

S9012LT

PNP EPITAXIAL SILICON TRANSISTOR

Features

- Excellent HFE Linearity HFE
- $hFE(2)=25(\text{Min.})$ at $V_{CE}=6V, I_c=400\mu A$
- High Total Power Dissipation: $P_c=225mW$
- RoHS compliant package

Mechanical Data

- Case: SOT-23 Molded plastic
- Epoxy: UL94V-0 rate flame retardant

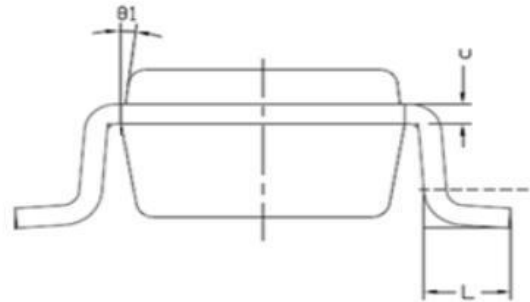
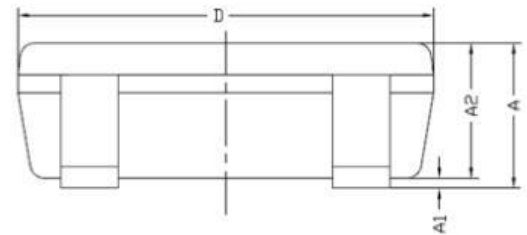
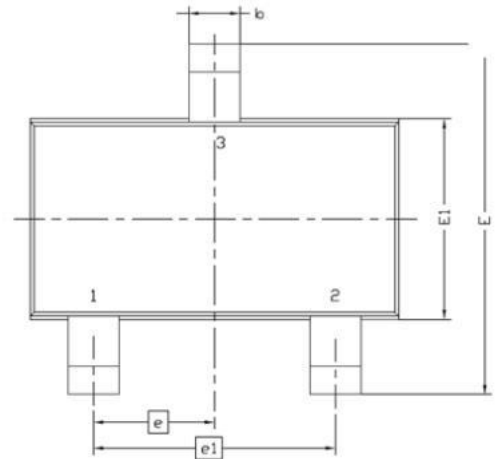
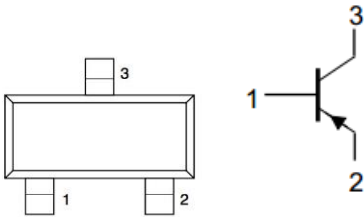
Packing & Order Information

3,000/Reel



**RoHS
COMPLIANT**

Graphic symbol



Symbol	MILLIMETERS	
	MIN	MAX
A	0.8	1.2
A1	0	0.1
A2	0.7	1.1
b	0.3	0.5
c	0.1	0.2
D	2.7	3.1
E	2.6	3
E1	1.4	1.8
e	0.95 BSC	
e1	1.9 BSC	
L	0.3	0.6
theta1	7° NOM	

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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Symbol	Parameter	S9012	Unit
V _{CBO}	Collector-Base Voltage	-40	Vdc
V _{CEO}	Collector-Emitter Voltage	-30	Vdc
V _{EBO}	Emitter-Base Voltage	-5	Vdc
I _C	Collector Current	-500	mAdc
P _D	Collector Power Dissipation	300	mW
T _j ,T _{stg}	Junction and Storage Temperature	-55 to +150	°C

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Symbol	Parameter	Test Conditions	MIN	TYP	MAX	UNIT
V _{(BR)CBO}	Collector-base breakdown voltage	I _C = -100μA	-40			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C = -1 mA	-30			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E = -100μA	-5			V
I _{CBO}	Collector cut-off current	V _{CB} = -35 V , I _E = 0			-0.1	uA
I _{EBO}	Emitter cut-off current	V _{EB} = -5 V , I _C = 0			-0.1	uA
h _{FE(1)}	DC current gain	V _{CE} = -1 V , I _C = -100 mA	70		400	
V _{CE(sat)}	Collector-emitter saturation voltage	I _C = -500 mA , I _B = -50 mA			-0.6	V
V _{BE}	Base-Emitter Saturation Voltage	V _{CE} = -1 V , I _C = -100mA		-0.8	-1.0	V
f _r	Transition frequency	V _{CE} = -6 V , I _C = -20 mA	150	300		MHz
C _{ob}	Collector output capacitance	V _{CB} = -6 V , I _E = 0 f = 1.0MHz		7	10	pF

CLASSIFICATION OF h_{FE}

Rank	L	H
Rang	70-200	200-400

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■ TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

