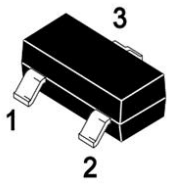
SSCP591GS6

PNP Switching Transistor

➢ Features

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

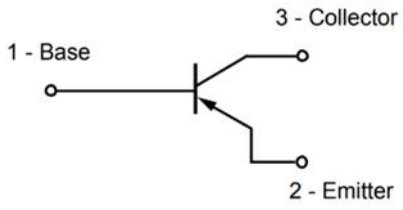
➢ Pin configuration



SOT-23

➢ 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.



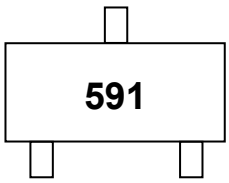
Circuit Diagram

➢ Applications

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

➢ Ordering Information

Device	Package	Shipping
SSCP591GS6	SOT-23	3000/Reel



Marking(Top View)

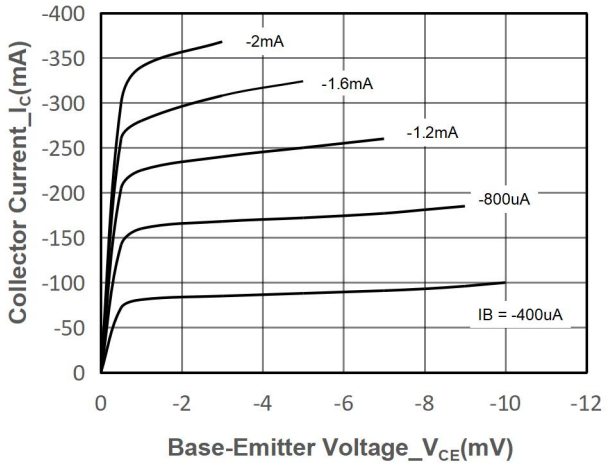
➢ Absolute Maximum Ratings(T_A = 25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-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	℃
Storage Temperature	T_{STG}	-55 to 150	℃

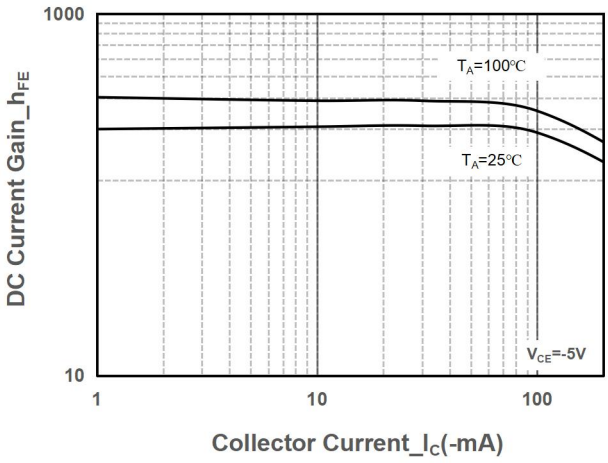
➢ Electrical Characteristics (T_A = 25℃ unless otherwise noted)

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

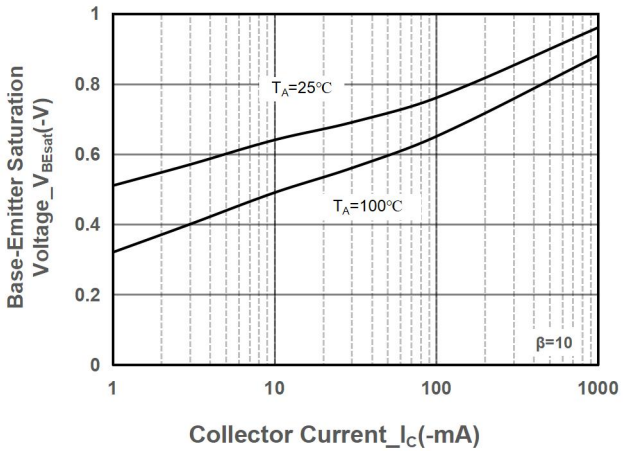
➢ Typical Performance Characteristics (T_A = 25℃ unless otherwise noted)



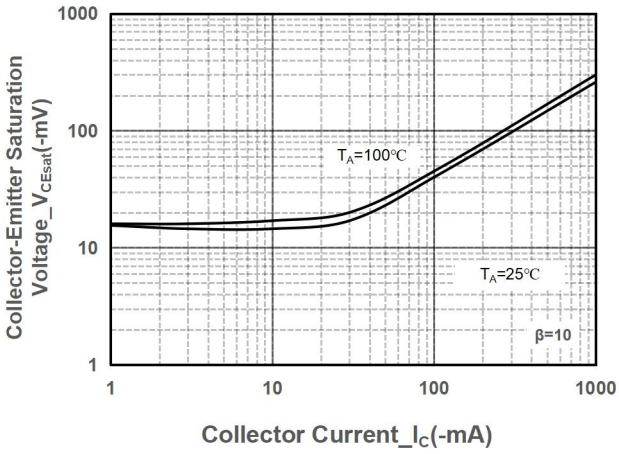
Collector Current vs. Base-Emitter Voltage



