



## SSCP3906GS7

### PNP Switching Transistor

#### ➤ Features

VCB	VCE	VBE	VCESAT	IC
-40V	-40V	-5V	-400mV	-200mA

#### ➤ Description

The PNP Transistor is designed for use in linear and switching applications. The device is housed in the SOT-323 package, which is designed for telephony and professional communication equipment.

#### ➤ Applications

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

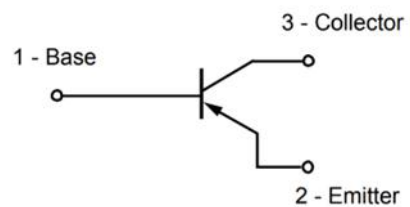
#### ➤ Ordering Information

Device	Package	Shipping
SSCP3906GS7	SOT-323	3000/Reel

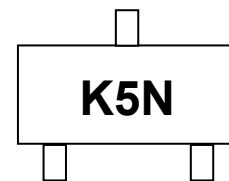
#### ➤ Pin configuration



**SOT-323**



**Circuit Diagram**



**Marking(Top View)**



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

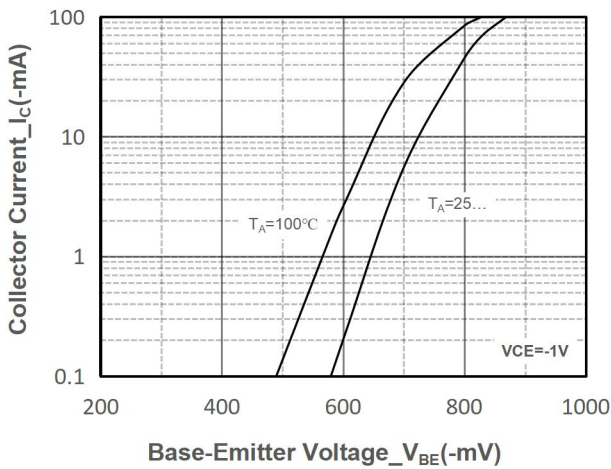
Parameter	Symbol	Value	Unit
Collector-Base Voltage	$V_{CB0}$	-40	V
Collector- Emitter Voltage	$V_{CEO}$	-40	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current-Continuous	$I_C$	-200	mA
Collector Power Dissipation	$P_C$	200	mW
Junction Temperature	$T_J$	150	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$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

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

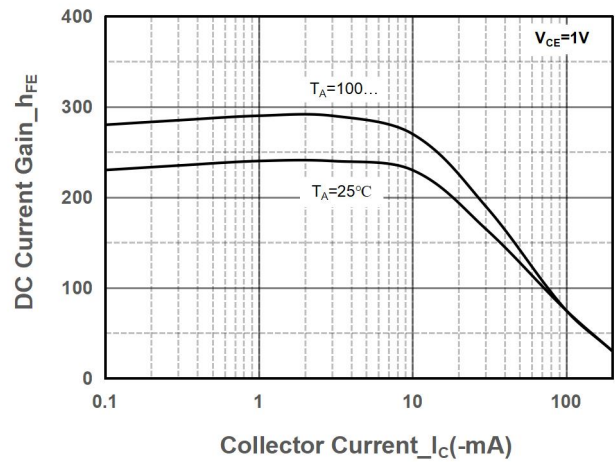
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$BV_{CB0}$	$I_C=-10\mu\text{A}, I_E=0$	-40			V
Collector-emitter Breakdown Voltage	$BV_{CEO}$	$I_C=-1\text{mA}, I_B=0$	-40			V
Emitter -Base Breakdown Voltage	$BV_{EBO}$	$I_E=-10\mu\text{A}, I_C=0$	-5			V
Collector 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



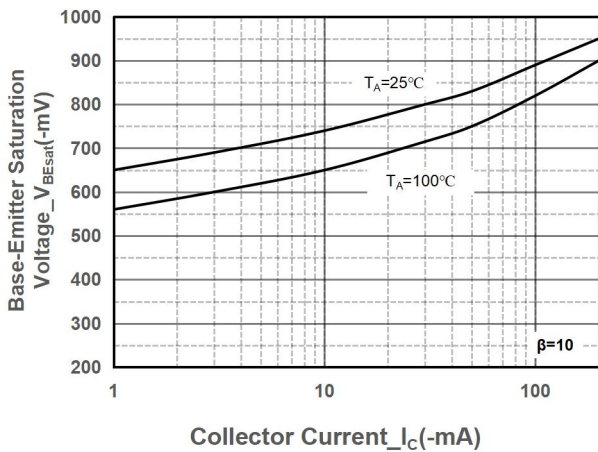
➤ **Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise noted)**



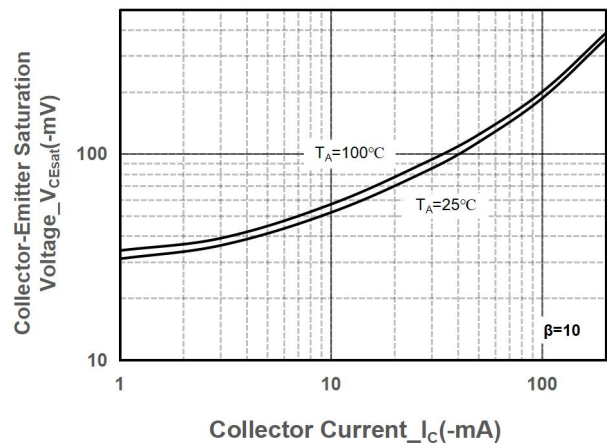
**Collector Current vs. Base-Emitter Voltage**



