



SSCP5401GSG

PNP Switching Transistor

➤ Features

VCB	VCE	VEB	IC
-160V	-150V	-5V	-200mA

➤ Description

This device is designed for general-purpose high-voltage amplifiers and gas discharge display drivers. It is Ideal for medium power amplification and switching.

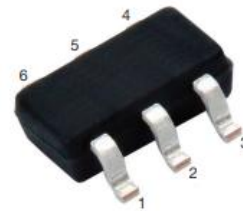
➤ Applications

- General-purpose high-voltage amplifiers
- Gas discharge display drivers
- Medium power amplification and switching

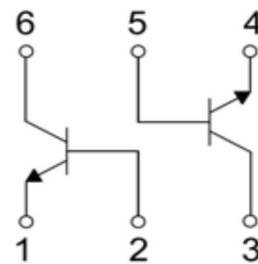
➤ Ordering Information

Device	Package	Shipping
SSCP5401GSG	SOT-363	3000/Reel

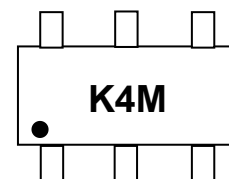
➤ Pin configuration



SOT-363



Circuit Diagram



Marking(Top View)



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

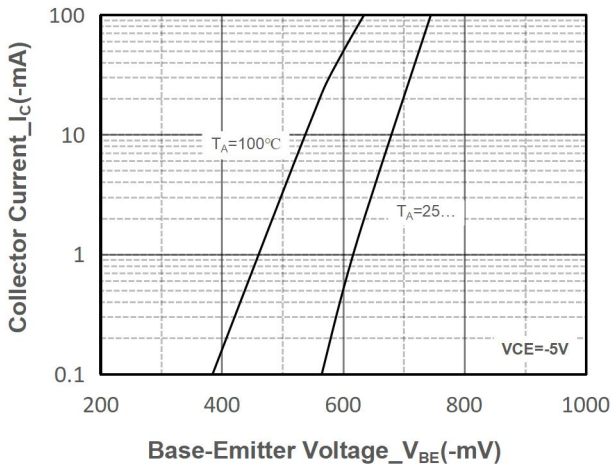
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	-160	V
Collector- Emitter Voltage	V_{CE0}	-150	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-200	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	-55 to 150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}\text{C}$

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

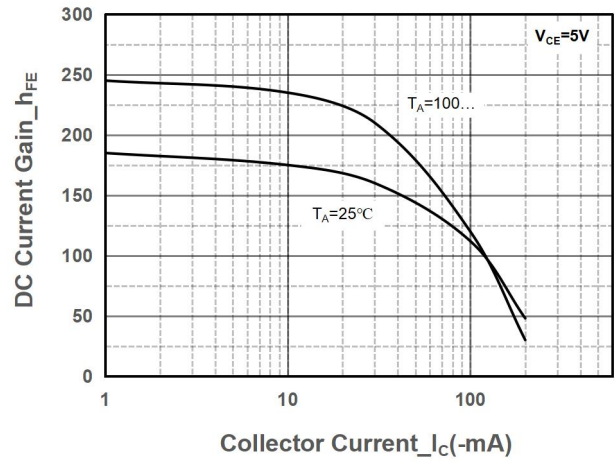
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C=-100\mu\text{A}, I_E=0$	-160			V
Collector-emitter Breakdown Voltage	BV_{CE0}	$I_C=-1\text{mA}, I_B=0$	-150			V
Emitter -Base Breakdown Voltage	BV_{EBO}	$I_E=-100\mu\text{A}, I_C=0$	-5			V
Collector Cutoff Current	I_{CB0}	$V_{CB}=-120\text{V}, I_E=0$			-50	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-4\text{V}, I_C=0$			-50	nA
DC Current Gain	h_{FE1}	$V_{CE}=-5\text{V}, I_C=-1\text{mA}$	50			
	h_{FE2}	$V_{CE}=-5\text{V}, I_C=-10\text{mA}$	100		300	
	h_{FE3}	$V_{CE}=-5\text{V}, I_C=-50\text{mA}$	50			
Collector-Emitter Saturation Voltage	$V_{CE(sat)1}$	$I_C=-10\text{mA}, I_B=-1\text{mA}$			-0.2	V
	$V_{CE(sat)2}$	$I_C=-50\text{mA}, I_B=-5\text{mA}$			-0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)1}$	$I_C=-10\text{mA}, I_B=-1\text{mA}$			-1	V
	$V_{BE(sat)2}$	$I_C=-50\text{mA}, I_B=-5\text{mA}$			-1	V
Output Capacitance	C_{ob}	$V_{CB}=-10\text{V}, I_E=0,$ $f=1\text{MHz}$			6	pF
Noise Figure	NF	$V_{CE}=-10\text{V}, I_C=-200\mu\text{A},$ $f=1\text{KHz}, R_s=10\Omega$			8.0	dB
Transition frequency	f_T	$V_{CE}=-10\text{V}, I_C=-10\text{mA}$ $f=1\text{MHz}$	100			MHz



