



## SSCP3906GS6

### PNP Switching Transistor

#### ➤ Features

VCE	VBE	VCEsat	IC
-40V	-5V	-400mV	-200mA

#### ➤ 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.

#### ➤ Applications

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

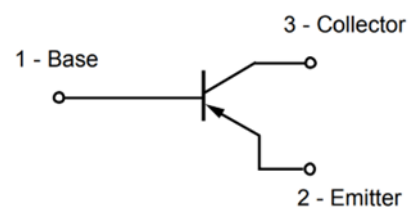
#### ➤ Ordering Information

Device	Package	Shipping
SSCP3906GS6	SOT-23	3000/Reel

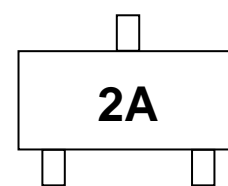
#### ➤ Pin configuration



**SOT-23**



**Circuit Diagram**



**Marking(Top View)**



➤ **Absolute Maximum Ratings**( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

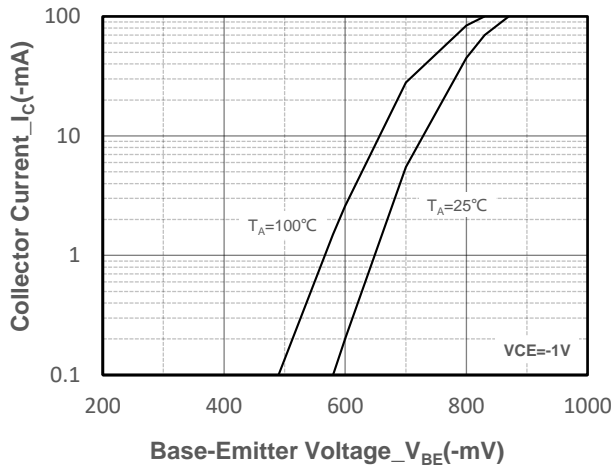
Parameter	Symbol	Value	Unit
Collector-Base Voltage	$V_{CB0}$	-40	V
Collector- Emitter Voltage	$V_{CEO}$	-40	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current-Continuous	$I_C$	-200	mA
Collector Power Dissipation	$P_C$	200	mW
Junction Temperature	$T_J$	150	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-55 to 150	$^{\circ}\text{C}$

➤ **Electrical Characteristics** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

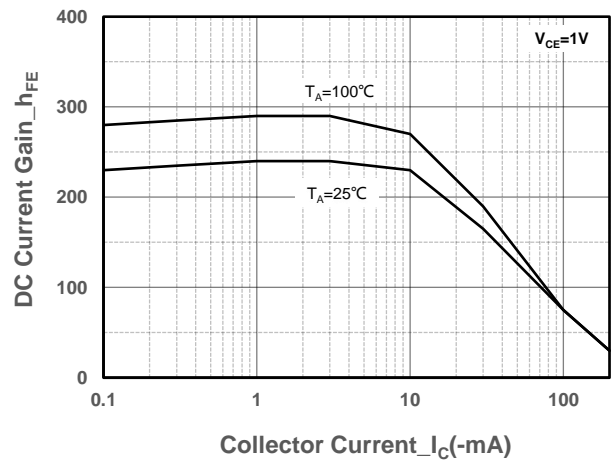
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$BV_{CB0}$	$I_C=-10\mu\text{A}, I_E=0$	-40			V
Collector-emitter Breakdown Voltage	$BV_{CEO}$	$I_C=-1\text{mA}, I_B=0$	-40			V
Emitter -Base Breakdown Voltage	$BV_{EBO}$	$I_E=-10\mu\text{A}, I_C=0$	-5			V
Collector Cutoff Current	$I_{CEX}$	$V_{CE}=-30\text{V}, V_{EB}=-3\text{V}$			-50	nA
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=-30\text{V}, I_E=0$			-100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=-3\text{V}, I_C=0$			-100	nA
DC Current Gain	$h_{FE}$	$V_{CE}=-1\text{V}, I_C=-10\text{mA}$	100		300	
		$V_{CE}=-1\text{V}, I_C=-0.1\text{mA}$	60			
		$V_{CE}=-1\text{V}, I_C=-100\text{mA}$	30			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-50\text{mA}, I_B=-5\text{mA}$			-0.4	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-50\text{mA}, I_B=-5\text{mA}$			-0.95	V
Transition frequency	$f_T$	$V_{CE}=-20\text{V}, I_C=-10\text{mA}$ $f=100\text{MHz}$	250			MHz
Delay Time	$t_d$	$V_{CC}=-3\text{V}, V_{BE}=0.5\text{V}$			35	ns
Rise Time	$t_r$	$I_C=-10\text{mA}, I_{B1}=-1\text{mA}$			35	ns
Storage Time	$t_s$	$V_{CC}=-3\text{V}, I_C=-10\text{mA}$			225	ns
Fall Time	$t_f$	$I_{B1}=-I_{B2}=-1\text{mA}$			75	ns



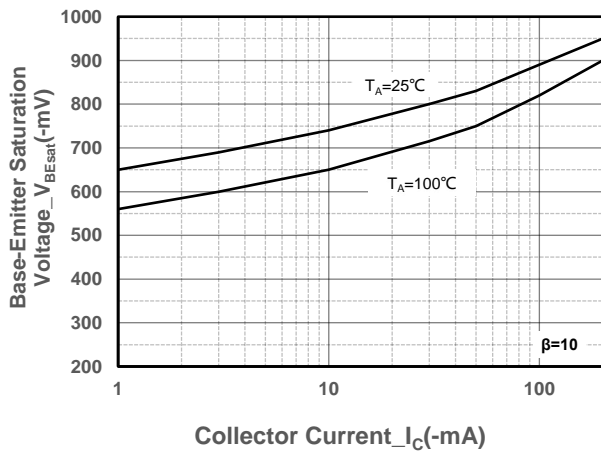
## Typical Performance Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise noted)



