*6.0 V*
Collector current	I_C	*max.*	*12.0 A*

Total power dissipation up to T_C = 25°C	P_{tot}	*max.* 75	*W*
Junction temperature	T_j	*max.* 150	*°C*
Storage temperature	T_{stg}	*–65 to +150*	*°C*

CHARACTERISTICS

T_{amb} = 25°C unless otherwise specified

Collector cutoff current			
I_E = 0; V_{CB} = 100 V	I_{CBO}	*max.* 100	*µA*
Emitter cut-off current			
I_C = 0; V_{EB} = 5V	I_{EBO}	*max.* 1000	*µA*
Breakdown voltages			
I_C = 1 mA; I_B = 0	V_{CEO}	*min.* 90	*V*
I_C = 1 mA; I_E = 0	V_{CBO}	*min.* 100	*V*
I_E = 1 mA; I_C = 0	V_{EBO}	*min.* 6.0	*V*
Saturation voltages			
I_C = 4 A; I_B = 0.5 A	V_{CEsat}	*max.* 1.0	*V*
	V_{BEsat}	*max.* 1.5	*V*
Base emitter on voltage			
I_C = 4A; V_{CE} = 4V	$V_{BE(on)}$	*max.* 1.5	*V*
D.C. current gain			
I_C = 1 A; V_{CE} = 4 V	h_{FE}	*min.* 80	
		max. 400	
I_C = 10 A; V_{CE} = 4 V	h_{FE}	*min.* 5	
Transition frequency			
I_C = 0.3 A; V_{CE} = 3 V	f_T	*min.* 3	*MHz*
Output capacitance			
I_E = 0; V_{CB} = 10V	C_o	*typ.* 100	*pF*
Second breakdown collector current with base forward biased (non-repetitive)			
V_{CE} = 21.5 V; t = 50ms	$I_{S/b}$	*typ.* 3.5	*A*

Notes

Disclaimer

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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