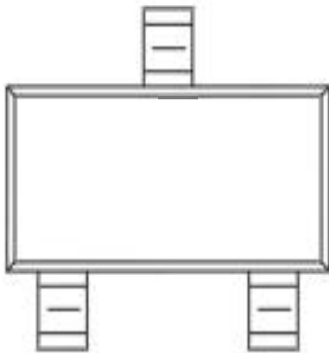
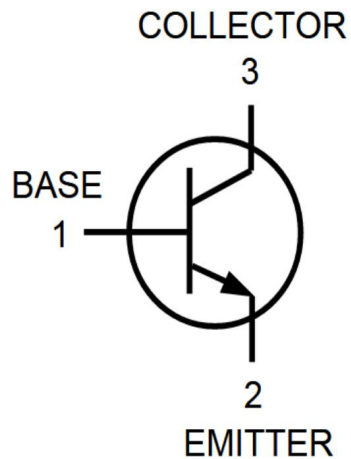


TRANSISTOR (NPN)

MARKING:

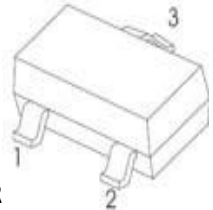


Equivalent Circuit:



SOT-23

- 1.BASE
- 2.EMITTER
- 3.COLLECTOR



FEATURES:

- ※ High voltage, $V_{CEO}=120V$
- ※ High h_{FE} . $HFE=200-700$
- ※ Low noise.
- ※ Small package.

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	120	V
Collector-Emitter Voltage	V_{CEO}	120	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Base current	I_B	20	A
Collector Power Dissipation	P_C	150	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	350	$^{\circ}C/W$
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature	T_{stg}	-55~+150	$^{\circ}C$

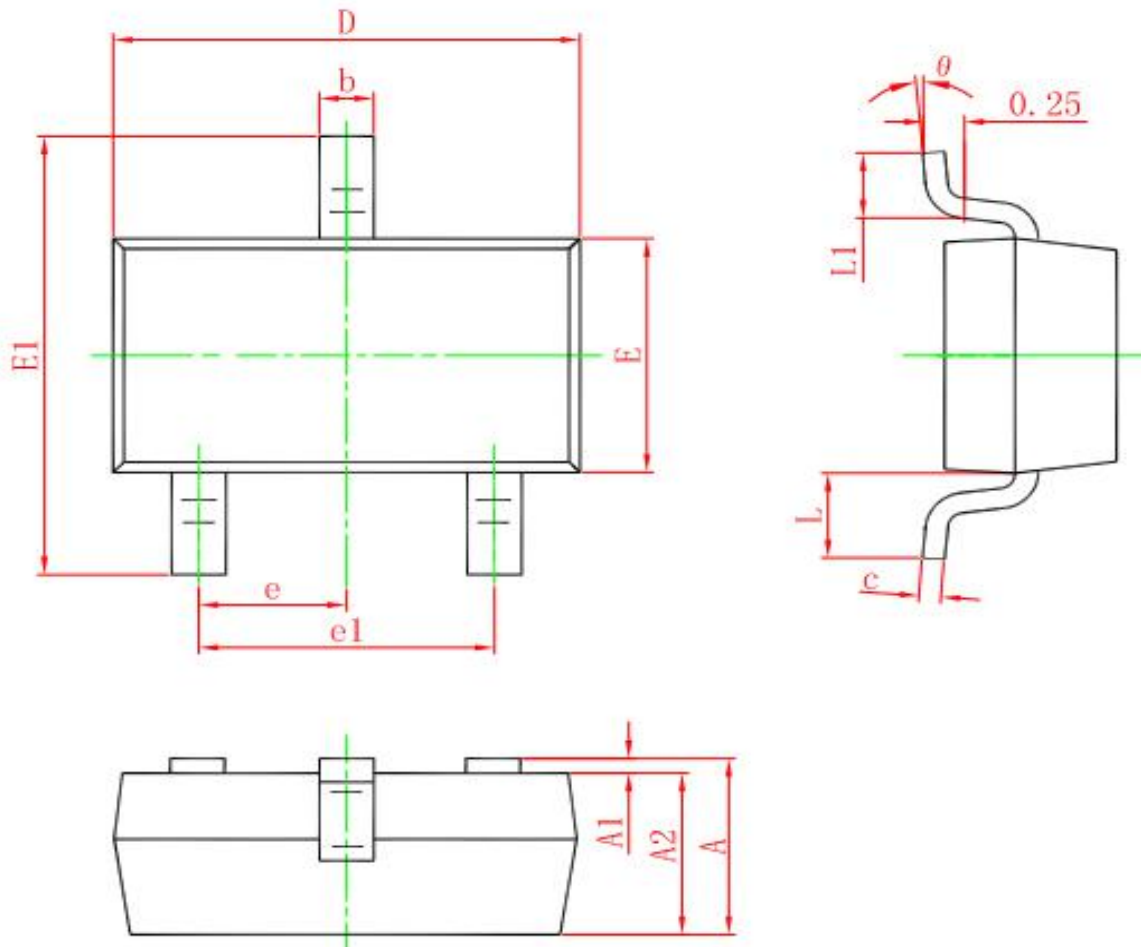
ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	IC= 100μA, IE=0	120			V
Collector-emitter breakdown voltage	V(BR)CEO	IC= 1mA, IB=0	120			V
Emitter-base breakdown voltage	V(BR)EBO	IE= 100μA, IC=0	5			V
Collector cut-off current	ICBO	VCE= 120 V , IE=0			0.1	μA
Emitter cut-off current	IEBO	VEB= 5V , IC=0			0.1	μA
DC current gain	hFE	VCE=6V, IC= 2mA	200		700	
Collector-emitter saturation voltage	VCE(sat)	IC= 10 mA, IB= 1mA			0.3	V
Base-emitter saturation voltage	VBE(sat)	IC= 10 mA, IB= 1mA			0.6	V
Transition frequency	fT	VCE=6V, IC= 10mA f=1MHz,		100		MHz
Collector output capacitance	Cob	VCE = 10 V, IE = 0, f = 1 MHz		4		PF
Noise figure	NF	VCE=6V, IC= 10mA f=1MHz, Rg=10K Ω		0.5	6	dB
	NF	VCE=6V, IC= 10mA f=1MHz, Rg=10K Ω		0.2	3	dB

CLASSIFICATION OF hFE

Rank	GR	BL
Range	200-400	350-700
MARKING	CBG	CBL

SOT-23 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°