An ISO/TS16949 and ISO 9001 Certified Company



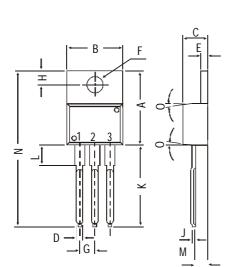


TO-220 Plastic Package

CD909

CD909 NPN PLASTIC POWER TRANSISTOR

Power Linear and Switching Applications



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

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

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 $T_C = 25^{\circ}C$	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			
$I_C = 1 A$; $V_{CE} = 4 V$	$h_{\!F\!E}$	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)	$V_{C\!E\!O}$	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 $T_C = 25^{\circ}C$ Junction temperature Storage temperature	P_{tot} T_{j} T_{stg}	max. max. -65 to	75 150 +150	${\mathcal C}$
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				
$I_C = 1 \text{ mA}; I_B = 0$	V_{CEO}	min.	90	V
$I_C = 1 \text{ mA}; I_E = 0$	V_{CBO}	min.	100	V
$I_E = 1 \text{ mA; } I_C = 0$	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	225ut			
$I_C = 4A$; $V_{CE} = 4V$	V _{BE(on)}	max.	1.5	V
D.C. current gain	· BE(OII)			
$I_C = 1 A$; $V_{CE} = 4 V$	$h_{\!F\!E}$	min.	80	
C , CE	TL.	max.	400	
$I_C = 10 \text{ A}; \ V_{CE} = 4 \text{ V}$	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
2 02	Ü	<i>.</i>		•
Second breakdown collector current				
with base forward biased (non-repetitive)				
$V_{CF} = 21.5 \text{ V}; t = 50 \text{ms}$	$I_{S/b}$	typ.	3.5	\boldsymbol{A}
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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 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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