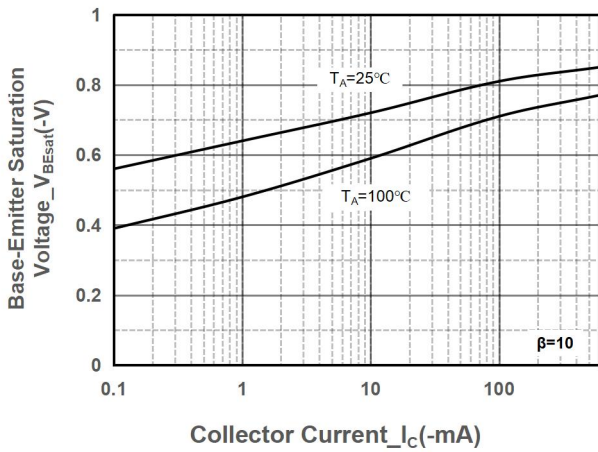
➤ **Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)**



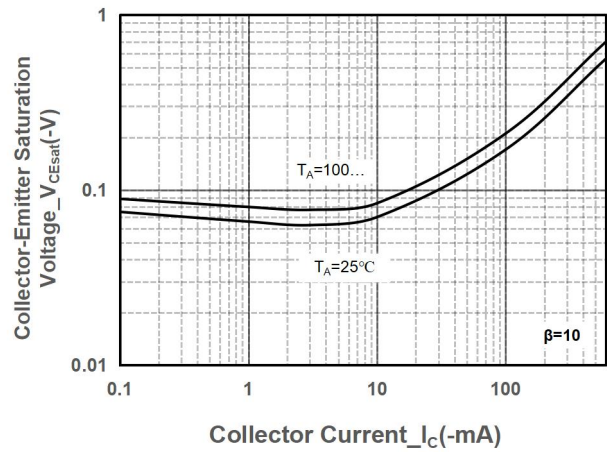
Collector Current vs. Base-Emitter Voltage



