



TO-251-3L Plastic-Encapsulate Transistors

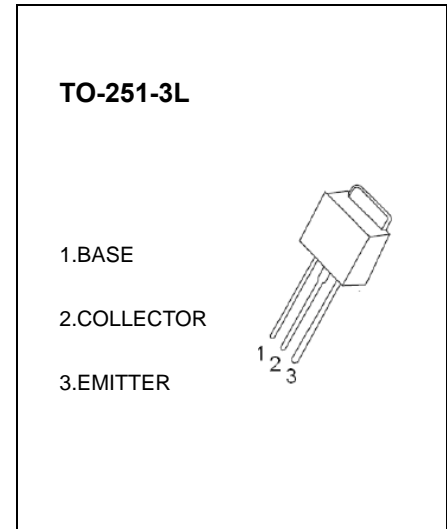
2SB1412 TRANSISTOR (PNP)

FEATURES

- Power Amplifier Applications

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	-30	V
V _{CE0}	Collector-Emitter Voltage	-20	V
V _{EBO}	Emitter-Base Voltage	-6	V
I _C	Collector Current –Continuous	-5	A
P _C	Collector Power Dissipation	1	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C



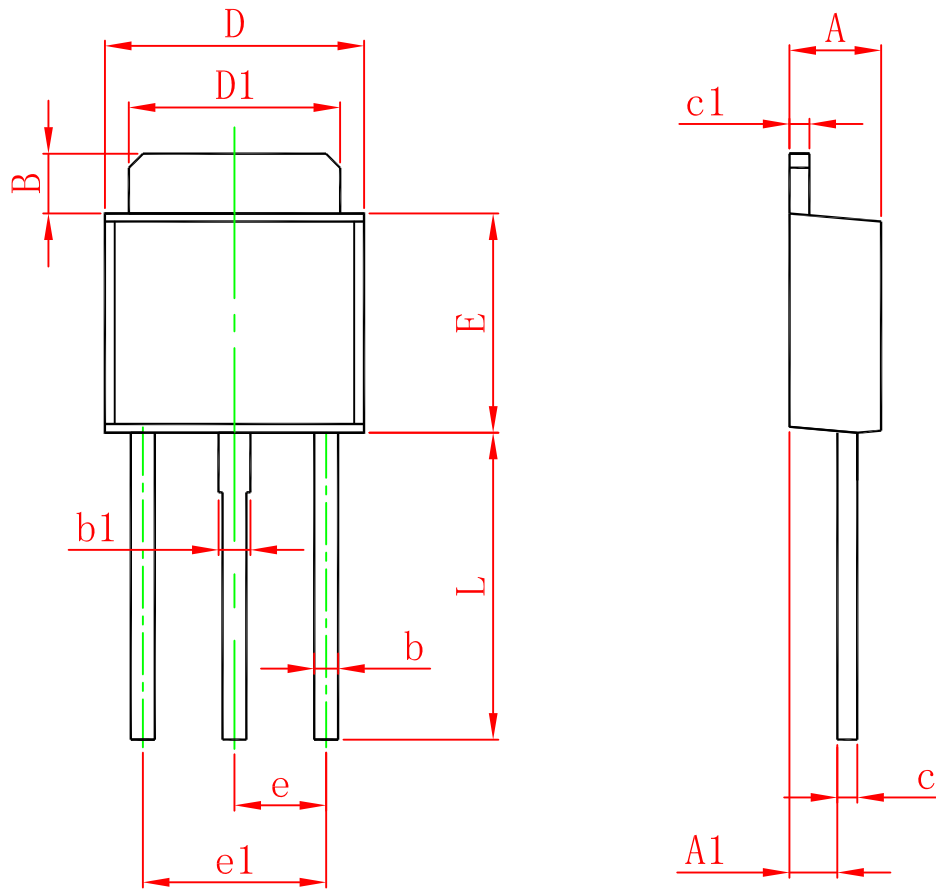
ELECTRICAL CHARACTERISTICS (T_a=25°C unless other wise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-50μA, I _E =0	-30			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-1mA, I _B =0	-20			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-50μA, I _C =0	-6			V
Collector cut-off current	I _{CBO}	V _{CB} =-20V, I _E =0			-0.5	μA
Emitter cut-off current	I _{EBO}	V _{EB} =-5V, I _C =0			-0.5	μA
DC current gain	h _{FE}	V _{CE} =-2V, I _C =-500mA	82		390	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-4A, I _B =-100mA			-1	V
Transition frequency	f _T	V _{CE} =-6V, I _C =-50mA, f=30MHz		120		MHz
Collector output capacitance	C _{ob}	V _{CB} =-20V, I _E =0, f=1MHz		60		pF

CLASSIFICATION OF h_{FE}

Rank	P	Q	R
Range	82-180	120-270	180-390

TO-251-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	1.050	1.350	0.042	0.054
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
c	0.430	0.580	0.017	0.023
c1	0.430	0.580	0.017	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	0.213
E	5.400	5.700	0.213	0.224
e	2.300 TYP.		0.091 TYP.	
e1	4.500	4.700	0.177	0.185
L	7.500	7.900	0.295	0.311