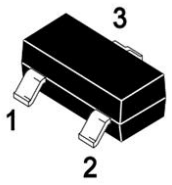
SSCP9012GS6

PNP Switching Transistor

➢ Features

VCB	VCE	VEB	IC
-40V	-25V	-5V	-500mA

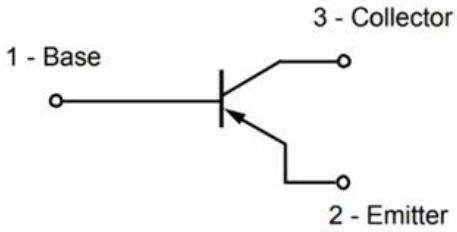
➢ Pin configuration



SOT-23

➢ Description

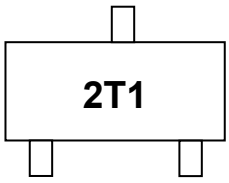
The PNP Transistor is designed for use in linear and switching applications. The device is housed in the SOT-23 package, which is designed for telephony and professional communication equipment.



Circuit Diagram

➢ Applications

- General purpose switching and amplification
- Telephony and professional communication equipment



Marking (Top View)

➢ Ordering Information

Device	Package	Shipping
SSCP9012GS6	SOT-23	3000/Reel

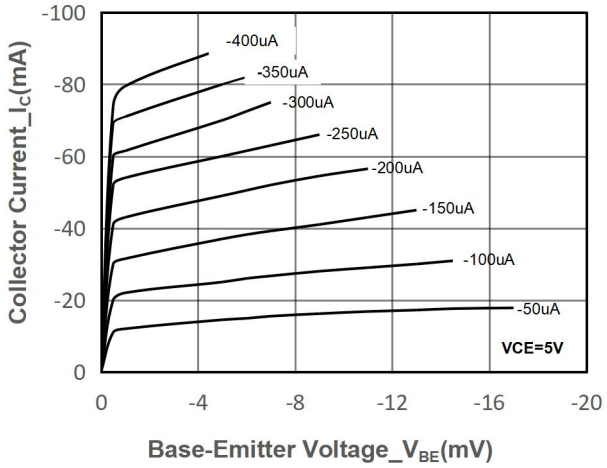
➢ Absolute Maximum Ratings (T_A = 25℃ unless otherwise noted)

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

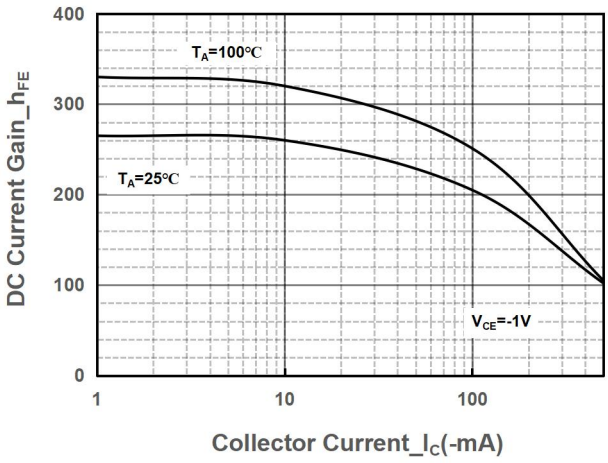
➢ Electrical Characteristics (T_A = 25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C = -100uA, I_E = 0	-40			V
Collector-emitter Breakdown Voltage	BV_{CEO}	I_C = -0.1mA, I_B = 0	-25			V
Emitter -Base Breakdown Voltage	BV_{EBO}	I_E = -100uA, I_C = 0	-5			V
Collector Cutoff Current	I_{CBO}	V_{CB} = -40V, I_E = 0			-0.1	μA
Collector Cutoff Current	I_{CEO}	V_{CE} = -20V, I_B = 0			-0.1	μA
Emitter Cutoff 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

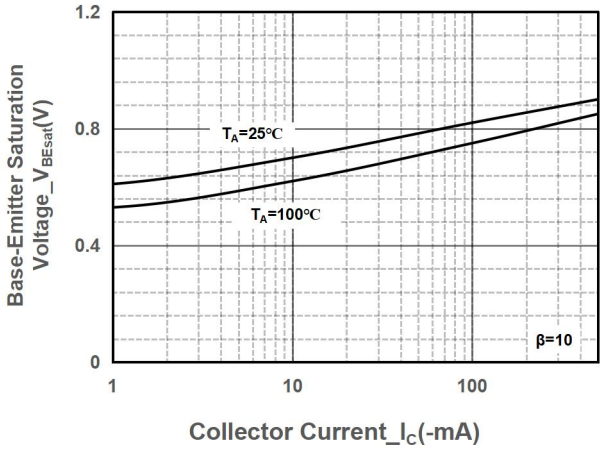
➢ Typical Performance Characteristics (T_A = 25℃ unless otherwise noted)