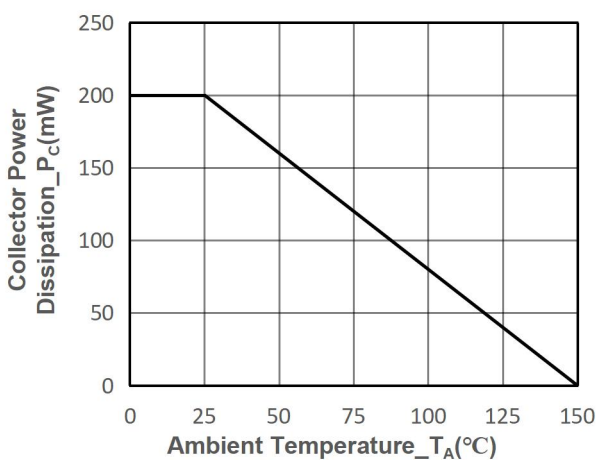
**DC Current Gain vs. Collector Current**



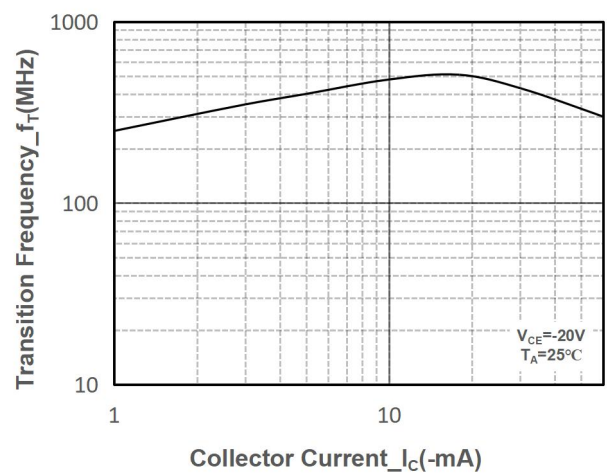
**$V_{BE(sat)}$  vs. Collector Current**



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

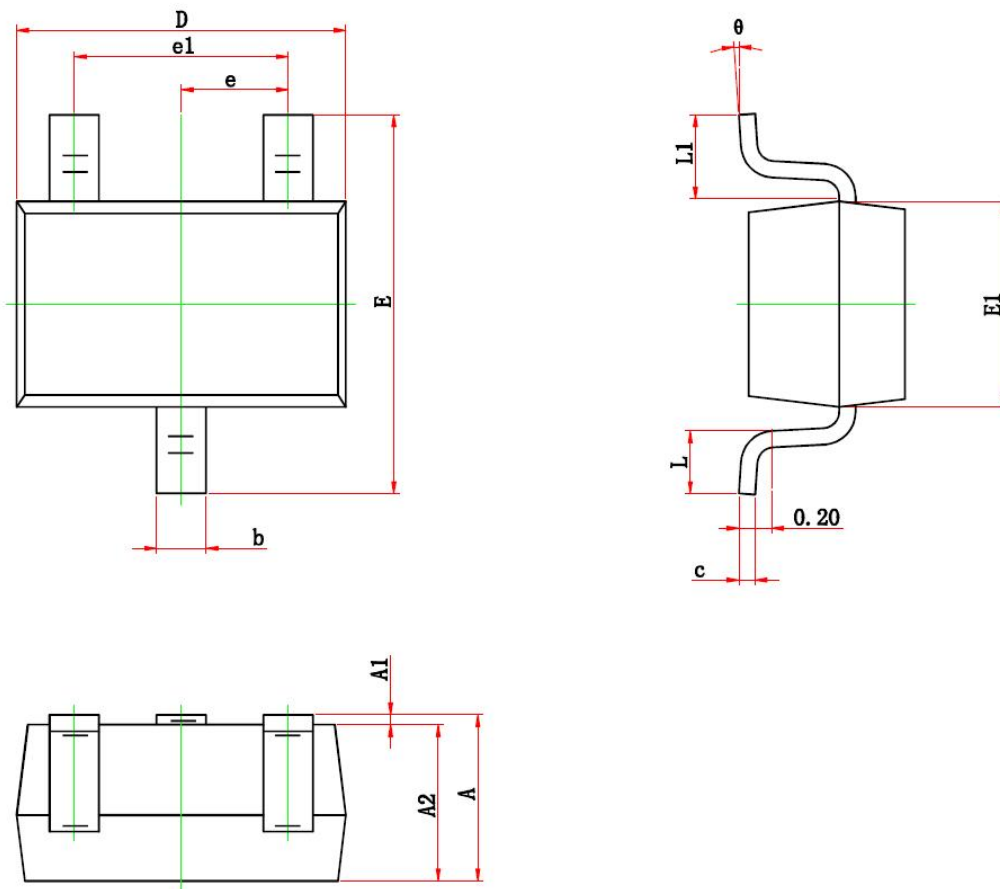


**Power derating vs. Ambient temperature**



**Transition Frequency vs. Collector Current**

## ● Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	2.150	2.450	0.085	0.096
E1	1.150	1.350	0.045	0.053
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.260	0.460	0.010	0.018
L1	0.525 REF.		0.021 REF.	
$\theta$	0°	8°	0°	8°



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