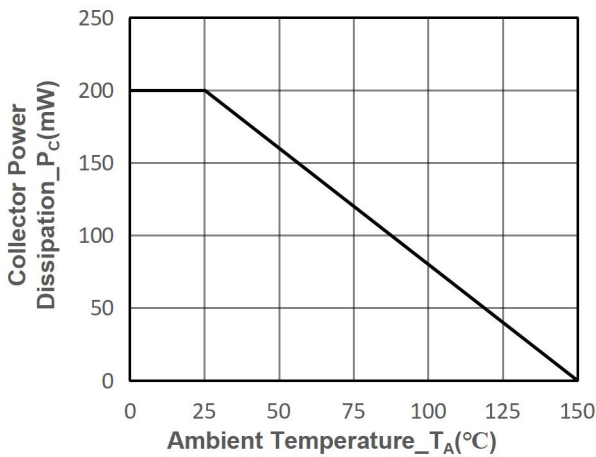
DC Current Gain vs. Collector Current



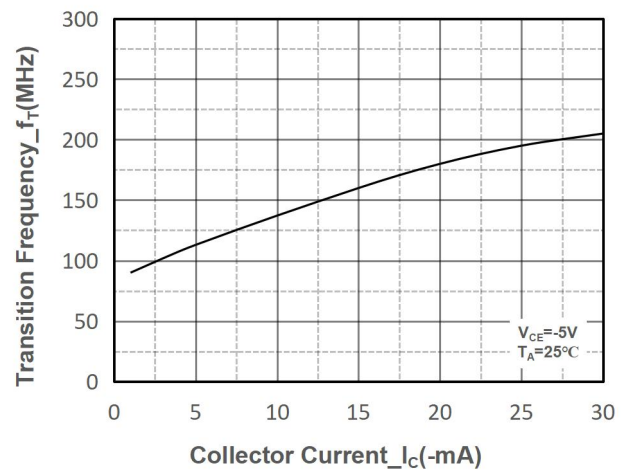
$V_{BE(sat)}$ vs. Collector Current



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



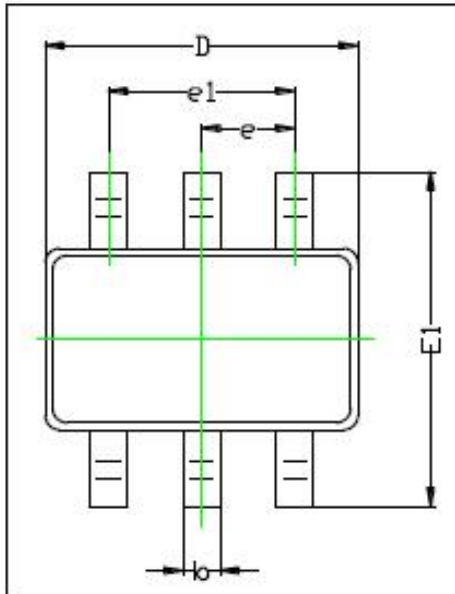
Power derating vs. Ambient temperature



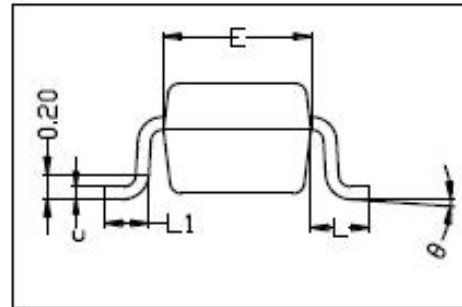
Transition Frequency vs. Collector Current

Package Information

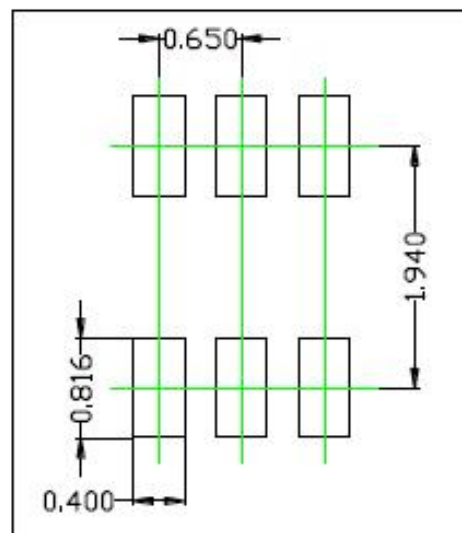
TOP VIEW



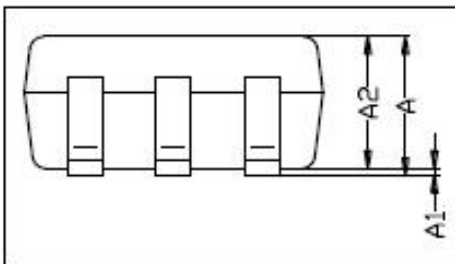
SIDE VIEW



SOLDING 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°



DISCLAIMER

SSCSEMI RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. SSCSEMI DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICIENCE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

THE GRAPHS PROVIDED IN THIS DOCUMENT ARE STATISTICAL SUMMARIES BASED ON A LIMITED NUMBER OF SAMPLES AND ARE PROVIDED FOR INFORMATIONAL PURPOSE ONLY. THE PERFORMANCE CHARACTERISTICS LISTED IN THEM ARE NOT TESTED OR GUARANTEED. IN SOME GRAPHS, THE DATA PRESENTED MAY BE OUTSIDE THE SPECIFIED OPERATING RANGE (E.G. OUTSIDE SPECIFIED POWER SUPPLY RANGE) AND THEREFORE OUTSIDE THE WARRANTED RANGE.

OUR PRODUCT SPECIFICATIONS ARE ONLY VALID IF OBTAINED THROUGH THE COMPANY'S OFFICIAL WEBSITE, CRM SYSTEM, OR OUR SALES PERSONNEL CHANNELS. IF CHANGES OR SPECIAL VERSIONS ARE INVOLVED, THEY MUST BE STAMPED WITH A QUALITY SEAL AND MARKED WITH A SPECIAL VERSION NUMBER TO BE VALID.