SSCP3906GSG

Dual PNP Switching Transistor

➢ Features

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

➢ Description

The NPN Transistor is designed for use in linear and switching applications. The device is housed in the SOT-363 package, which is designed for telephony and professional communication equipment.

➢ Applications

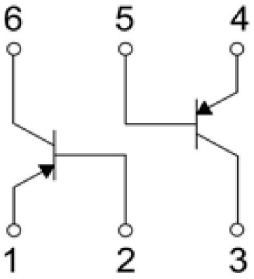
- General purpose switching and amplification
- Epitaxial planar die construction

➢ Ordering Information

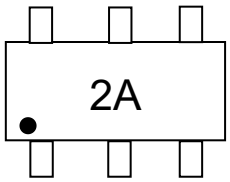
Device	Package	Shipping
SSCP3906GSG	SOT-363	3000/Reel

➢ Pin configuration

SOT-363



Circuit Diagram



Marking (Top View)

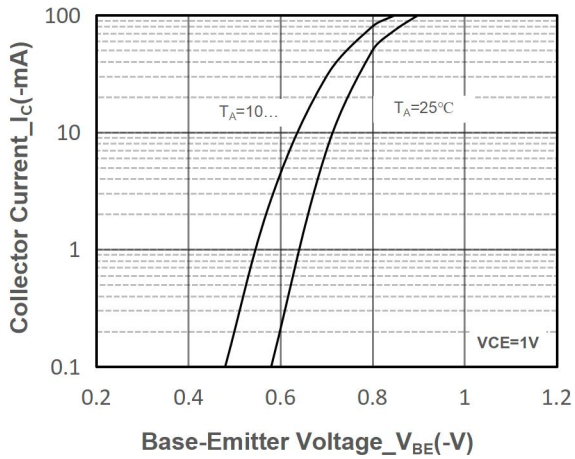
➢ Absolute Maximum Ratings (T_A=25℃ unless otherwise noted)

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	200	mW
Junction Temperature	T_J	625	℃
Storage Temperature	T_{STG}	-55 to 150	℃

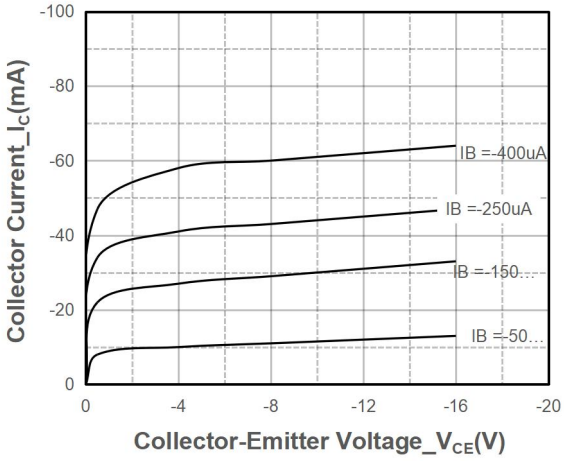
➢ Electrical Characteristics (T_A=25℃ unless otherwise noted)

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			0.05	uA
Collector Cutoff Current	I_{CBO}	V_{CB}=-30V, I_E=0			0.05	uA
Emitter Cutoff Current	I_{EBO}	V_{EB}=-5V, I_C=0			0.05	uA
DC Current Gain	h_{FE}	V_{CE} = -1V, I_C=-0.1mA	60			
		V_{CE}=-1V, I_C=-1mA	80			
		V_{CE}=-1V, I_C=-10mA	100		300	
		V_{CE}=-1V, I_C=-50mA	60			
		V_{CE}=-1V, I_C=-100mA	30			
Collector-Emitter Saturation Voltage	$V_{CE\ (sat)1}$	I_C=-10mA, I_B=-1mA			-0.25	V
	$V_{CE\ (sat)2}$	I_C=-50mA, I_B=-5mA			-0.4	V
Base-Emitter Saturation Voltage	$V_{BE\ (sat)1}$	I_C=-10mA, I_B=-1mA	-0.65		-0.85	V
	$V_{BE\ (sat)2}$	I_C=-50mA, I_B=-5mA			-0.95	V
Transition frequency	f_T	V_{CE}=-20V, I_C=-10mA f=100MHz	250			MHz
Collector output capacitance	Cob	VCB=-5V, IE=0, f=1MHz			4.5	pF
Noise figure	NF	VCE=-5V, Ic=-0.1mA, f=1kHz, RS=1KΩ			4	dB
Delay Time	t_d	V_{CC}=-3V, $V_{BE\ (off)}$=0.5V I_C=-10mA, I_{B1}=-1mA			35	ns
Rise Time	t_r	V_{CC}=-3V, $V_{BE\ (off)}$=0.5V I_C=-10mA, I_{B1}=-1mA			35	ns
Storage Time	t_s	V_{CC}=-3V, I_C=-10mA I_{B1}= -I_{B2}=-1mA			225	ns
Fall Time	t_f	V_{CC}=-3V, I_C=-10mA I_{B1}= -I_{B2}=-1mA			75	ns