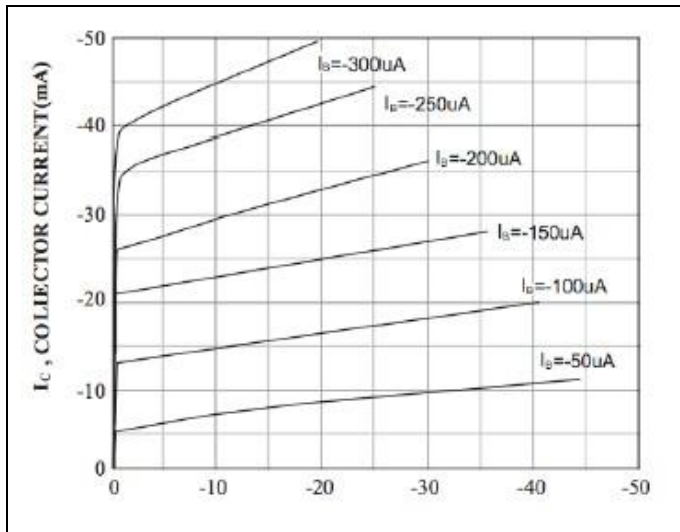


FIG.1- STATIC CHARACTERISTICS

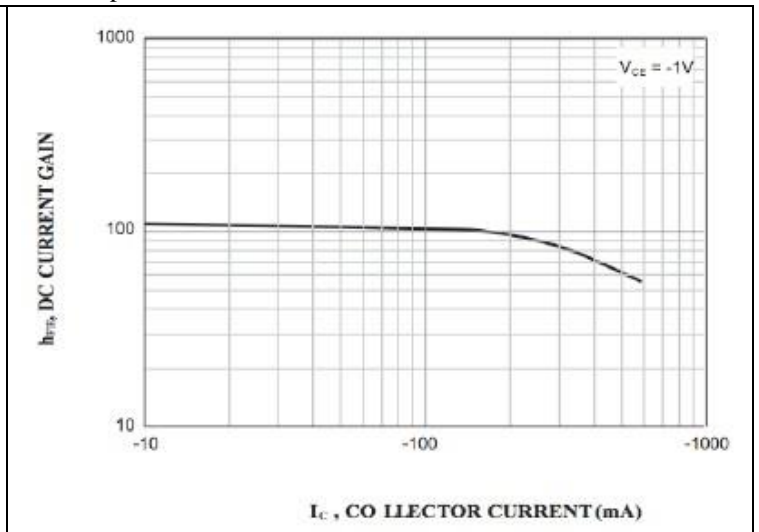


FIG.2- DC CURRENT GAIN

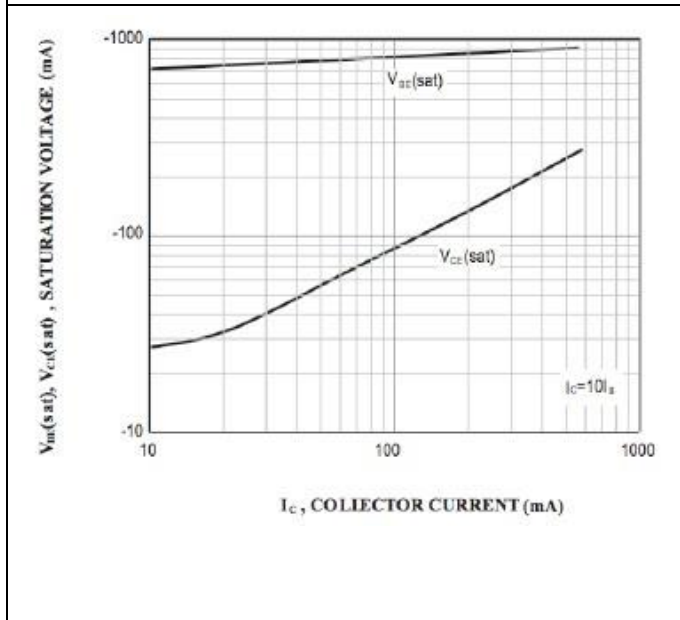


FIG.3- BASE-EMITTER SATURATION VOLTAGE COLLECTOR-EMITTER SATURATION VOLTAGE

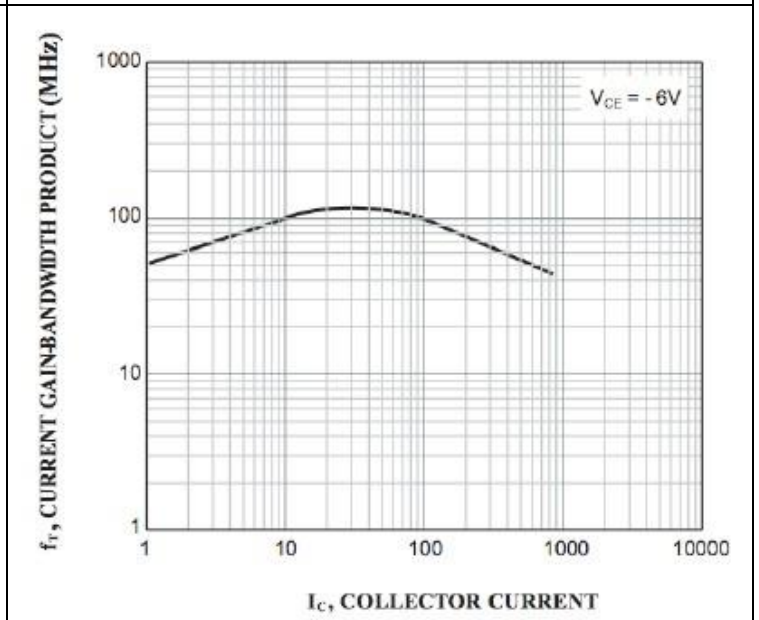


FIG.4- CURRENT GAIN BANDWIDTH PRODUCT

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