

NPN Transistors

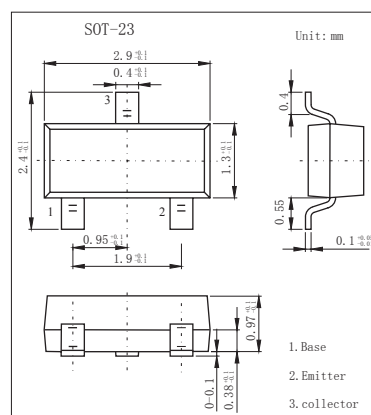
2SC1623

Features

- High DC Current Gain:

 $h_{FE} = 200 \text{ TYP.}$
 $V_{CE} = 6.0 \text{ V, } I_C = 1.0 \text{ mA}$

- High Voltage:

 $V_{CEO} = 50 \text{ V}$


Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	60	V
Collector to emitter voltage	V_{CEO}	50	V
Emitter to base voltage	V_{EBO}	5	V
Collector current (DC)	I_C	100	mA
Collector power dissipation	P_C	200	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 60\text{V, } I_E = 0$			0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5\text{V, } I_C = 0$			0.1	μA
DC current gain *	h_{FE}	$V_{CE} = 6\text{V, } I_C = 1\text{mA}$	90	200	600	
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 100\text{mA, } I_B = 10\text{mA}$		0.15	0.3	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = 100\text{mA, } I_B = 10\text{mA}$		0.86	1	V
Base-emitter voltage *	V_{BE}	$V_{CE} = 6\text{V, } I_C = 1\text{mA}$	0.55	0.62	0.65	V
Output capacitance	C_{ob}	$V_{CB} = 6\text{V, } I_E = 0, f = 1.0\text{MHz}$		3.0		pF
Transiton Frequency	f_T	$V_{CE} = 6\text{V, } I_E = -10\text{mA}$		250		MHz

*. $PW \leq 350 \mu\text{s}$, duty cycle $\leq 2\%$

h_{FE} Classification

Marking	L4	L5	L6	L7
h_{FE}	90 to 180	135 to 270	200 to 400	300 to 600

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■ Typical Characteristics