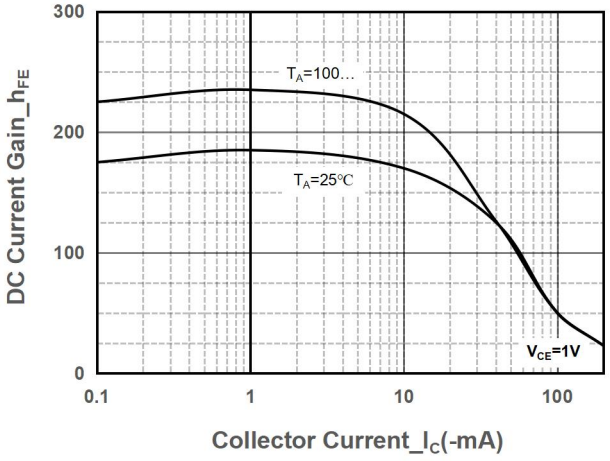
➢ Typical Performance Characteristics (TA=25℃ unless otherwise noted)



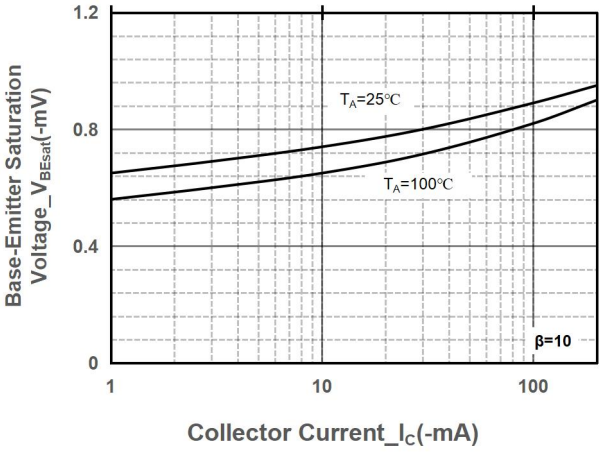
Collector Current vs. Base-Emitter Voltage



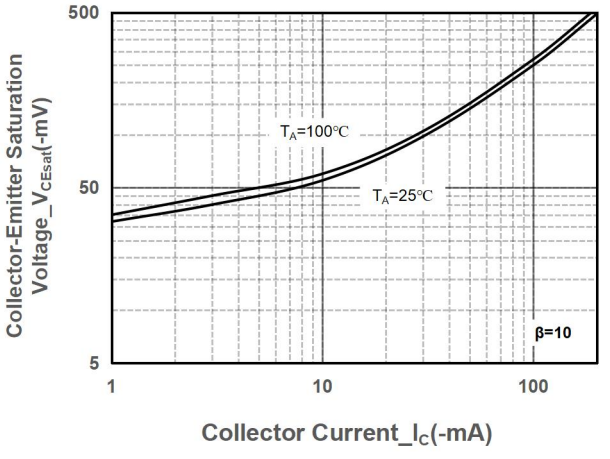
Collector Current vs. Collector-Emitter Voltage



