

**TO-251-3L Plastic-Encapsulate Transistors****2SB1184** TRANSIST OR (PNP)**FEATURES**

- Low $V_{CE(sat)}$
- Complements the 2SD1760 / 2SD1864

MARKING

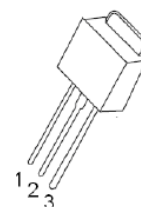
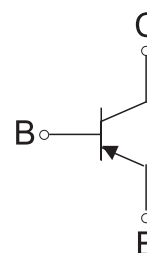
B1184=Device code

Solid dot=Green moldinn compound device,
if none,the normal device

XXXX=Code

TO-251-3L

1. BASE
2. COLLECTOR
3. EMITTER

**Equivalent Circuit****MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)**

Symbol	Parameter	Value	Unit
V_{CBO}	Collector Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current –Continuous	-3	A
P_C	Collector Power Dissipation	1	W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55-150	$^{\circ}\text{C}$

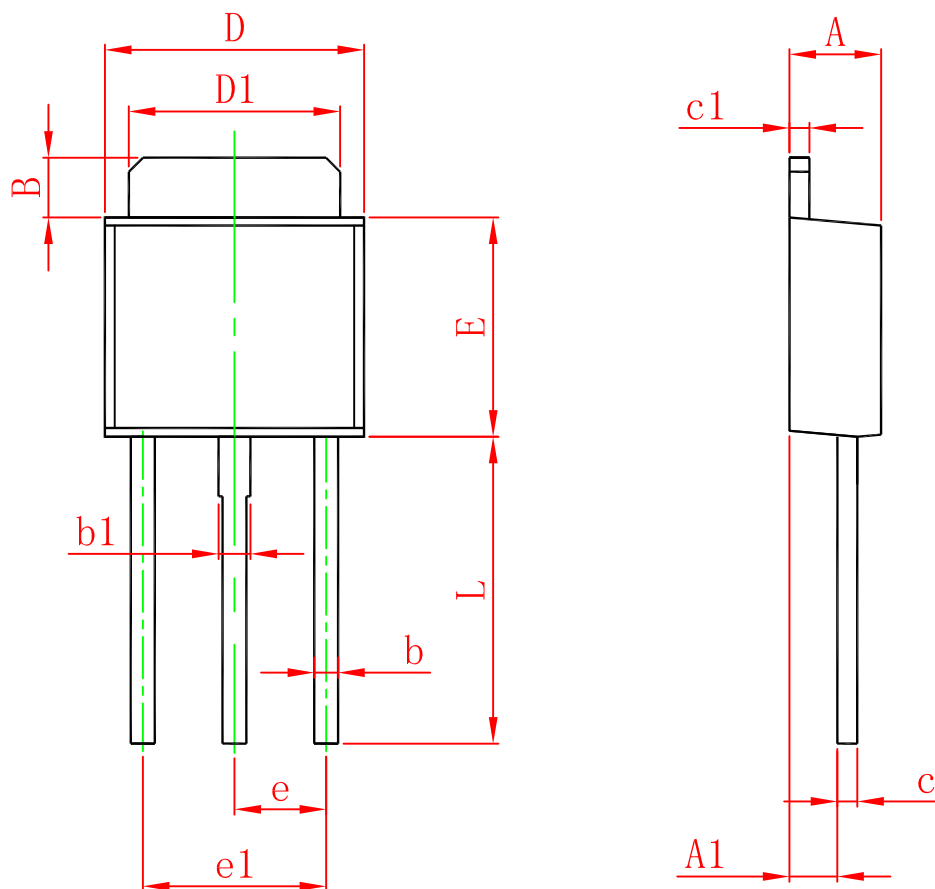
ELECTRICAL CHARACTERISTICS (T_a=25°C unless other wise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-50μA, I _E =0	-60			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-1mA, I _B =0	-50			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-50μA, I _C =0	-5			V
Collector cut-off current	I _{CBO}	V _{CB} =-40V, I _E =0			-1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =-4V, I _C =0			-1	μA
DC current gain	h _{FE(1)}	V _{CE} =-3V, I _C =-0.5A	82		390	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-2A, I _B =-0.2A			-1	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =-1.5A, I _B =-0.15A			-1.2	V
Transition frequency	f _T	V _{CE} =-5V, I _C =-0.5A, f=30MHz		70		MHz
Collector output capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz		50		pF

CLASSIFICATION OF h_{FE(1)}

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