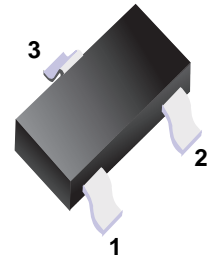


■ PNP Transistors

■ Features

- Small Package
- Complementary to MMBT2222AT



1.Base
2.Emitter
3.Collector

■ Simplified outline(SOT-523)

■ Absolute Maximum Ratings Ta = 25°C

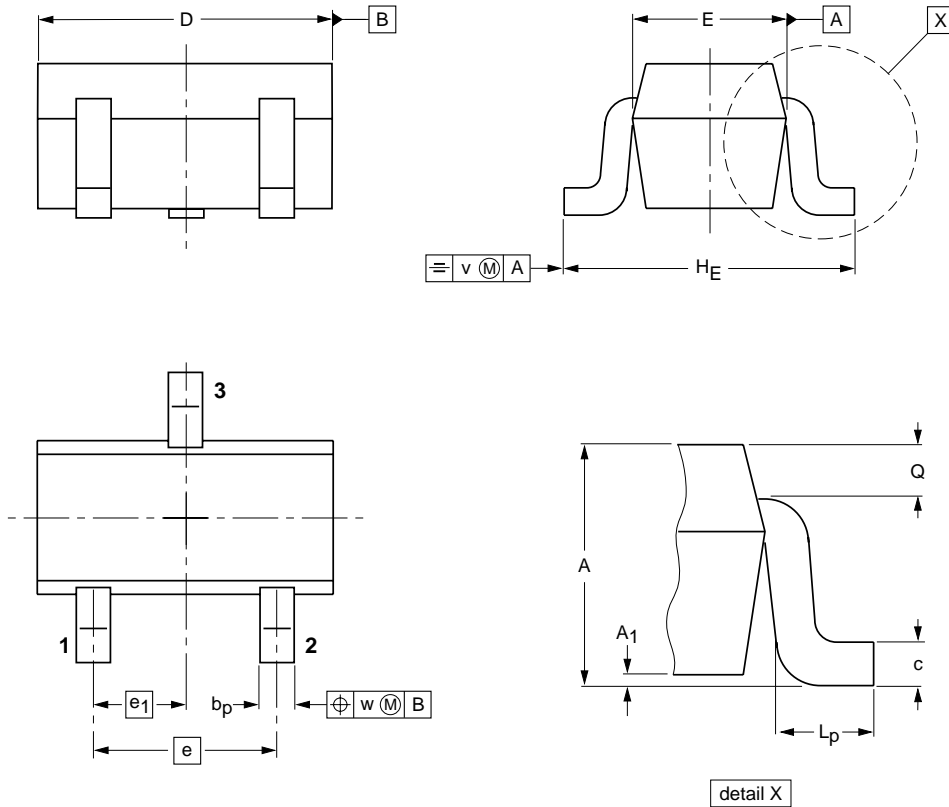
Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V _{CB0}	-60	V
Collector - Emitter Voltage	V _{CEO}	-60	
Emitter - Base Voltage	V _{EB0}	-5	
Collector Current - Continuous	I _c	-600	mA
Collector Power Dissipation	P _c	150	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	833	°C/W
Junction Temperature	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	-60			V
Collector- emitter breakdown voltage	V _{CEO}	I _c = -10 mA, I _B = 0	-60			
Emitter - base breakdown voltage	V _{EB0}	I _E = -100 μA, I _c = 0	-5			
Collector-base cut-off current	I _{cBO}	V _{CB} = -50 V, I _E = 0			-100	nA
Emitter cut-off current	I _{EBO}	V _{EB} = -5V, I _c =0			-100	
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =-150 mA, I _B =-15mA			-0.4	V
		I _c = -500 mA, I _B = -50mA			-1.6	
Base - emitter saturation voltage	V _{BE(sat)}	I _c =-150 mA, I _B =-15mA			-1.3	
		I _c = -500 mA, I _B = -50mA			-2.6	
DC current gain	h _{FE(1)}	V _{CE} = -10V, I _c =- 0.1mA	75			
	h _{FE(2)}	V _{CE} = -10V, I _c = -1mA	100			
	h _{FE(3)}	V _{CE} = -10V, I _c =- 10mA	100			
	h _{FE(4)}	V _{CE} = -10V, I _c = -150mA	100		300	
	h _{FE(5)}	V _{CE} = -10V, I _c = -500mA	50			
Delay time	t _d	V _{CC} =-30V, I _c =-150mA, I _{B1} =-15mA			10	nS
Rise time	t _r				40	
Storage time	t _s				225	
Fall time	t _f				30	
Emitter input capacitance	C _{ib}	V _{EB} = -2V, I _c = 0, f=1MHz			30	
Collector output capacitance	C _{ob}	V _{CB} = -10V, I _E = 0, f=1MHz			8	
Transition frequency	f _T	V _{CE} = -20V, I _c = -50mA, f=100MHz	200			MHz

Package Outline

SOT-523



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	0.95 0.60	0.1	0.30 0.15	0.25 0.10	1.8 1.4	0.9 0.7	1	0.5	1.75 1.45	0.45 0.15	0.23 0.13	0.2	0.2

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-523	Tape/Reel, 7" reel	3000	EIA-481-1