



SSCP591GS6

PNP Switching Transistor

➤ Features

VCB	VCE	VEB	IC
-80V	-60V	-5V	-1A

➤ 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.

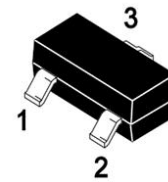
➤ Applications

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

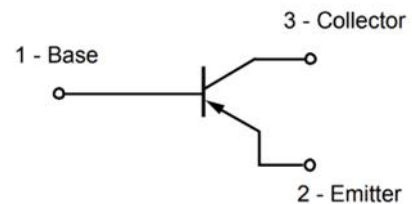
➤ Ordering Information

Device	Package	Shipping
SSCP591GS6	SOT-23	3000/Reel

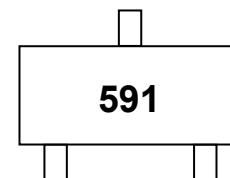
➤ Pin configuration



SOT-23



Circuit Diagram



Marking(Top View)



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

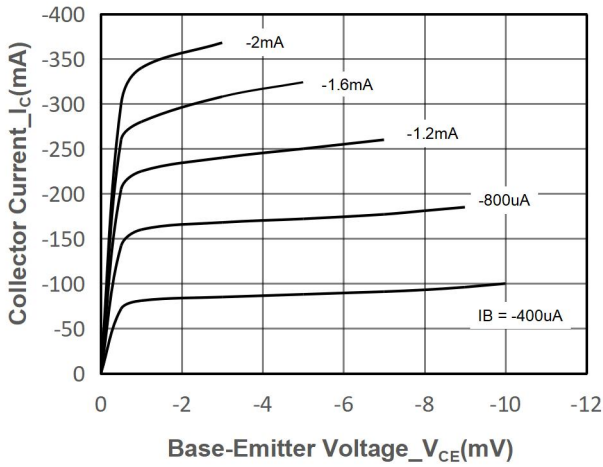
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	-80	V
Collector- Emitter Voltage	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-1	A
Collector Power Dissipation	P_C	250	mW
Junction Temperature	T_J	-55 to 150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^\circ\text{C}$

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

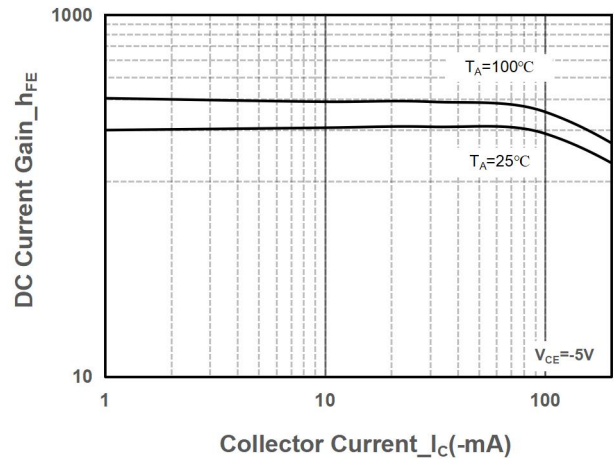
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C = -100\mu\text{A}, I_E = 0$	-80			V
Collector-emitter Breakdown Voltage	BV_{CEO}	$I_C = -10\text{mA}, I_B = 0$	-60			V
Emitter -Base Breakdown Voltage	BV_{EBO}	$I_E = -100\mu\text{A}, I_C = 0$	-5			V
Collector Cutoff Current	I_{CB0}	$V_{CB} = -60\text{V}, I_E = 0$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -4\text{V}, I_C = 0$			-0.1	μA
DC Current Gain	h_{FE1}	$V_{CE} = -5\text{V}, I_C = -1\text{mA}$	100			
	h_{FE2}	$V_{CE} = -5\text{V}, I_C = -500\text{mA}$	100		300	
	h_{FE3}	$V_{CE} = -5\text{V}, I_C = -1\text{A}$	80			
	h_{FE4}	$V_{CE} = -5\text{V}, I_C = -2\text{A}$	15			
Collector-Emitter Saturation Voltage	$V_{CE(sat)1}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$			-0.3	V
	$V_{CE(sat)2}$	$I_C = -1\text{A}, I_B = -100\text{mA}$			-0.6	V
Base-Emitter Saturation Base-Emitter	$V_{BE(sat)}$	$I_B = -1\text{A}, I_C = -1\text{A}$			-1.2	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = -5\text{V}, I_C = -1\text{A}$			-1	V
Transition frequency	f_T	$V_{CE} = -10\text{V}, I_C = -50\text{mA}$ $f = 100\text{MHz}$	150			MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}$ $f = 1\text{MHz}$			10	pF



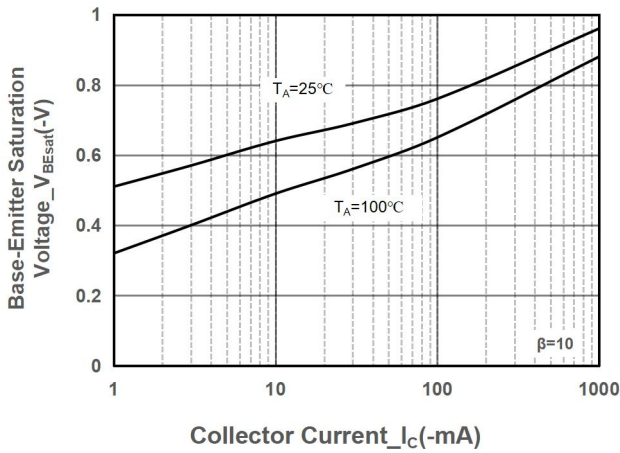
➤ **Typical Performance Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)**



