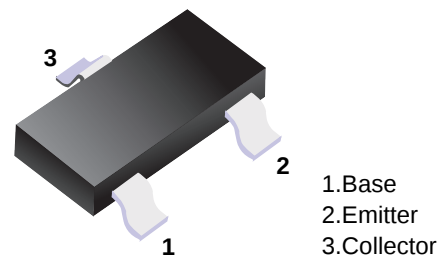


NPN Transistors

■ Features

- High DC Current gain.
- Complimentary to 2SB624



■ Simplified outline(SOT-23)

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V _{CB0}	30	V
Collector - Emitter Voltage	V _{CEO}	25	
Emitter - Base Voltage	V _{EB0}	5	
Collector Current - Continuous	I _c	700	mA
Collector Power Dissipation	P _c	200	mW
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25°C

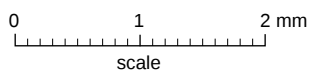
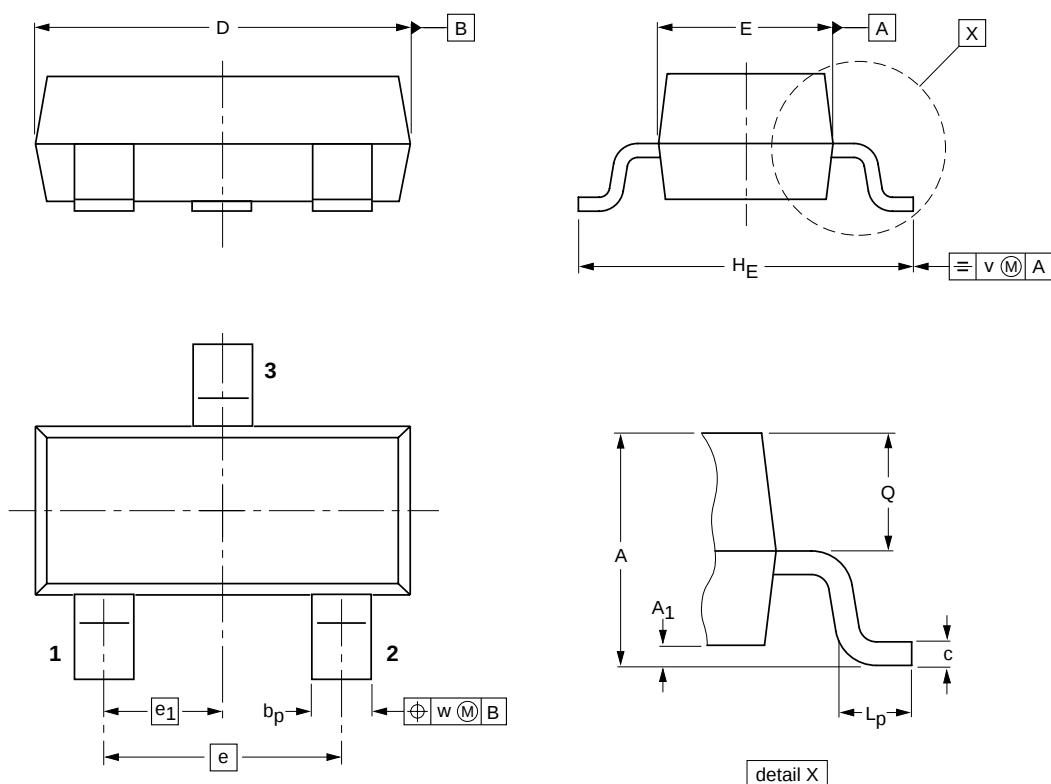
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c = 100 μA, I _E = 0	30			V
Collector- emitter breakdown voltage	V _{CEO}	I _c = 1 mA, I _B = 0	25			
Emitter - base breakdown voltage	V _{EB0}	I _E = 100 μA, I _c = 0	5			
Collector-base cut-off current	I _{CB0}	V _{CB} = 30 V, I _E = 0			100	nA
Emitter cut-off current	I _{EB0}	V _{EB} = 5V, I _c =0			100	
Collector-emitter saturation voltage (Note.1)	V _{CE(sat)}	I _c =700 mA, I _B =70mA			0.6	V
Base - emitter saturation voltage (Note.1)	V _{BE(sat)}	I _c =700 mA, I _B =70mA			1.2	
Base - emitter voltage (Note.1)	V _{BE}	V _{CE} = 6V, I _c = 10mA	0.6		0.7	
DC current gain (Note.1)	h _{FE(1)}	V _{CE} = 1V, I _c = 100mA	110		400	
	h _{FE(2)}	V _{CE} = 1V, I _c = 700mA	50			
Collector output capacitance	C _{ob}	V _{CB} = 6V, I _E = 10mA, f=10MHz		12		pF
Transition frequency	f _T	V _{CE} = 6V, I _c = 10mA	170			MHz

Note.1: Pulse test : Pulse width ≤350μs, Duty Cycle≤2%.

■ Classification of h_{FE(1)}

Type	2SD596-DV1	2SD596-DV2	2SD596-DV3	2SD596-DV4	2SD596-DV5
Range	110-180	135-220	170-270	200-320	250-400
Marking	DV1	DV2	DV3	DV4	DV5

■ SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1