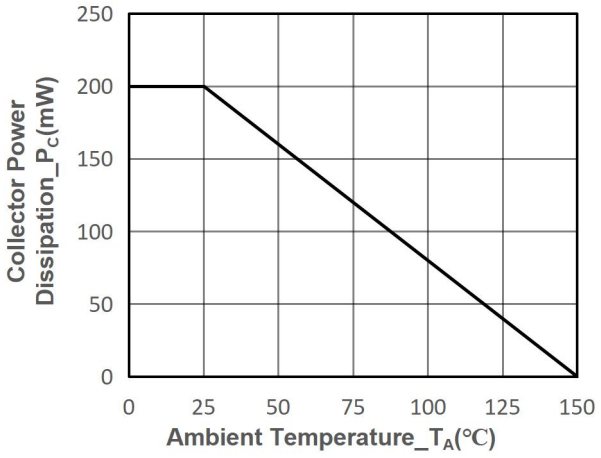
DC Current Gain vs. Collector Current



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



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

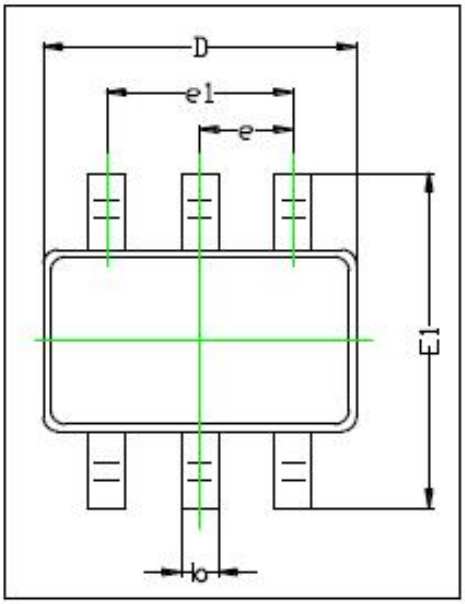


Power derating vs. Ambient temperature

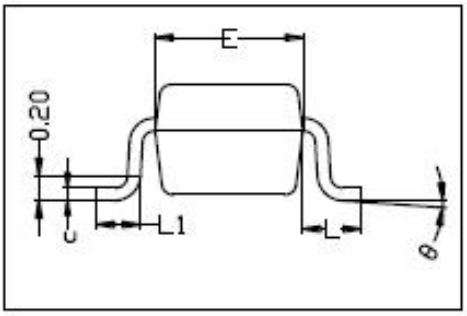
➢ Package Information

SOT-363

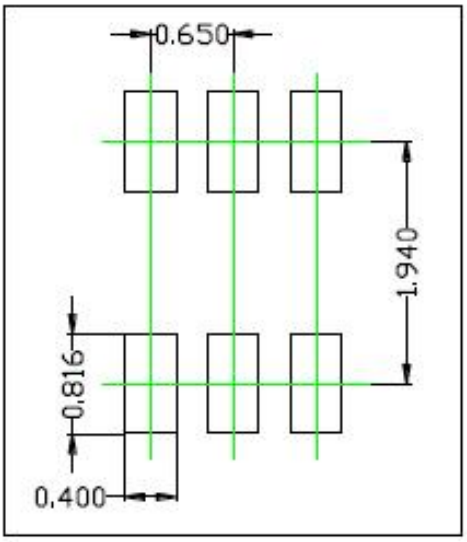
TOP VIEW



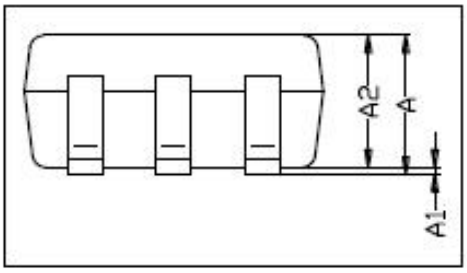
SIDE VIEW



SOLDRING PATTERN



FRONT VIEW



SYMBOL	DIMENSIONS IN MILLIMETER	
	MIN	MAX
A	0.900	1.000
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.300
c	0.100	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.400
e	0.650 TYP.	
e1	1.200	1.400
L	0.525 REF.	
L1	0.260	0.450
θ	0°	8°

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