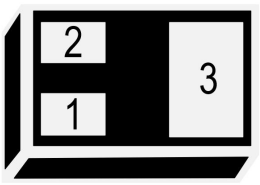
SSCP3906GN1

PNP Switching Transistor

➢ Features

VCB	VCE	VBE	IC
-40V	-40V	-5V	-200mA

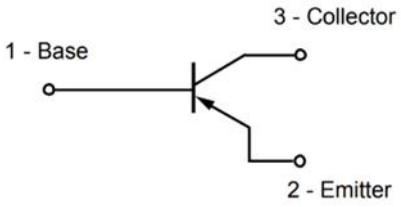
➢ Pin configuration



DFN1006-3L (Bottom View)

➢ Description

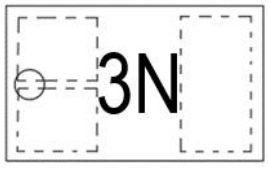
The PNP Transistor is designed for use in linear and switching applications. The device is housed in the DFN1006-3L package, which is designed for telephony and professional communication equipment.



Circuit Diagram

➢ Applications

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



Marking (Top View)

➢ Ordering Information

Device	Package	Shipping
SSCP3906GN1	DFN1006-3L	10000/Reel

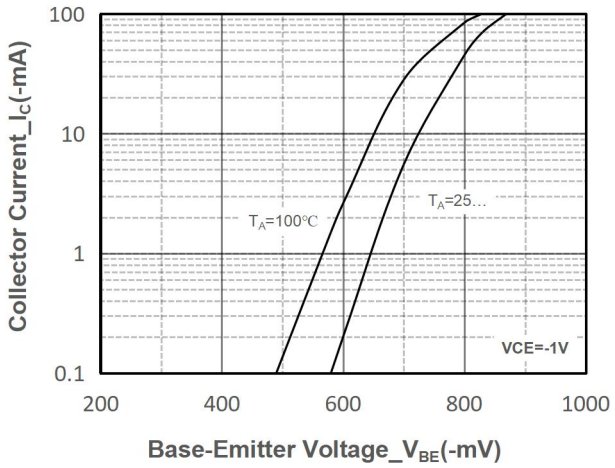
➢ Absolute Maximum Ratings(T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector- Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-200	mA
Collector Power Dissipation	P_C	100	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	1250	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55 to 150	℃

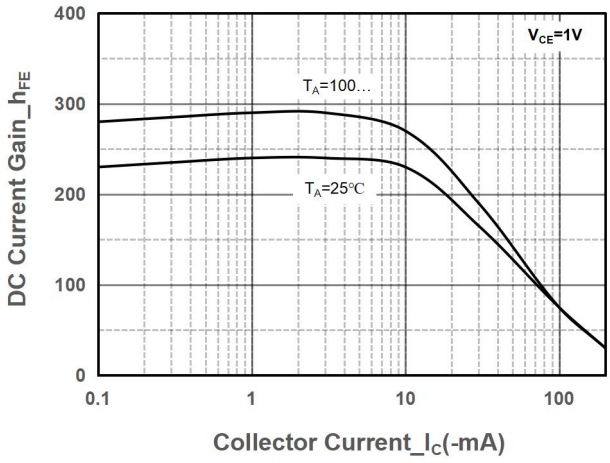
➢ Electrical Characteristics (T_A=25℃ unless otherwise noted)

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

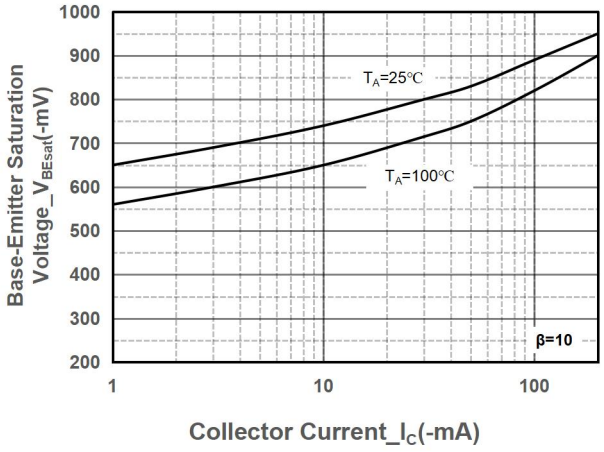
➢ Typical Performance Characteristics (T_A=25℃ unless otherwise noted)



