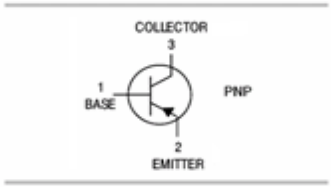
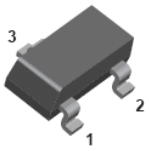
PNP Silicon Epitaxial Planar Transistor **S9012**

FEATURES

HF

- High Collector Current.(I_C= -500mA)
- Complementary To S9013.
- Excellent H_{FE} Linearity.
- RoHS compliant with Halogen-free





SOT-23

APPLICATIONS

- High Collector Current.

ORDERING INFORMATION

Type No.	Marking	Package Code
S9012-L	2T1	SOT-23
S9012-H	2T1	SOT-23
S9012-J	2T1	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-25	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-500	mA
P_C	Collector Dissipation	300	mW
T_J,T_{STG}	Junction and Storage Temperature	-55 to +150	℃

PNP Silicon Epitaxial Planar Transistor **S9012**

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA,I_E=0	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-1mA,I_B=0	-25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-100μA,I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-40V,I_E=0			-0.1	μA
Collector cut-off current	I_{CEO}	V_{CE}=-20V,I_B=0			-0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V,I_C=0			-0.1	μA
DC current gain	h_{FE}	V_{CE}=-1V,I_C=-50mA	120		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-500mA, I_B= -50mA			-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-500mA, I_B= -50mA			-1.2	V
Transition frequency	f_T	V_{CE}=-6V, I_C= -20mA f=30MHz	150			MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V,I_E=0,f=1MHz			5	pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	L	H	J
Range	120-200	200-350	300-400
MARKING	2T1		

PNP Silicon Epitaxial Planar Transistor **S9012**

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

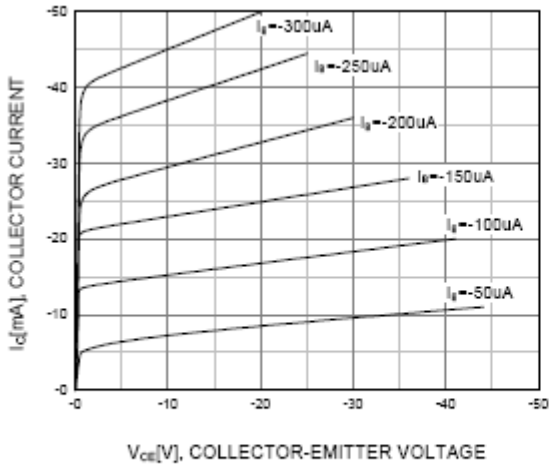


Figure 1. Static Characteristic

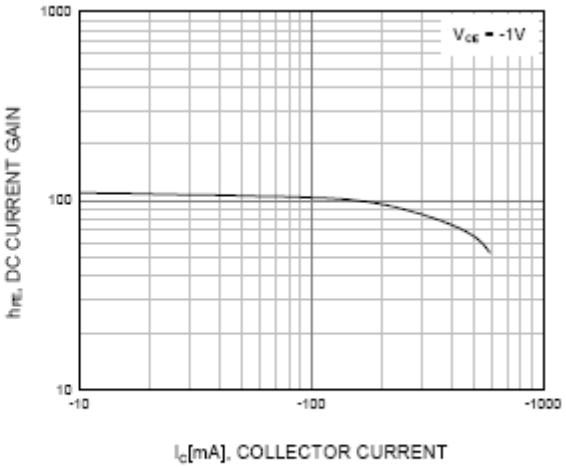


Figure 2. DC current Gain

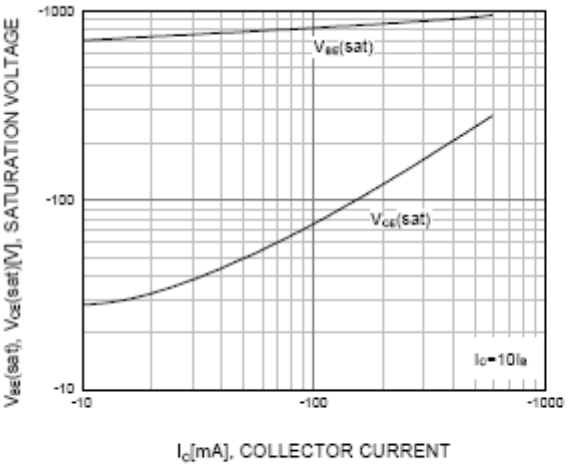


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

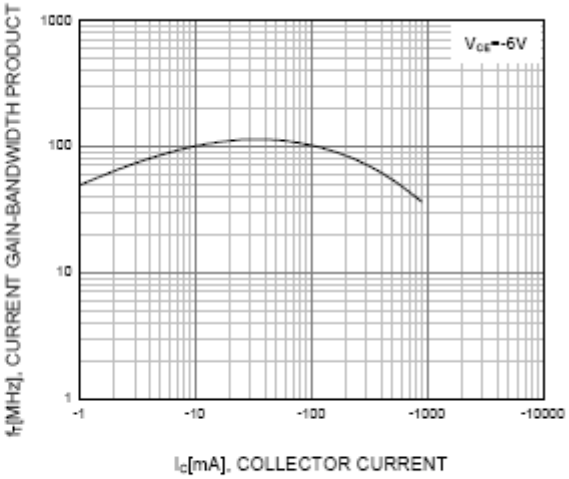
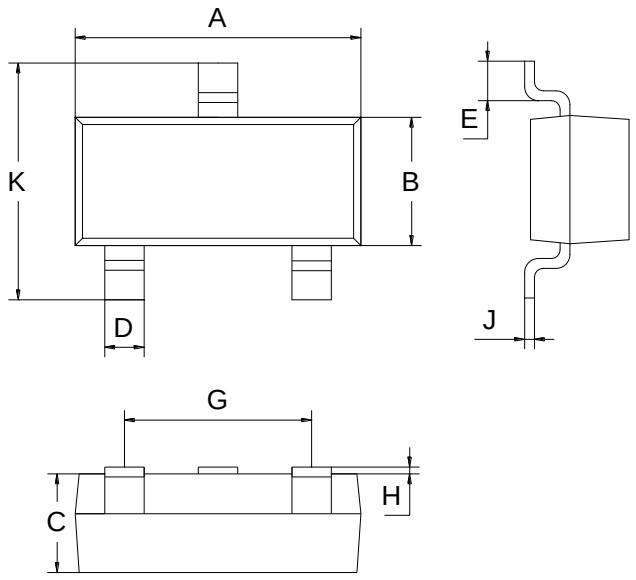


Figure 4. Current Gain Bandwidth Product

PNP Silicon Epitaxial Planar Transistor **S9012**

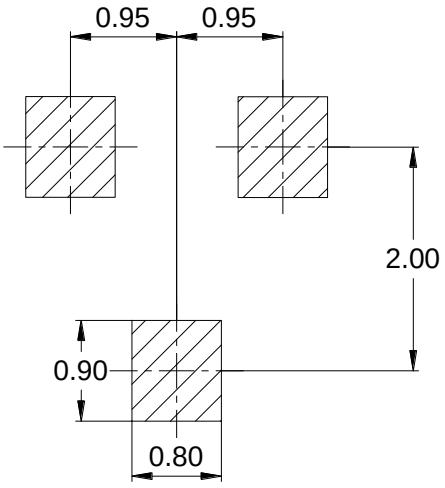
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

Device	Package	Shipping
S9012	SOT-23	3000 pcs / Tape & Reel