

■ PNP Transistors



■ Simplified outline(SOT-23)

■ Features

- Excellent hFE linearity
- Collector Current :I_c=-0.5A

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V _{CB0}	-40	V
Collector - Emitter Voltage	V _{CEO}	-25	V
Emitter - Base Voltage	V _{EBO}	-5	V
Collector Current to Continuous	I _c	-500	mA
Collector Power Dissipation	P _c	300	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to 150	°C

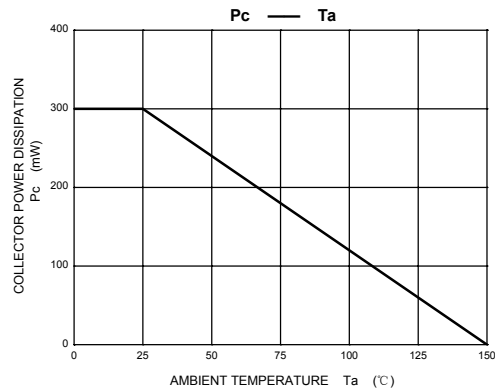
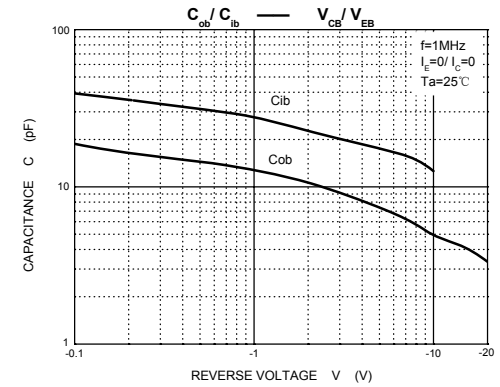
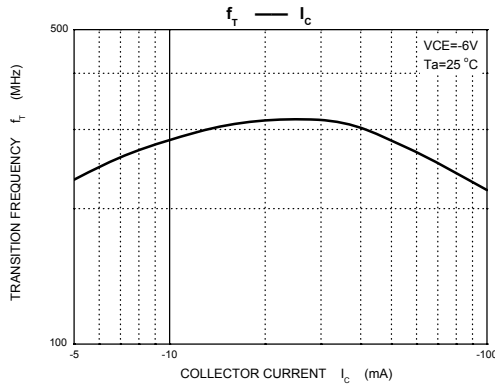
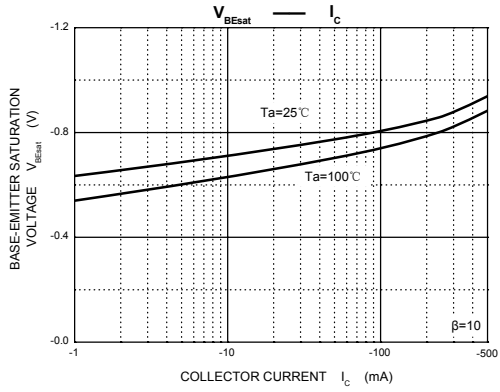
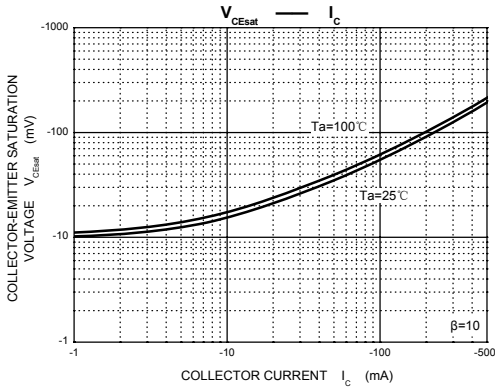
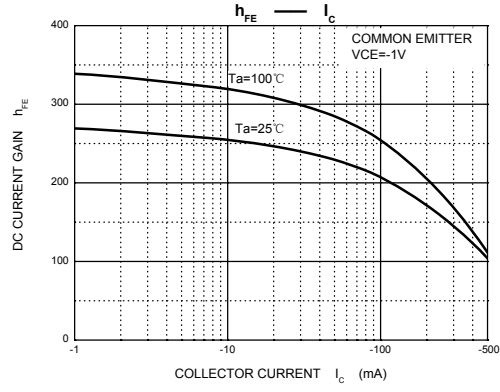
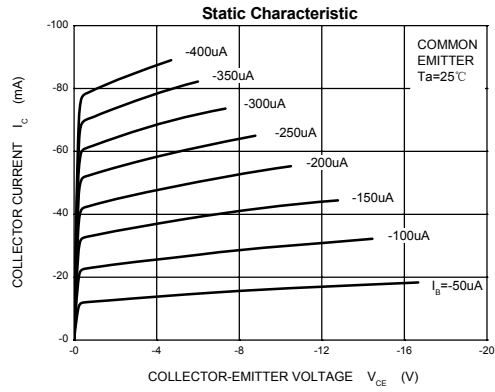
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector - base breakdown voltage	V _{CB0}	I _c = -100u A, I _E =0	-40			V
Collector - emitter breakdown voltage	V _{CEO}	I _c = -1 mA, I _B =0	-25			V
Emitter - base breakdown voltage	V _{EBO}	I _E = -100uA, I _C =0	-5			V
Collector cut - off current	I _{CB0}	V _{CB} =- 40V, I _E =0			-0.1	μ A
Collector cut - off current	I _{CEO}	V _{CB} =-20V, I _E =0			-1	μ A
Emitter cut - off current	I _{EBO}	V _{EB} =- 5V, I _C =0			-0.1	μ A
DC current gain	h _{FE}	V _{CE} =-1V, I _c = -50mA	120		400	
Collector - emitter saturation voltage	V _{CE(sat)}	I _c = -500 mA, I _B = -50mA			-0.6	V
Base - emitter voltage	V _{BE(sat)}	I _c = -500 mA, I _B =- 50mA			-1.2	V
Collector output capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz			5	pF
Transition frequency	f _T	V _{CE} =-6V, I _c =-20mA, f=30MHz	150			MHz

