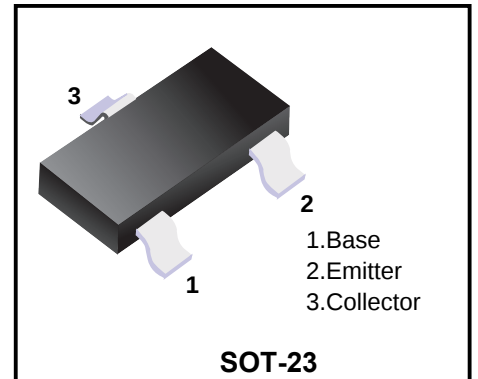


NPN Transistors

Features

- High DC Current Gain:
 $h_{FE} = 200$ TYP.
 $V_{CE} = 6.0\text{ V}$, $I_C = 1.0\text{ mA}$
- High Voltage:
 $V_{CE\ O} = 50\text{ V}$



Absolute Maximum Ratings (Ta=25℃)

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	℃
Storage temperature range	T_{stg}	-55 to +150	℃

Electrical Characteristics (Ta=25℃ unless otherwise specified.)

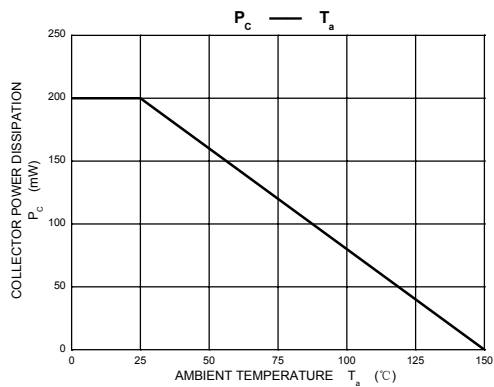
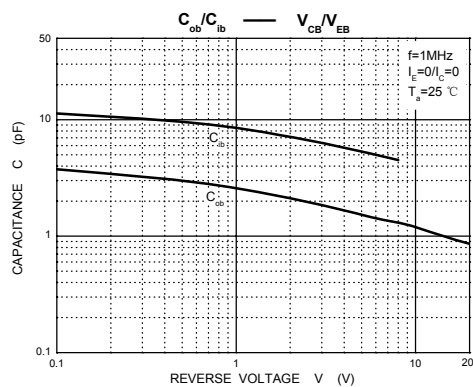
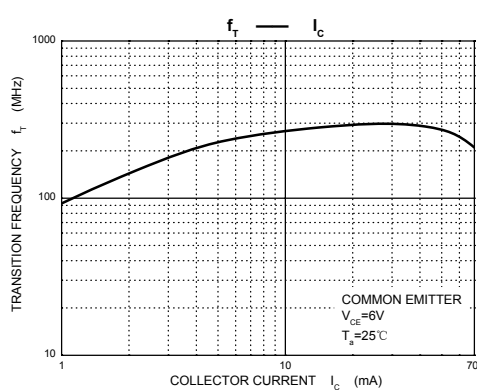
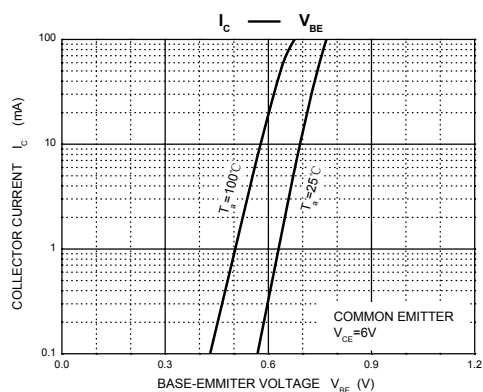
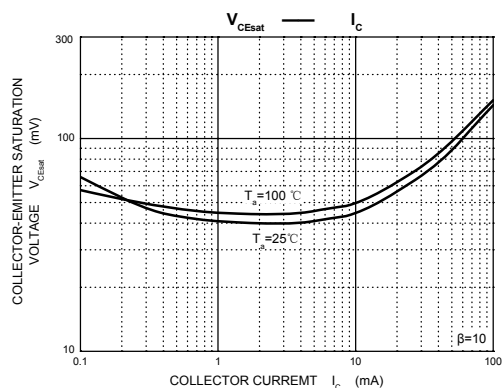
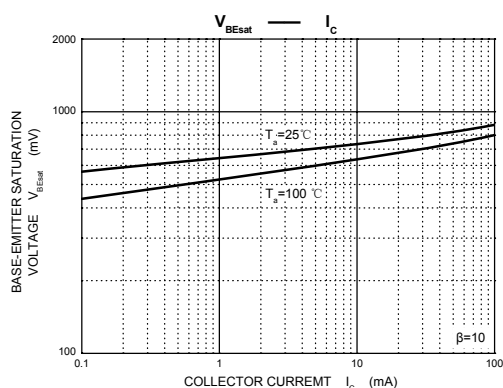
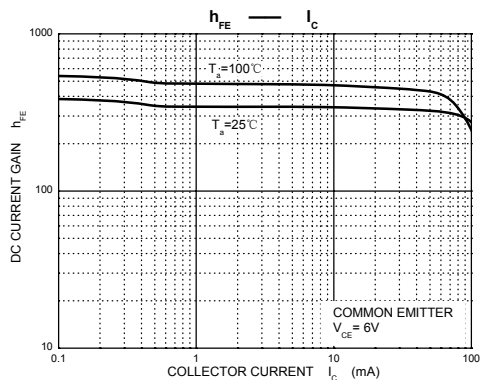
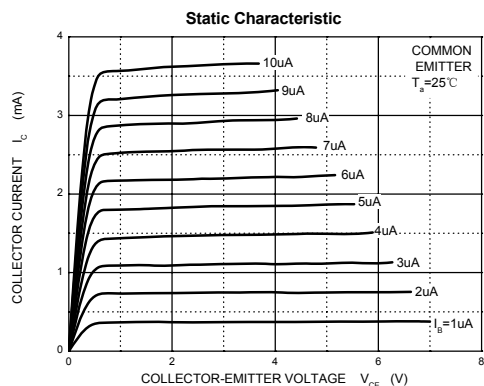
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 100\text{ }\mu\text{A}$, $I_E = 0$	60			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1\text{ mA}$, $I_B = 0$	50			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100\text{ }\mu\text{A}$, $I_C = 0$	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

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

h_{FE} Classification

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

Typical Characteristics



Ordering information

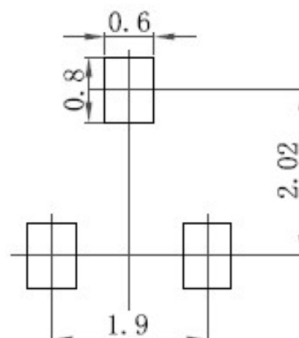
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



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