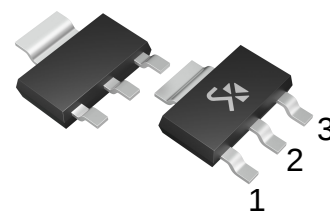


Silicon PNP bipolar Transistor

Features

- High Collector Current
- 1.3W Power Dissipation



Pin assignment

PIN NAME	PIN NUMBER	FUNCTION
	SOT-223	
B	1	BASE
C	2	COLLECTOR
E	3	EMITTER

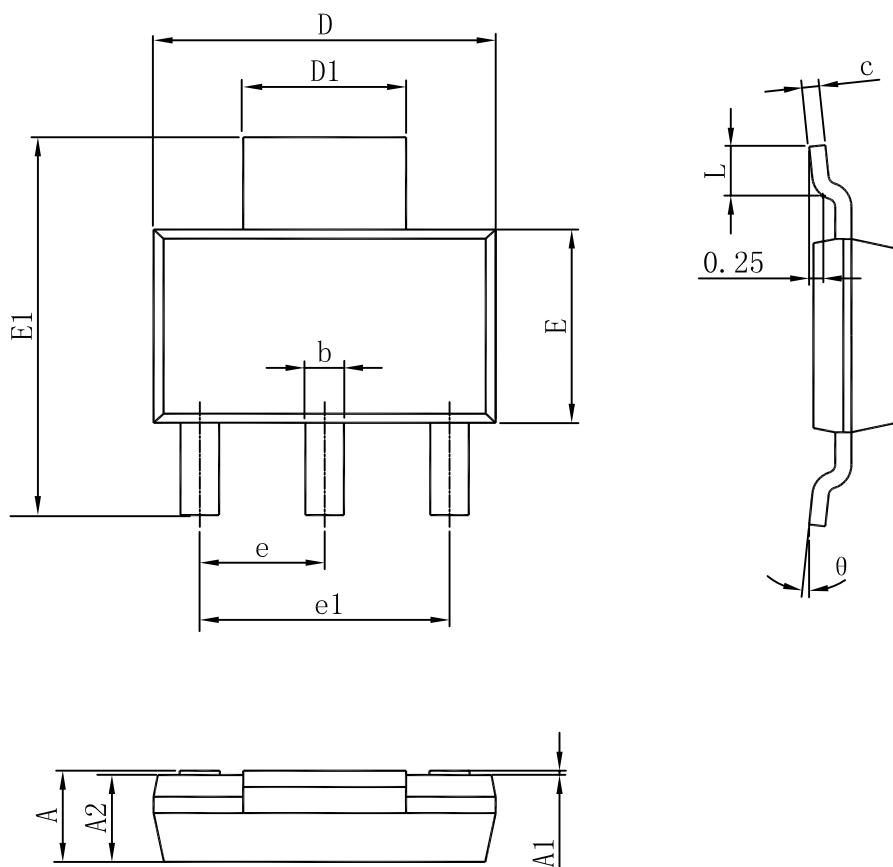
MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	BCP51 -45	V
		BCP52 -60	
		BCP53 -100	
V_{CEO}	Collector-Emitter Voltage	BCP51 -45	V
		BCP52 -60	
		BCP53 -80	
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-1	A
I_{CM}	Peak Collector Current	-1.5	A
I_{BM}	Peak Base Current	-0.2	A
P_{tot}	Total power consumption	1.3	W
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65 to +150	$^{\circ}\text{C}$
$R_{th(j-a)}$	Thermal resistance from junction to environment	95	K/W
$R_{th(j-s)}$	Thermal resistance from junction to solder point	14	K/W

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-Emitter cut-off current	I_{CBO}	$V_{CE}=-30V, I_E=0$			-100	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5V, I_B=0$			-100	nA
DC current gain BCP51-10,BCP52-10,BCP53-10 BCP51-16,BCP52-16,BCP53-16	h_{FE}	$V_{CE}=-2V, I_C=-5mA$	63			
		$V_{CE}=-2V, I_C=-150mA$	63		250	
		$V_{CE}=-2V, I_C=-500mA$	40			
		$V_{CE}=-2V, I_C=-150mA$	63		160	
		$V_{CE}=-2V, I_C=-150mA$	100		250	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500mA, I_B=-50mA$			-0.5	V
Base to emitter voltage	V_{BE}	$I_C=-500mA, V_{CE}=-2V$			-2.6	V
Transition Frequency	f_T	$V_{CE}=-5V, I_C=-10mA, f=100MHZ$		115		MHz

SOT-223 PACKAGE OUTLINE DIMENSIONS



Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	1.520	1.800	0.06	0.071
A1	0.02	0.100	0.001	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.810	0.026	0.032
c	0.240	0.320	0.010	0.014
D	6.300	6.500	0.248	0.256
D1	2.900	3.100	0.114	0.122
E	3.300	3.700	0.130	0.146
E1	6.830	7.070	0.269	0.278
e	2.3 (BSC)		0.091 (BSC)	
e1	4.500	4.700	0.177	0.185
L	0.900	1.150	0.035	0.045
θ	0°	10°	0°	10°