

NPN Transistors

2SC1623-HF

■ Features

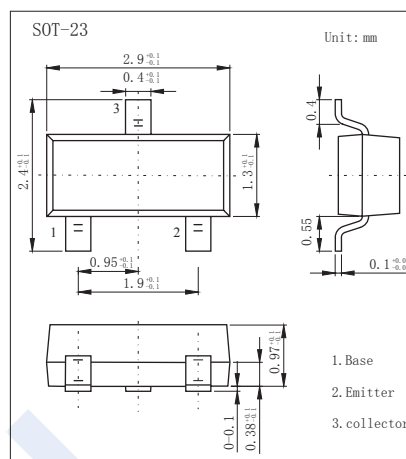
- High DC Current Gain:

$h_{FE} = 200$ TYP.

$V_{CE} = 6.0$ V, $I_C = 1.0$ mA

- High Voltage: $V_{CEO} = 50$ V

- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish

■ 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	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 100 \mu\text{A}$, $I_E = 0$	60			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1 \text{ mA}$, $I_B = 0$	50			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu\text{A}$, $I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 60 \text{ V}$, $I_E = 0$			100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5 \text{ V}$, $I_C = 0$			100	
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	
Base - emitter voltage *	V_{BE}	$V_{CE} = 6 \text{ V}$, $I_C = 1 \text{ mA}$	0.55		0.7	
DC current gain *	h_{FE}	$V_{CE} = 6 \text{ V}$, $I_C = 1 \text{ mA}$	90	200	600	
Collector output capacitance	C_{ob}	$V_{CB} = 6 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$		3		pF
Transition 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

Type	2SC1623-L4-HF	2SC1623-L5-HF	2SC1623-L6-HF	2SC1623-L7-HF
Range	90-180	135-270	200-400	300-600
Marking	L4 _F	L5 _F	L6 _F	L7 _F

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■ Typical Characteristics

