S9012LT

PNP EPITAXIAL SILICON TRANSISTOR

Features

- Excellent HFE Linearity HFE
- hFE(2)=25(Min.) at VCE=6V ,Ic=400m
- High Total Power Dissipation: Pc=225mW
- RoHS compliant package

Mechanical Data

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

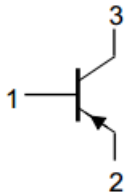
Packing & Order Information

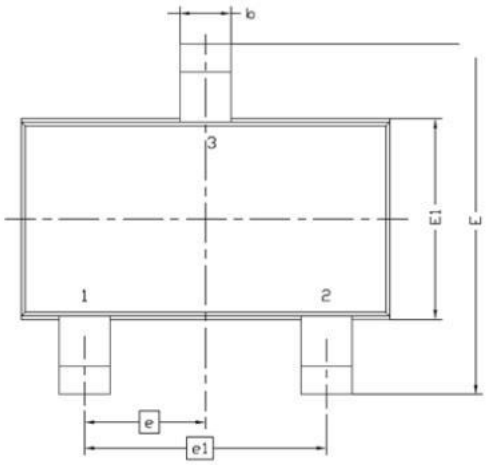
3,000/Reel

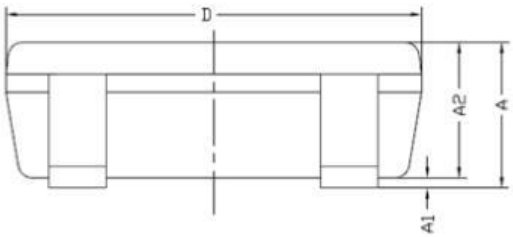


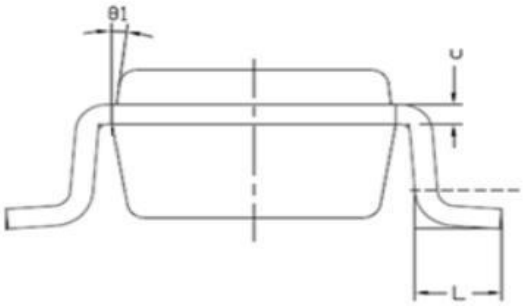
RoHS
COMPLIANT

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
θ1	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
Tj,Tstg	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_T	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 @ Ta=25°C unless otherwise specified

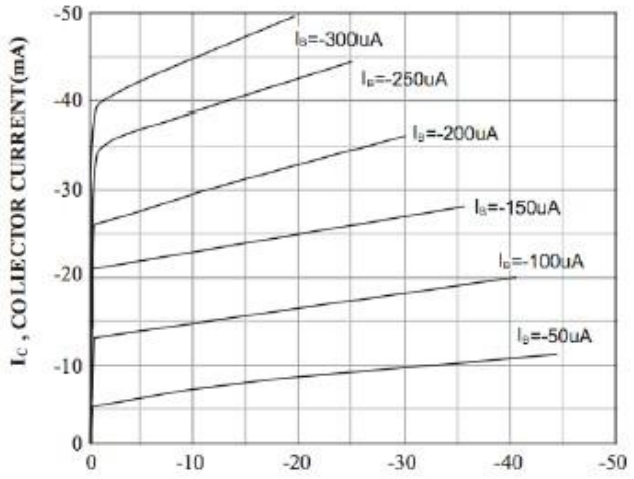


FIG.1- STATIC CHARACTERISTICS

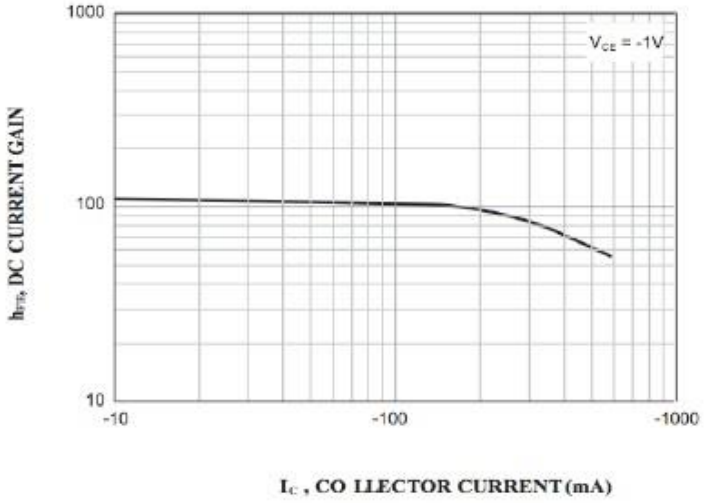


FIG.2- DC CURRENT GAIN

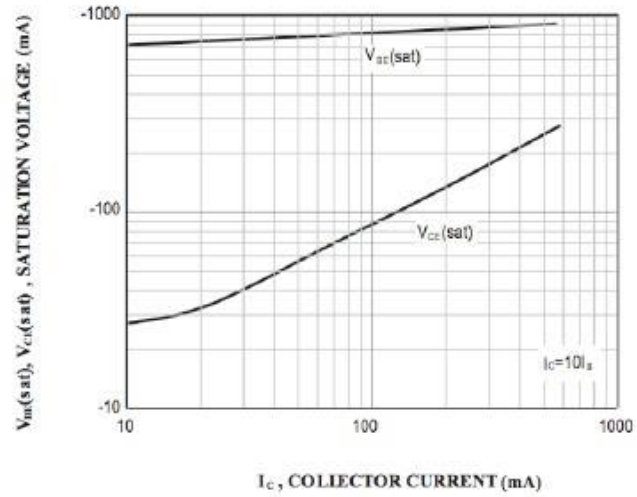


FIG.3- BASE-EMITTER SATURATION VOLTAGE COLLECTOR-EMITTER SATURATION VOLATAGE

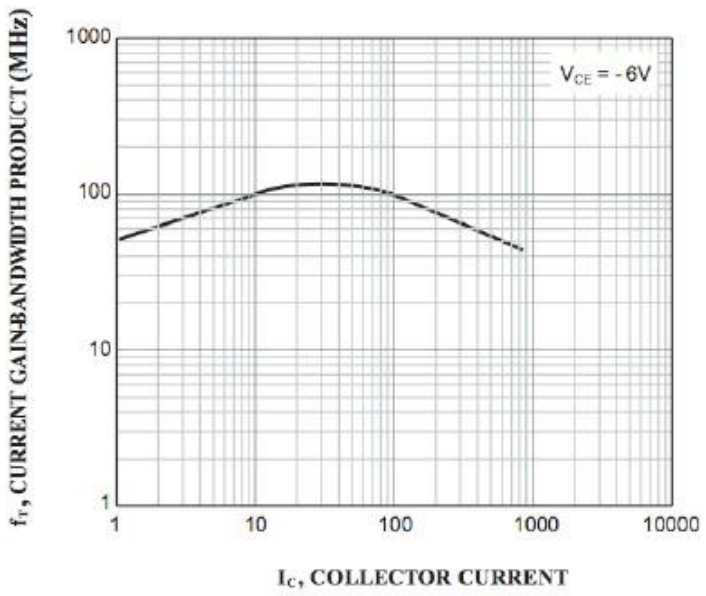


FIG.4- CURRENT GAIN BANDWIDTH PRODUCT

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