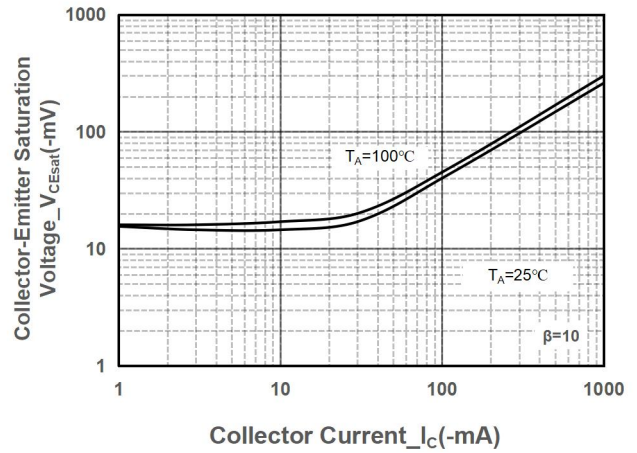
Collector Current vs. Base-Emitter Voltage



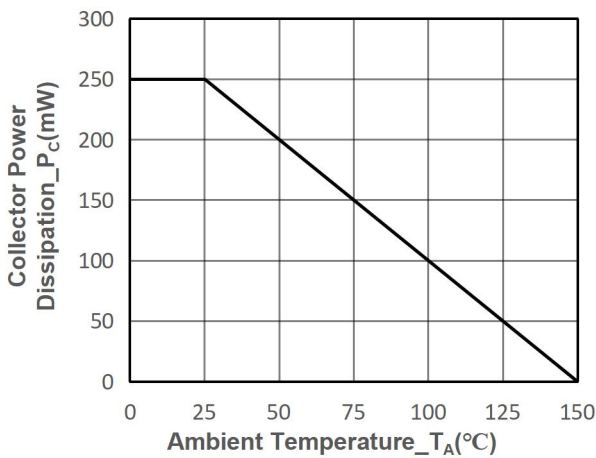
DC Current Gain vs. Collector Current



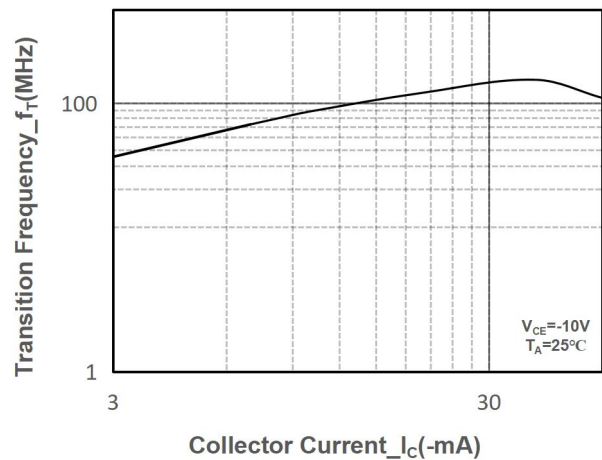
$V_{BE(sat)}$ vs. Collector Current



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



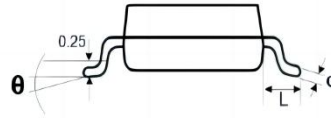
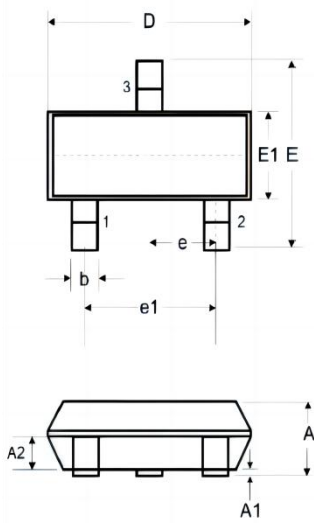
Power derating vs. Ambient temperature



Transition Frequency vs. Collector Current

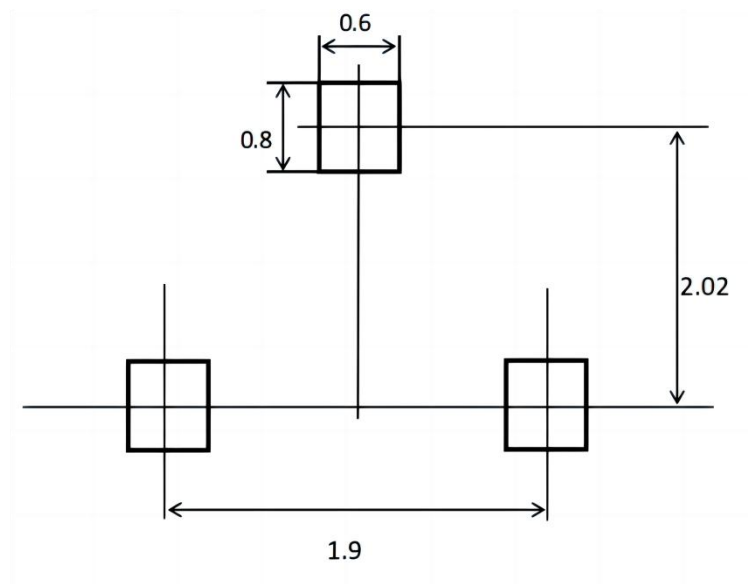
➤ Package Information

SOT-23



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	2.800	2.90	3.000
E	2.10	2.37	2.64
E1	1.20	1.30	1.40
e	0.95		
e1	1.80	-	2.00
L	0.40	0.50	0.60
L1	0.30	-	0.50
θ	0°	-	8°

Recommended Pad outline (Unit: mm)





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