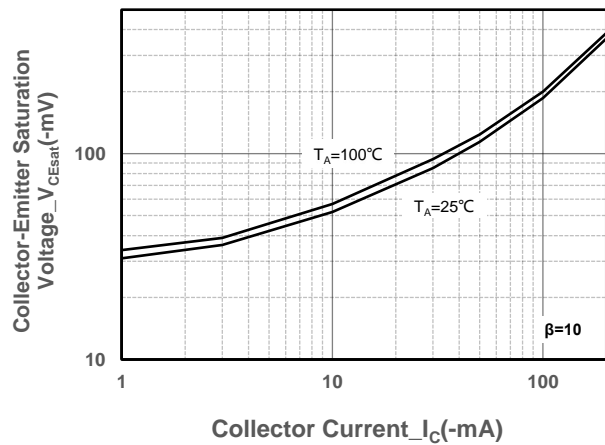
Collector Current vs. Base-Emitter Voltage



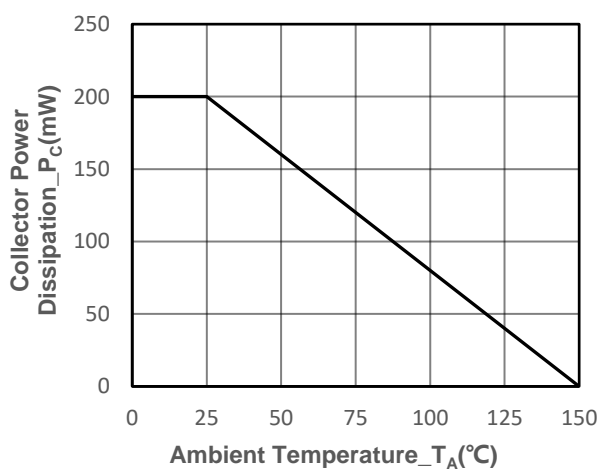
DC Current Gain vs. Collector Current



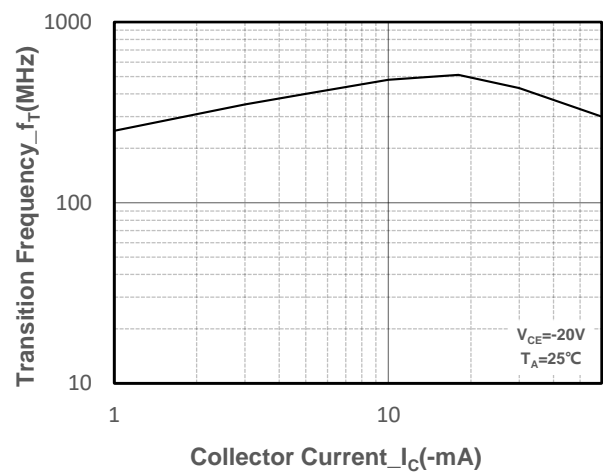
$V_{BE(sat)}$  vs. Collector Current



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



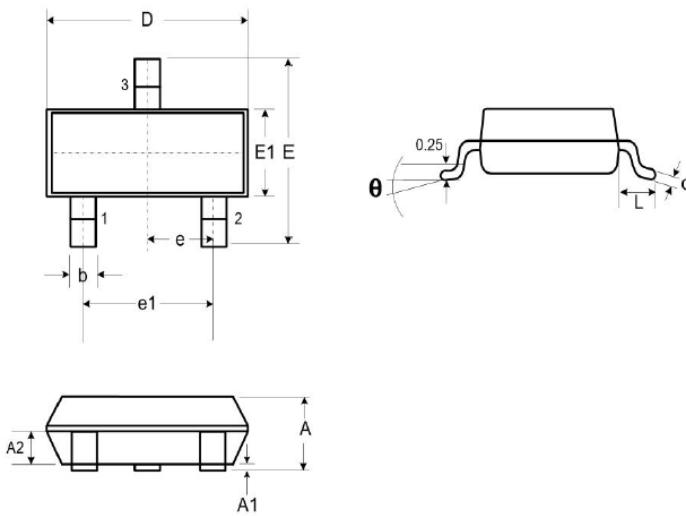
Power derating vs. Ambient temperature



Transition Frequency vs. Collector Current

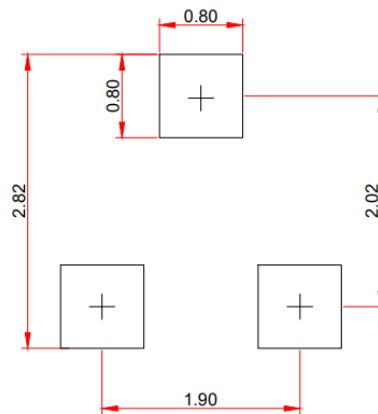


● **Package Information**



DIM	Millimeters		
	Min.	Typ.	Max.
A	0.89	-	1.12
A1	0.01	-	0.10
A2	0.88	0.95	1.02
b	0.30	-	0.51
c	0.08	-	0.18
D	2.80	2.90	3.04
E	2.10	2.37	2.64
E1	1.20	1.30	1.40
e	1.90		
e1	0.95		
L	0.40	0.50	0.60
L1	0.55		
N	3		
θ	0°	-	8°

**Recommended Pad outline(Unit: mm)**





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