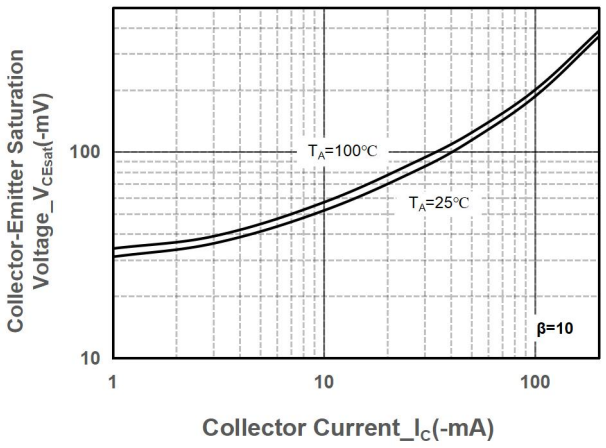
Collector Current vs. Base-Emitter Voltage



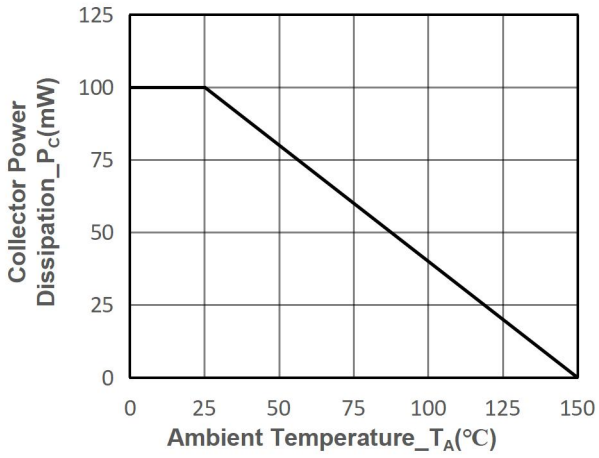
DC Current Gain vs. Collector Current



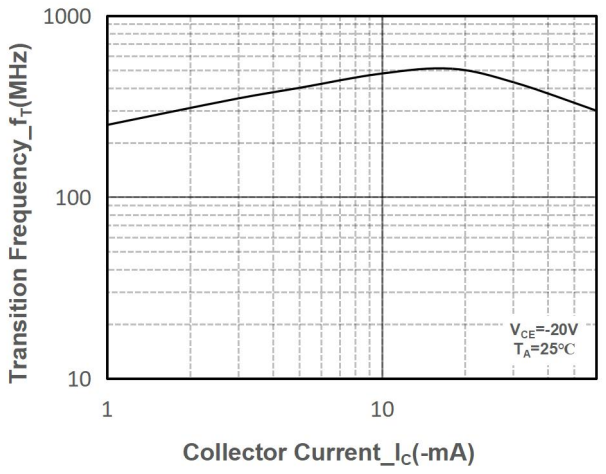
$V_{BE(sat)}$ vs. Collector Current



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



Power derating vs. Ambient temperature



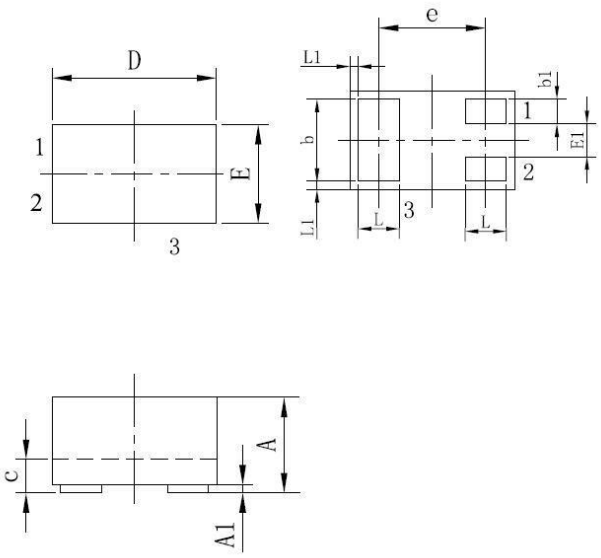
Transition Frequency vs. Collector Current

➢ Package Information

Mechanical Data

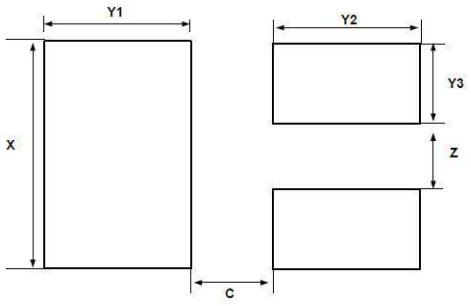
Case: DFN1006-3L

Case Material: Molded Plastic. UL Flammability



DIM	Millimeters		
	Min	Nom	Max
A	0.45	0.50	0.55
A1	0.00	0.02	0.05
b	0.45	0.50	0.55
b1	0.10	0.15	0.20
c	0.12	0.15	0.18
D	0.95	1.00	1.05
e	0.65 BSC		
E	0.55	0.60	0.65
E1	0.15	0.20	0.25
L	0.20	0.25	0.30
L1	0.05REF		

Suggested Pad Layout



DIM	Millimeters
C	0.25
X	0.65
Y1	0.50
Y2	0.50
Y3	0.25
Z	0.20

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