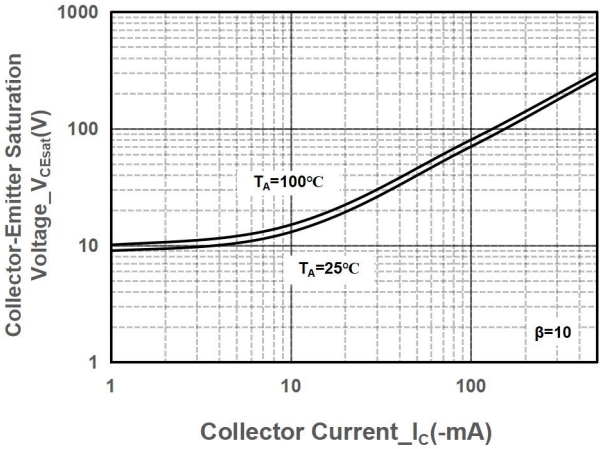
Collector Current vs. Base-Emitter Voltage



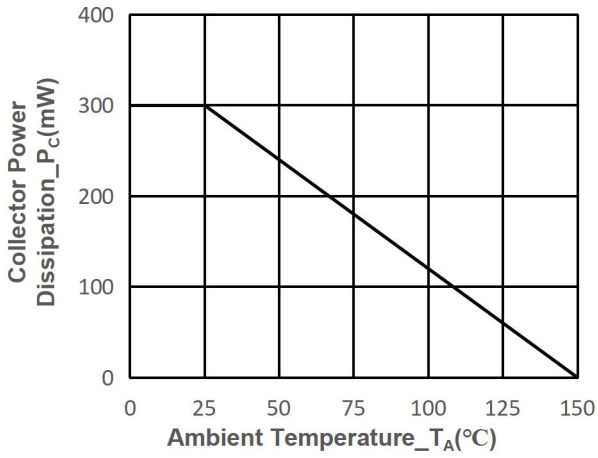
DC Current Gain vs. Collector Current



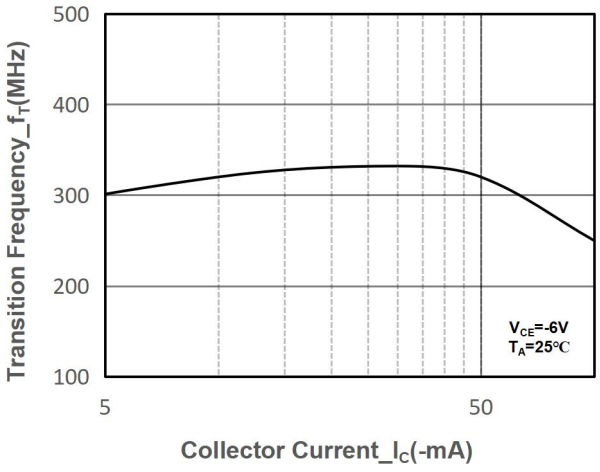
$V_{BE\ (sat)}$ vs. Collector Current



$V_{CE\ (sat)}$ vs. Collector Current



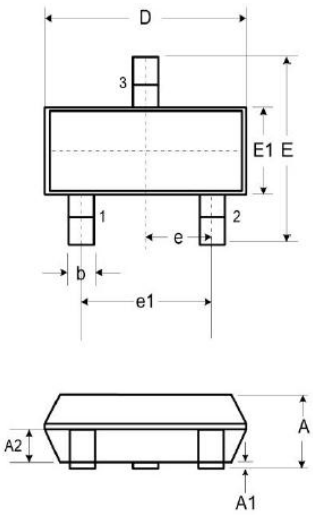
Power derating vs. Ambient temperature

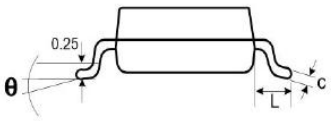


Transition Frequency vs. Collector Current

➢ Package Information

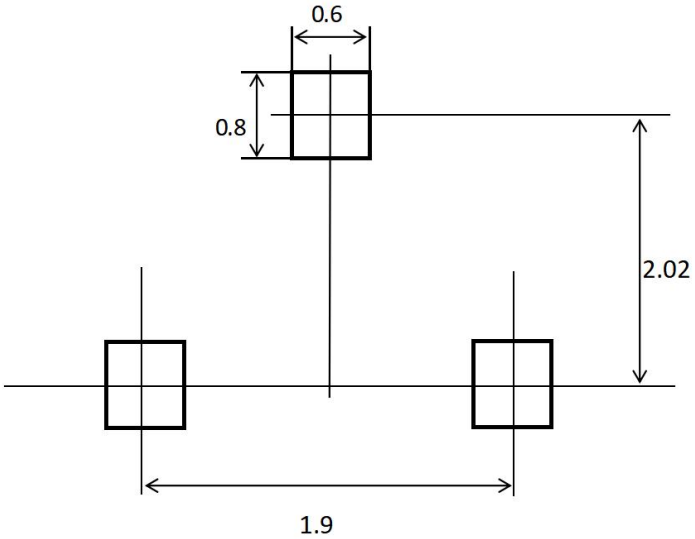
SOT-23





DIM	Millimeters		
	Min.	Typ.	Max.
A	0.900	-	1.150
A1	0.00	-	0.100
A2	0.900	-	1.050
b	0.300	-	0.500
c	0.080	-	0.150
D	2.800	-	3.000
E	2.250	-	2.550
E1	1.200	-	1.40
e	0.950		
e1	1.800	-	2.000
L	0.550		
L1	0.300		0.500
N	3		
θ	0°	-	8°

Recommended Pad outline (Unit: mm)



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