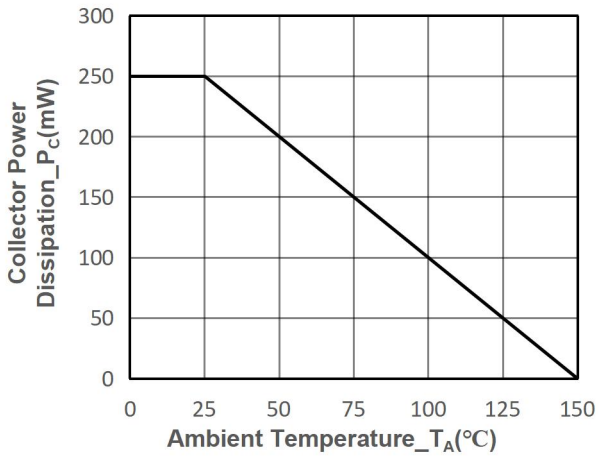
DC Current Gain vs. Collector Current



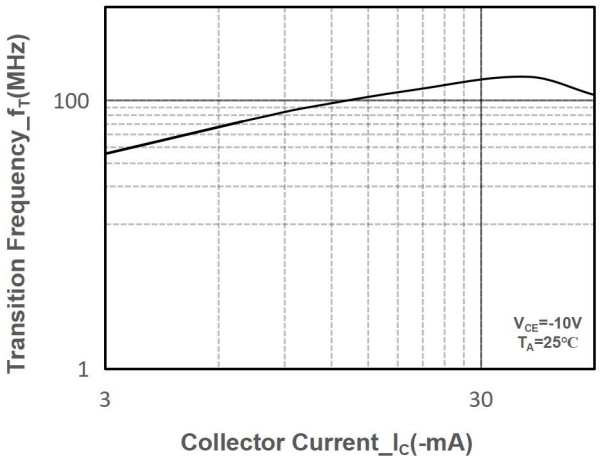
$V_{BE\ (sat)}$ vs. Collector Current



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



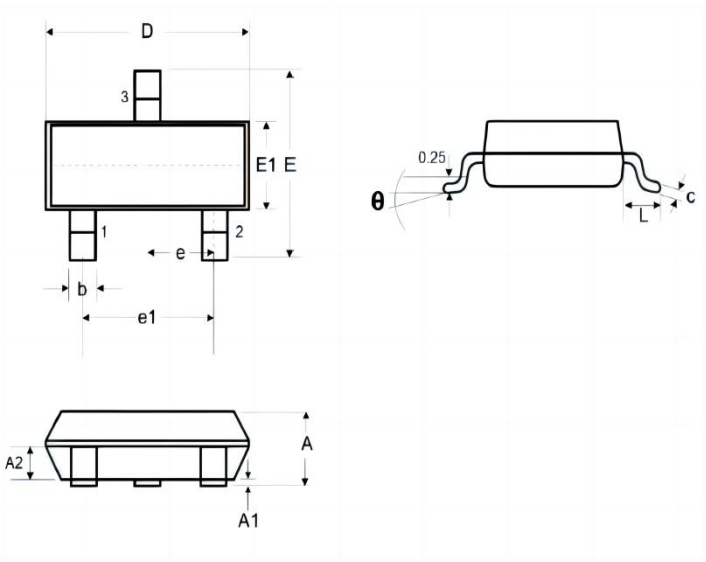
Power derating vs. Ambient temperature



Transition Frequency vs. Collector Current

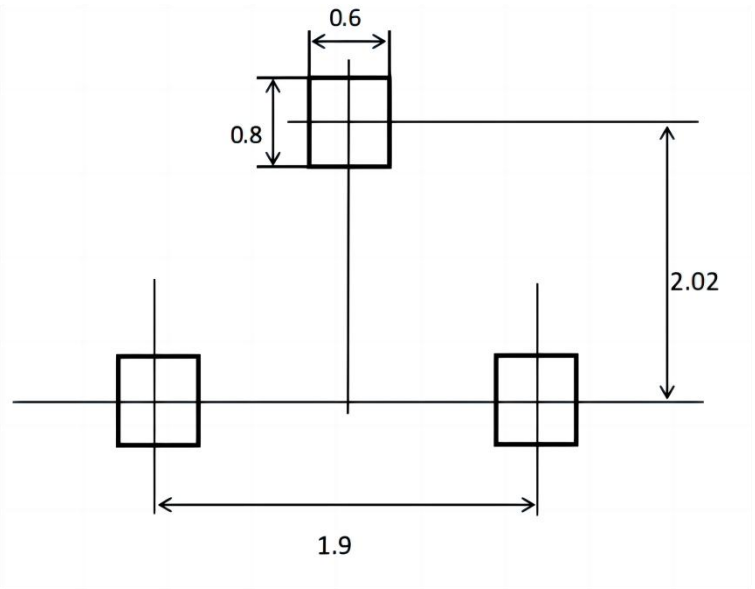
➢ Package Information

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)



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.