■ Classification of h_{FE}(1)

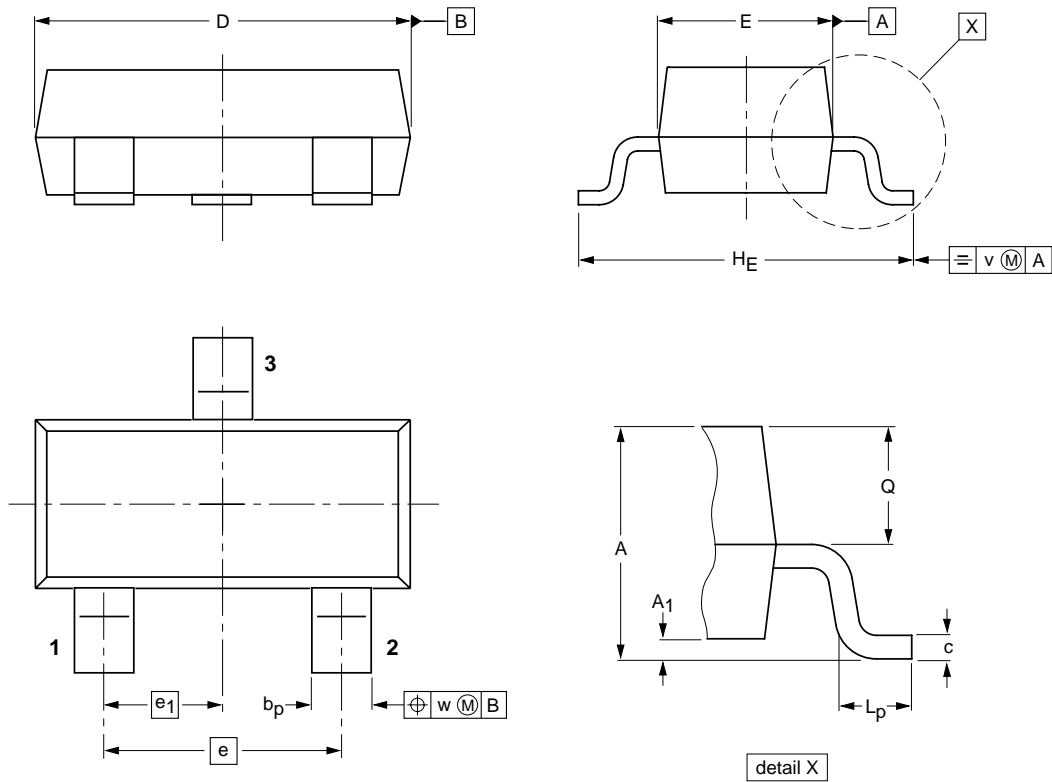
Type	S9012	S9012-L	S9012-H	S9012-J
Range	200-350	120-200	144-202	300-400
Marking	2T1			

■ Typical Characteristics



Package Outline

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

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel, 7" reel	3000	EIA-481-1